

GUIDELINES FOR COUNTING CLINICAL EXPERIENCES

Council on Accreditation of Nurse Anesthesia Educational Programs October 15, 2015 Revised January 2021

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The Council on Accreditation of Nurse Anesthesia Educational Programs (COA) recently published revised standards for nurse anesthesia educational programs offering masters and doctoral degrees. These new standards included revisions to the required clinical experiences that each graduate must attain within the program. The COA received feedback indicating a need to provide an authoritative reference for all student registered nurse anesthetists (SRNAs) and program administrators. The document is also available for use by any Certified Registered Nurse Anesthetist (CRNA) advising student nurse anesthetists about recording clinical experiences. While SRNAs are responsible for accurately recording clinical learning experiences, all participants in the process must realize the final authority for quantifying c | i n i c a | experiences rests with the Program Administrator who must affirm the accuracy of the clinical experience record. The purpose of the *Guidelines for Counting Clinical Experiences* is to enhance consistency in how nurse anesthesia students quantify their clinical learning experiences by providing interpretive guidelines and examples for the clinical experiences. These guidelines cannot anticipate all possible scenarios, nor can they foresee future developments in surgical/procedural care or other emerging technologies. Therefore, students must consult the program administrator when questions arise regarding how clinical experiences should be counted. Program administrators are encouraged to consult the COA regarding these matters, as needed.

General Guidelines on Counting Clinical Experiences:

Nurse anesthesia students must have the opportunity to develop into competent, safe, nurse anesthetists capable of engaging in full scope of practice as defined in the AANA's *Scope of Nurse Anesthesia Practice* and *Standards for Nurse Anesthesia Practice*. To ensure nurse anesthesia students develop the knowledge, skills and abilities for entry into practice, students must participate in all phases of their clinical cases including preoperative, intraoperative and postoperative anesthesia care. While it may not be possible for students to participate in all phases of care on every case, students can only take credit for a case where they personally provide anesthesia for critical portions of the case. A student may only count a procedure (e.g., CVL placement, regional block, etc.) that he or she actually performs. Students can take credit for an anesthetic case only if they are personally involved with the implementation and management of the anesthetic. Students cannot take credit for an anesthetic case in which they observe another anesthesia provider manage a patient's anesthetic care.

The COA published the following definition in the glossary section of both the Standards for Accreditation of Nurse Anesthesia Programs – Practice Doctorate and 2004 Standards for Accreditation of Nurse Anesthesia Educational Programs.

Counting clinical experiences-Students can only take credit for a case where they personally provide anesthesia for critical portions of the case. A student may only count a procedure (e.g., central venous catheter placement, regional block, etc.) that he or she actually performs. Students cannot take credit for an anesthetic case if they are not personally involved with the management of the anesthetic or only observe another anesthesia provider manage a patient's anesthetic care. Two learners should not be assigned to the same case, except when the case provides learning opportunities for 2

students, and 2 anesthesia providers are necessary due to the acuity of the case. The program will need to justify any deviation from this requirement.

Developing comprehensive guidelines addressing all possible situations where programs/students may count clinical learning experiences is difficult. In order to provide clarity, consideration should be given to the following general principles.

- 1. Clinical learning experiences must provide educational value.
 - a. Experiences <u>lacking value</u> might include:
 - 1) Student provides temporary relief (e.g., morning/lunch breaks) to the primary anesthetist in a case, where the student neither begins nor finishes a case and is only in the case for a short period of time (e.g., ≤30 minutes).
 - 2) Student is in an observation-only role (e.g., not involved in decision-making processes nor actively engaged in developing or implementing the anesthetic plan).
 - 3) Student role is limited to recording the anesthetic (i.e., charting only).
 - 4) Two students share a routine case (e.g., laparoscopic cholecystectomy, orthopedic case).
 - b. Experiences <u>with value</u> might include:
 - Student provides temporary relief (e.g., morning/lunch breaks) and a significant event occurs requiring the student to develop/implement anesthesia management (e.g., air embolus develops, major hemorrhage occurs, aortic clamping/unclamping, new onset myocardial ischemia, cardiac arrest, intense resistant bronchospasm, unintentional extubation, etc.)
 - Two students share a complex case where there is opportunity for both learners to have significant learning (e.g., liver transplants, rare cases, massive trauma, complicated cases requiring two anesthesia providers)
- 2. Students cannot count any procedure unless they personally perform the procedure.
- 3. The program will need to justify any questionable counting of cases by identifying the student's level of participation and learning outcomes achieved.

How to Use This Document:

Students and program administrators are encouraged to read the document in its entirety. The "Interpretive Guidelines" column includes language intended to amplify and clarify the intent of the clinical learning experience. When the Interpretive Guidelines reflect definitions found in the glossary of COA accreditation standards, it will be so indicated. For example, (*see Glossary, "Clinical hours"*).

Examples may be included in more than one Clinical Experience category for increased clarity. For example, information regarding regional techniques used in obstetric management may be found in obstetric management, pain management encounters, and regional techniques. This underscores the need to read the entire document for maximum clarity. The COA standards no longer include an exhaustive list of anatomical categories. Several anatomic categories were eliminated in the current standards because the experiences are common across all programs. Therefore, some clinical learning experiences will not have an appropriate anatomic category (e.g., extremities, extrathoracic, perineal (e.g., colonoscopy), extracranial (e.g., ECTs), and routine pacemaker insertions. Some cases will appropriately be recorded in two anatomic categories. A single case may be counted in one anatomic category, more than one anatomic category, or no anatomic category at all. All anesthetic cases are considered valuable learning experiences, and therefore should be counted regardless of whether they are assigned to an anatomic category. Therefore, the total number of cases recorded in anatomical categories may not add up to the total number of cases.

Program administrators are encouraged to contact the COA with any questions regarding the appropriateness of students counting specific clinical learning experiences and the NBCRNA regarding the reporting of required clinical learning experiences on the NBCRNA transcript. This will allow the COA and the NBCRNA to promote consistency in how clinical learning experiences are counted and reported respectively, and further develop these guidelines.

CLINICAL EXPERIENCES		Interpretive Guidelines	Examples
Total Clinical Hours	(2000)	Clinical hours include time spent in the actual administration of anesthesia (i.e.,	Examples of other clinical time would include
		anesthesia time) and other time spent in the clinical area. Total clinical hours are	in-house call, preanesthesia assessment,
		inclusive of total hours of anesthesia time; therefore, this number must be equal to	postanesthesia assessment, patient
		or greater than the total number of hours of anesthesia time. (see Glossary,	preparation, OR preparation, and time spent
		"Clinical hours")	participating in clinical rounds.
Patient Physical Status		Each patient must have only one physical status.	Students would not include the Patient Physical
			Status category for code blue responses,
		The Patient Physical Status categories are to be used only for learning experiences	intubations outside the OR, vascular access
		where the student administers an anesthetic. They are not to be used for other	consultations, and other situations where an
		learning situations that cannot be counted as a case.	actual anesthetic is not being administered.
Class I			-
Class II			
Classes III – VI (total of a, b, c & d)	(200) [300]		
a. Class III	(50) [100]		
b. Class IV	(10) [100]		
c. Class V	(0) [5]		
d. Class VI			
Total Cases	(650⁺) [700]		
Patient Assessment ⁺			
Initial preanesthetic assessment ⁺		The initial preanesthetic assessment is one in which the student personally conducts the assessment by reviewing the patient's medical history, conducting an anesthesia-focused physical assessment, and evaluating pertinent laboratory findings/diagnostic testing. This is an original assessment, not a review of or reference to a preanesthetic assessment previously conducted by another anesthesia provider. The preanesthetic assessment is evaluated by a faculty member (defined as a body of individuals entrusted with instruction,	A student is assigned to the preanesthetic testing (PAT) clinic. The student conducts and documents th preanesthetic assessment of preoperative patients presenting to the PAT clinic and their performance is evaluated by the faculty member.
		including the teaching staff, both clinical and academic, and any individuals involved in teaching or supervising the educational experiences/activities of students on a part-time or full-time basis). Clinical experiences cannot be obtained by simulation alone.	A patient presents for surgery and had not had a preanesthetic assessment. The student conducts and documents the preanesthetic assessment and their performance is evaluated by the faculty member. The following example does is NOT an initial preanesthetic assessment: A patient presents for surgery. The patient has had a preanesthetic
COA Guidelines for Counting Clinical Exper		5	assessment performed in a PAT clinic or in the

		preoperative holding area by an anesthesia provider, another SRNA or by an anesthesia resident. The SRNA performing the anesthetic reviews that preanesthetic assessment and documents that review.
Postanesthetic assessment ⁺	(50)[150] A postanesthetic assessment is the review by the student of all pertinent patient data and evaluation of anesthesia outcomes. This may occur anytime during the post-operative period. The student implements needed interventions or makes appropriate referrals, if indicated, based on the assessment. This is not the postanesthetic assessment required by health care facility accreditors. Due to many factors beyond the control of the student, each patient the student anesthetizes is not required to have a postanesthetic assessment performed by the student. The program must have a process of validating postanesthetic assessments if not documented in the patient's medical record. Documentation may be solely the student case log, recognizing the fact that the student may not be able to document the encounter in the patient's medical record. The postanesthetic assessment can be accomplished telephonically. Clinical experiences cannot be obtained by simulation.	The SRNA is assigned to the postanesthesia care unit (PACU) under the supervision an appropriately credentialed provider. The SRNA manages (such as pain, fluids, ventilation, circulation) these patients and may determine their readiness for discharge. If allowed by the facility, the SRNA makes an entry into the patient's medical record. Regardless of making an entry in the medical record, the SRNA notes in their case log that a postanesthetic assessment was performed. Each patient cared for in the PACU is a "case" (a "postanesthetic assessment"). The SRNA visits their patient(s) from the previous day (or cases performed by other anesthesia providers). The SRNA reviews the medical record, interview and, if indicated, examines the patient to detect any anesthesia- related complications and assess the patient's satisfaction with the perioperative experience. If allowed by the facility, the SRNA makes an entry into the patient's medical record. Regardless of making an entry in the medical record, the SRNA notes in their case log that a postanesthetic assessment was performed. Each patient assessed is a "postanesthetic assessment." The SRNA calls their patients from the previous day. The patient is assessed telephonically for
		postanesthetic complications and satisfaction with the perianesthetic experience. If allowed by the facility, the SRNA makes an entry into the patient's medical record. Regardless of making an entry in the medical record, the SRNA notes in their case log that a postanesthetic assessment was performed. Each patient assessed is a "postanesthetic assessment."

Comprehensive history and physical assessment includes the history, physical, and	A comprehensive history and physical is not a
	preanesthetic assessment.
	•
	A comprehensive history and physical is often
assessment techniques, including diagnostic testing, as appropriate. A complete physical	required by facilities for patients presenting for
assessment should incorporate cultural and developmental variations and needs of a	surgery or a procedure. This comprehensive history
patient. The results of a comprehensive history and physical assessment are used to	and physical is often performed by the surgeon or
-	primary care provider. It may be performed by a
	physician anesthesiologist or CRNA.
obtained by simulation alone.	This is not an example of a comprehensive history
	and physical: A student is assigned to the
	preanesthetic testing (PAT) clinic. The student
	conducts the preanesthetic assessment of preoperative patients presenting to the PAT clinic and
	their performance is evaluated by the faculty
	member.
	This is an example of a comprehensive history and
	physical: A SRNA is assigned to the preanesthetic testing
	(PAT) clinic. The SRNA conducts the preanesthetic
	assessment of a preoperative patient presenting to the
	PAT clinic. The student also performs a comprehensive
	history and physical on that patient. This comprehensive
	history and physical assessment includes the history, physical, and psychological assessment of signs and
	symptoms, pathophysiologic changes, and psychosocial
	variations of a patient. The assessment includes an
	evaluation of the body and its functions using inspection,
	palpation, percussion, auscultation, and advanced
	assessment techniques, including diagnostic testing, as
	appropriate. A complete physical assessment should
	incorporate cultural and developmental variations and
	needs of a patient. Their performance is evaluated by the
	faculty member.
	assessment should incorporate cultural and developmental variations and needs of a

		A comprehensive history and physical is often performed periodically by a primary care provi aid in detection of health problems. Deferring the breast, genitourinary, and rectal examinations is acceptable.	der to
a. Actual [†]			
b. Simulated [†]			
Special Cases			
Geriatric 65+ years	(100) [200]		
Pediatric			
Pediatric 2 to 12 years	(30) [75]		
Pediatric (less than 2 years)	(10) [25]		
Neonate (less than 4 weeks)	[5]		

Trauma/Emergency (E)	 (30) [50] An emergency case allows the student the opportunity to provide anesthesia under one or more of the following conditions: there is an urgency/continued threat to patient well-being; 2) there are fewer resources available then during regular operating hours; and/or 3) there is limited assessment and planning time allowed for the unscheduled case. When a case is deemed an emergency based on the professional opinion of the operating practitioner (i.e., surgeon, proceduralist), the case may be counted as an emergency case. 	An emergency case: A student is notified that a case is being brought to the OR on an emergent basis, as deemed by the surgeon. The patient has a newly diagnosed kidney stone and is rapidly moving into a septic state. The patient has not been NPO. Due to time constraints, the preanesthetic evaluation is limited.
		Not an emergency case: It is 1:40 p.m. Wednesday and the orthopedic surgeon has a patient with a fracture hip who has been in the hospital for 36 hours to stabilize her cardiac and hemodynamic status. The patient is NPO, has been fully assessed, and her physical status optimized. The surgeon wishes to do this case at this time instead of waiting to schedule it for the following day. This would not be considered an emergency case as it meets none of the three conditions that define an emergency case.

CLINICAL EXPERIENCES	Interpretive Guidelines	Examples
Obstetrical management (total of a & b) (30) [40]	This category is intended to ensure students have adequate clinical experiences	A student performs an anesthetic for an
	during all stages of labor and delivery. Students may count clinical experiences in	appendectomy on a patient whose fetus is at
	this category only if the procedure being performed is intended to facilitate	18 weeks gestation. Since the procedure is
	delivery of the fetus.	not intended to result in delivery of the fetus,
		the procedure cannot be counted as an
		obstetrical management experience.
		A student performs an anesthetic for a
		cervical cerclage on a patient with cervical
		insufficiency. Since the procedure is not
		intended to result in delivery of the fetus,
		the procedure cannot be counted as
		obstetrical management experience.
	The COA is aware the number of required cesarean deliveries (10) and analgesia	A student who has completed sixty (60) OB
	for labor cases (10) do not equal the total number of required Obstetrical	anesthesia experiences, eight (8) of which are
	Management cases (30). Obstetrical patient populations are unpredictable	cesarean deliveries. The student would not
	during students' OB rotations. Requiring students to have a greater number of	meet the minimum case requirements for
	Obstetrical Management experiences assures that the total number of required	graduation. Although the student with sixty
	OB case experiences is greater without being too prescriptive.	(60) obstetrical management experiences far
		exceeds the minimum number required for
		obstetrical management, the students fails to
		meet the minimum number of ten (10)
		cesarean deliveries. The student would need to
		administer two (2) additional anesthetics for
		cesarean deliveries in order to meet the
		required minimum.
a. Cesarean delivery (10) [15]	When anesthesia is delivered for a cesarean delivery, regardless of whether it is a	A student places an epidural catheter for pain
	continuation of a labor epidural, it is counted in this category.	management during labor. Following a trial
		of labor, the patient proceeds to cesarean
		delivery. The student records the experience
		as ONE case, for ONE patient.
		This case is recorded in the following
		categories:

Pain Management Encounter
Obstetrical management
 Cesarean delivery
 Analgesia for labor
 Anatomic category-abdominal
Regional techniques
 Management
 Actual Administration
Epidural
 Pain Management
 Anesthesia
Anesthesia time for the case should include
the patient assessment and preparation,
subsequent epidural catheter placement, and
any other face-to-face time with the patient.
The cumulative anesthesia time would include
both the labor epidural face-to-face time and
the intra-operative time during the cesarean
delivery. If the case proceeds to emergent
cesarean delivery, it would also count as an
emergency case.

CLINICAL EXPERIENCES	Interpretive Guidelines	Examples
		A student administers a spinal anesthetic for
		cesarean delivery and remains for the
		management of the case. This case is recorded
		in the following categories:
		Obstetrical management
		 Cesarean delivery
		Anatomic category-abdominal
		Regional techniques
		Management
		Anesthesia
		 Actual administration
		Spinal
		Anesthesia
		• If the case is an emergent cesarean delivery,
		it would also count as an emergency case.

CLINICAL EXPERIENCES	Interpretive Guidelines	Examples	
b. Analgesia for labor (10) [15]	Students performing a pre-anesthetic assessment, developing a plan of care, performing an intervention (e.g., epidural catheter placement), and providing care following the intervention, should count the experience as a case. The case is counted as a SINGLE case, and a SINGLE pain management encounter even if the student periodically returns to evaluate the patient and adjust the epidural dosing.	A student places an epidural catheter for labor pain management. The student provides care after placing the epidural for a period of time and periodically reassesses the patient, adjusting the dosing as indicated. This case is recorded as ONE case in the following categories: • Obstetrical management • Analgesia for Labor • Pain management encounter • Regional techniques • Management • Pain management • Actual administration • Epidural • Pain management	
	If the student only performs the intervention (i.e., another provider has performed the assessment and developed the plan of care), the student <u>does</u> <u>not</u> count the experience as a case, but <u>does</u> count the skills performed (e.g., epidural administration).	A student places an epidural catheter for lab pain management. Another anesthesia provider performed the preanesthetic assessment and patient preparation. The student's involvement was limited to performance of the procedure. The student would count this as neither an anesthetic case nor a pain management encounter, but would take credit for the clinical skills performed. The experience would be recorded in the following categories: • Regional techniques • Actual administration • Epidural • Pain management	

	When a student performs a combined spinal/epidural catheter placement, the student counts both procedures (i.e., spinal and epidural).	A student places a combined spinal/epidural catheter for labor pain management. This case is recorded in the following categories: • Obstetrical management • Analgesia for Labor • Pain management encounter • Regional techniques • Management • Pain management • Actual administration • Epidural
Pain Management Encounters <i>(see Glossary "Pain</i>	Pain management encounters are individual one-on-one patient interactions for	 Pain management O Actual administration Spinal Pain management A student is called to labor and delivery to
	the express purpose of intervening in an acute pain episode or a chronic pain condition. Pain management encounters must include a patient assessment prior to initiating a therapeutic action.	assess a patient for labor pain. The patient has a pre-existing lumbar epidural catheter.
	 Pain management encounters include, but are not limited to, the following: Initiation of epidural or intrathecal analgesia. Facilitation or initiation of patient controlled analgesia. Initiation of regional analgesia techniques for post-operative pain or other non-surgical pain conditions, including but not limited to, plexus blocks, local anesthetic infiltration of incisions, intercostal blocks, etc. Adjustment of drugs delivered, rates of infusion, concentration or dose parameters for an existing patient controlled analgesia or patient controlled epidural analgesia. Pharmacologic management of an acute pain condition in PACU. Trigger point injections. Electrical nerve stimulation. (see <i>Glossary, "Pain management encounters"</i>) 	 The student formulates a plan that includes increasing the dose of the analgesic being delivered by PCEA (patient-controlled epidural analgesia). The student would not count this as an anesthetic case. The experiences would be recorded in the following categories: Obstetrical management Analgesia for labor Pain management encounter Regional Techniques Management Pain Management

Administering an epidural for an esophagectomy for postoperative pain management may count as a regional technique-pain management and a pain management encounter.	The student is providing anesthesia for an esophagectomy, and places an epidural catheter for post-op pain management prior to induction of general anesthesia. Toward the end of the procedure, the student initiates the post-operative analgesia plan utilizing the epidural. The student records all typical case activities for the esophagectomy, and the following categories: • Pain management encounter • Regional Techniques • Actual Administration • Epidural • Pain Management • Management • Pain Management
Administering a spinal anesthetic for a cesarean delivery does not count as a pain management encounter. If the administration of regional anesthesia is the primary anesthetic technique for a surgical procedure, it does not constitute an acute pain management encounter. If a regional technique is used post-operatively for analgesia/acute pain management, and the student's participation meets the definition of a pain management encounter, then the experience may be counted as both a pain management encounter and a regional management- pain management experience.	 Pain Management The student administers a spinal anesthetic for cesarean delivery. The spinal drugs include a local anesthetic for surgical anesthesia and a long-acting opioid for post- operative analgesia. This would not count as a pain management encounter because it does not meet the definition of a pain management encounter. The long-acting opioid is part of the intraoperative anesthesia plan. However, three hours after the patient is discharged from the PACU, the student performs a post-operative patient assessment for pain management and determines the need for supplemental IV opioid (or any other intervention including no change in the plan). This interaction would be counted as a pain management encounter, but not an anesthetic case.

	The administration of regional anesthesia as the primary anesthetic technique for	recovery from the anesthetic, the patient is transferred to the nursing unit. Two hours later, the acute pain service is consulted for pain management. The same student who administered the intraoperative anesthetic is now asked to respond to the acute pain service consult request. The student evaluates the patient, develops a plan of care, and executes the plan. The student <u>does</u> count this as a pain management encounter. The student administers a spinal anesthetic in
T	ourposes of meeting minimal COA required clinical experiences. (see <i>Glossary,</i> <i>"Pain management encounters"</i>) The administration of analgesics (e.g., fentanyl) upon arrival in the PACU does not constitute a pain management encounter.	nurse. The student administers an opioid before leaving the bedside in response to the patient's complaints of pain. This <u>does not</u> count as a pain management encounter because the plan for immediate postoperative pain management is integral to all anesthetic plans. The student turns over the care of a patient to the PACU nurse. Following appropriate
а	The administration of intravenous analgesics as an adjunct to a general or regional anesthesia technique does not constitute a pain management encounter for	A student provides moderate sedation to a patient having a facet joint injection being performed by a physician anesthesiologist. The student is supervised by a CRNA or another physician anesthesiologist. This does not count as a pain management encounter. It does count as an anesthetic case. The student has transported the patient to the PACU, and is transferring care to the PACU

	Placement and/or initiation of a regional technique (e.g., epidural catheter, instillation of intrathecal opioids, peripheral nerve block) <u>not</u> being used as the primary anesthetic is counted as a regional technique, administration (if the student performs the procedure), and pain management (if the student initiates pain management care using a catheter placed by another provider). This would also be counted as a pain management encounter if the postoperative plan for analgesia is different than the intraoperative anesthesia plan.	The student places an epidural catheter for intraoperative anesthesia in a patient undergoing femoral-popliteal bypass. Toward the end of the procedure, the student initiates the post-operative analgesia plan utilizing the epidural by changing the epidural solution to a weak local anesthetic plus an opioid. The experiences would be recorded in the following categories: • Pain management encounter • Vascular • Regional Technique • Actual Administration • Epidural • Anesthesia • Management • Anesthesia • Pain Management This counts as a pain management encounter because the plan for immediate postoperative pain management is different than the intraoperative anesthetic plan. The student assesses the patient's pain throughout the intraoperative phase, and develops the postoperative pain management plan, and assesses its effectiveness postoperatively.
-	The total number cases recorded in anatomical categories will not add up to the total number of cases. Some cases will appropriately be recorded in two anatomic	Examples of cases that do not have a designated anatomical category include

¹ Count all that apply.

		categories where other cases may have no category at all. The list of anatomic categories is not an exhaustive list.	extremities, extrathoracic, perineal (e.g., colonoscopy), extracranial (e.g., ECTs), and routine pacemaker insertions.
Intra-abdominal		Abdominal procedures are defined as cases where the abdomen is entered via open or laparoscopic procedures.	Examples of intra-abdominal cases include total abdominal hysterectomy and radical prostatectomy. ERCP and other intestinal endoscopy cases would not be counted as intra-abdominal.
Intracranial (total of a & b)		Intracranial procedures are defined as cases where a procedure occurs within the brain.	An example of a closed case is anesthesia administered for a gamma knife procedure.
a. Open	• • • •	Open intracranial procedures are when the brain is accessed through the skull, or an incision from another anatomical area.	Open procedure examples include: Burr hole decompression and intracranial procedures via transphenoidal approach.
b. Closed		Closed intracranial procedures are when the brain is accessed percutaneously via catheter.	Examples of closed intracranial procedures include gamma knife procedures and percutaneous aneurysm coiling.

CLINICAL EXPERIENCES	Interpretive Guidelines	Examples
Oropharyngeal (20)	students obtain a variety of cases within this category. While a student could technically meet the requirements by providing anesthesia for 20 patients having	Bronchoscopy, esophagoscopy, ERCP, oral procedures (e.g., orthodontic/dental, tongue, uvea, palate, pharynx, tonsils, adenoids, bony fractures), trans oral cervical spine, odontectomy.
ntrathoracic (total of a, b, & c) (15) [40]	Intrathoracic procedures are defined as a procedure within the thorax where the thorax is surgically open or entered via laparoscope.	
a. Heart		
 Open Heart Cases (total of a & b) (5) [10] 		
a) With Cardiopulmonary Bypass		
b) Without Cardiopulmonary Bypass		Examples include off-pump coronary artery bypass and minimally invasive direct coronary artery bypass.
2. Closed Heart Cases [10]		Examples of closed heart cases include cardiac ablation, implanted cardioverter- defibrillator, transcatheter aortic valve replacement/implantation, transcatheter pulmonary valve replacement, perivalvular leak closure, percutaneous mitral valve repair, pacemaker lead extraction (lead over 1 year old), pulmonary artery/vein stent, and left atrial appendage closure device, and Lariat procedure. Cases that are not appropriate to count in this category are routine cardiac catheterizations and routine pacemaker insertions.
b. Lung (5)		Pulmonary artery thrombectomy, Video- assisted thoracic surgery (VATS) involving the lung. Simple insertion of a chest tube to treat pulmonary conditions is not counted as an intrathoracic procedure.

	Includes intrathoracic procedures performed either via open thoracotomy, thorascope, or percutaneous approaches that are not appropriate to count in other intrathoracic categories.	Examples include: mediastinoscopy; procedures on the esophagus, thymus, and diaphragm; and procedures on great vessels including the thoracic aorta (e.g., thoracic aneurysm repair via open thorax or endovascular stent placement) or vena cava (e.g., open repair of vena cava or Greenfield filter placement).
leck (5) [10]		Tracheostomy
leuroskeletal (20)		
ascular (10) [30]		Examples include endovascular aortic stents and other open or percutaneous procedures performed on vascular structures.
Nethods of Anesthesia		
ieneral anesthesia (400)		
minimal or no assistance [†] (50)[100] i	The student is provided the opportunity to conduct a general anesthetic induction, including applying standard monitoring, preoxygenating, selecting and administering induction medications, and managing the airway and ventilation with minimal or no assistance from the supervising CRNA or physician anesthesiologist. The plan of care is always approved by the supervising CRNA and/or physician anesthesiologist.	The student is performing an induction and is having trouble maintaining a seal of the face mask on the patient's face. The instructor provides verbal guidance to the student on mask management, and the student then makes an adjustment and continues with the induction.
8 1 1 1	The program establishes how to verify the student was given the opportunity to perform a general anesthetic induction with minimal or no assistance from the supervising CRNA or anesthesiologist. "Minimal" assistance is considered limited verbal advice or reinforcement from the supervising CRNA or physician anesthesiologist. One method is for the student to note this on the daily evaluation and the supervising CRNA or physician anesthesiologist indicates agreement by their signature on the daily evaluation. Note that students cannot count any procedure unless they personally perform the procedure. The program will need to justify any questionable counting of cases by identifying the student's level of participation and learning outcomes achieved.	The student may require multiple verbal interventions and the student may be rated as not meeting clinical expectations in performing a general anesthetic induction. The student was still provided the OPPORTUNITY to conduct the general anesthetic induction and this would still be counted as a "case" (Perform a general anesthetic induction with minimal or no supervision). As with all clinical case requirement, the requirement offers the student an opportunity to learn and be
-		As with all clinical case

			a clinical case requirement does not indicate the student's level of performance regarding that clinical case requirement. The faculty must evaluate the student's level of performance consistent with the program's evaluation process.
Inhalation induction	(25) [40]		
Mask management ²		A general anesthetic that is administered by mask, exclusive of induction. Mask management should be counted when it is used for induction <u>and</u> maintenance of anesthesia. Mask management should <u>not</u> be counted when it is just used only for induction.	A student induces general anesthesia and subsequently administers a non-depolarizing muscle relaxant. The student ventilates the patient via facemask awaiting onset of the muscle relaxant. Following onset of the muscle relaxant, the student places an endotracheal tube. This does not count as mask management.
			A student induces general anesthesia using a total intravenous anesthesia technique for a short procedure (e.g., ECT, cardioversion). The airway is managed via facemask, with or without an oral airway. This <u>does</u> count as mask management.
Supraglottic airway devices (tot	al of a & b)		
	(35) [50]		
a. Laryngeal Mask			A student inserts a laryngeal mask and then performs a laryngeal mask-guided endotracheal intubation. The experiences would be recorded in the following categories.
			 Supraglottic airway devices Laryngeal mask
			Tracheal intubation
			o Oral
			 Alternative tracheal intubation techniques

² <u>A general anesthetic that is administered by mask, exclusive of induction.</u> COA Guidelines for Counting Clinical Experiences

		o Other techniques
b. Other		Includes but not limited to: cuffed oropharyngeal tubes with esophageal cuffs, cuffed oropharyngeal tubes without esophageal cuffs, and cuffless anatomically shaped pharyngeal tubes.
Tracheal intubation (total of a & b) (250)	Tracheal intubation may only count towards case number requirements if the student is successful at placing the endotracheal tube. Unsuccessful attempts at intubation may not be counted.	
a. Oral		A student performs a direct laryngoscopy and is unable to pass the endotracheal tube, or inadvertently intubates the esophagus. This experience may not be counted as a tracheal intubation. A student successfully places an endotracheal tube using an alternative method such as a videolaryngoscope. The experiences would be recorded in the following categories: • Tracheal intubation o Oral • Alternative tracheal intubation techniques o Other techniques
b. Nasal [5]		
Alternative tracheal intubation/endoscopic techniques ³ (25) [50] (total of a & b) <i>(see Glossary "Alternative</i> <i>tracheal intubation techniques")</i>	Alternative tracheal intubation techniques include, but are not limited to fiberoptic intubation, light wand, retrograde tracheal intubation, transtracheal jet ventilation, gum elastic bougie/tracheal tube changer, LMA guided intubation, cricothyroidotomy, video assisted laryngoscopy, etc.	The student uses a video laryngoscope (e.g., GlideScope, McGrath), to insert an endotracheal tube. Since the GlideScope and McGrath are both rigid, these experiences would be recorded under b. Other Techniques.
	Airway endoscopy is the skillful manipulation of a flexible endoscopic instrument into the airway cavity. It requires familiarity with the anatomy of the airway and is	

³ Tracheal intubations accomplished via alternative techniques should be counted in both tracheal intubation and the alternative tracheal intubation categories.

⁴ Simple models and simulated experiences may be used to satisfy part of this requirement. No clinical experiences can be obtained by simulation alone.

	performed for purposes of preoperative evaluation or airway management. Devices utilized for airway endoscopy include but are not limited to fiberoptic bronchoscopes, non-fiberoptic bronchoscopes, flexible fiberoptic and non- fiberoptic videoscopes.	
1. Actual tracheal tube placement	Placement of a tracheal tube in a human patient using a flexible endoscope.	
2. Simulated tracheal tube placement	Placement of a tracheal tube in simulated patient (i.e., human patient simulator or task trainer). Simulated experiences may satisfy part, but not all, of the required five (5) experiences in endoscopic techniques.	
3. Airway assessment	Airway assessment via flexible endoscopic bronchoscopy may be performed to evaluate the anatomy of the airway for patency and/or assure optimal ventilatory mechanics. Airway assessment with a flexible endoscope via an <i>in situ</i> endotracheal or endobronchial tube does not count toward the required five (5) endoscopic techniques.	 Examples of experiences that may be counted in this category include: Verification of proper placement of an endotracheal tube, endobronchial tube, or bronchial blocker. Determination of the patency of airway devices and the need for repositioning or replacement. Airway assessment for: Vocal cord function Presence of airway injury or disease (e.g., perforation, stenosis) Readiness for extubation Removal of a foreign body or other tracheal debris (e.g., mucous plug)

CLINICAL EXPERIENCES		Interpretive Guidelines	Examples
b. Other techniques	(5) [25]	The placement of supraglottic airway devices is not included in this category because it is counted in the Supraglottic airway devices category. However, if a tracheal tube is advanced into the trachea via the supraglottic airway device, the experience would be counted in this category.	Examples of experiences that may be counted in this category include; light wand, retrograde tracheal intubation, transtracheal jet ventilation, gum elastic bougie/tracheal tube changer, laryngeal mask airway guided intubation, cricothyroidotomy, and video assisted laryngoscopy.
Emergence from anesthesia	(300)		
Regional techniques		A minimum number of regional anesthetics is required to ensure all graduates have experience with each regional anesthetic technique. While a minimum number of experiences is required in each regional technique sub-category, the total number of regional techniques can include a variety of combinations provided they meet both the requirement for the subcategory and the total required regional	A student who administers ten (10) spinals, ten (10) epidurals and fifteen (15) peripheral blocks would meet the required case numbers [10+10+15=35].
		techniques. As long as students administer no fewer than ten (10) spinals, ten (10) epidurals and ten (10) peripheral blocks, the remaining five additional techniques required can be all of one technique or any combination of techniques totaling thirty- five (35).	A student who administered fourteen (14) spinals, sixteen (16) epidurals and five (5) peripheral blocks would not meet the required case numbers [14+16+5=35]. The student would need 5 more peripheral blocks to meet the required case numbers.
			A student who administers 38 spinals, 42 epidurals, and 9 peripheral blocks would <u>not</u> meet the required case numbers

CLINICAL EXPERIENCES		Interpretive Guidelines	Examples
			[38 + 42 + 9 = 89]. The student would need 1
			more peripheral block to meet the required
			case numbers. Remember that simulation can
			be used to meet some, but not all, of the
			required peripheral blocks.
Actual Administration (total of a,			
	(35)		
a. Spinal (total of 1 & 2)	(10) [50]		
1. Anesthesia			
2. Pain management			
b. Epidural (total of 1 & 2)	(10) [50]		
1. Anesthesia			
2. Pain management			
c. Peripheral ⁵ (total of 1&2)	(10) [50]		
1. Anesthesia			
Upper			
Lower			
2. Pain management			
Upper			
Lower			
d. Other ⁶ (total of 1 & 2)			
1. Anesthesia			
2. Pain management			
Management (total of 1 & 2)	(35) [50]		
1. Anesthesia			
2. Pain management			
Moderate/deep sedation	(25) [50]	"Monitored Anesthesia Care, or MAC Anesthesia" is not synonymous with	If a student provides anesthesia care (e.g.,
		moderate/deep sedation. MAC Anesthesia describes an anesthesia service in which	preanesthetic evaluation, intraoperative

COA Guidelines for Counting Clinical Experiences

 ⁵ Simple models and simulated experiences may be used to satisfy part of this requirement. No clinical experiences can be obtained by simulation alone.
 ⁶ Examples include truncal, cutaneous, head, and neck blocks (e.g., transversus abdominis plane, rectus sheath, ilioinguinal, iliohypogastric, oral, and maxillofacial blocks).

a licensed anesthesia provider participates in the care of a patient undergoing a	monitoring), but does not administer any
procedure. The term MAC is not included in the standards because it does not	medications, the experience will count as an
define any particular level of sedation. The American Society of Anesthesiologists, n their "Continuum of Depth of Sedation," publishes the following definitions.	anesthetic case, but does not count as moderate/deep sedation.
Minimal sedation/anxiolysis is a drug- induced state of anxiolysis in which batients are able to respond normally to verbal commands.	If a student administers oral midazolam or perhaps nitrous oxide for IV placement, or intravenous midazolam for removal of external fixation device, and the patient remains able to respond normally to verbal commands. The experience will count as an anesthetic case, but does not count as moderate/deep sedation.
Moderate sedation/analgesia ("Conscious Sedation") refers to a drug-induced depression of consciousness during which patients respond purposefully to verbal	A student administers a sedative, narcotic and/or anxiolytic medication for an inguinal
commands, either alone or accompanied by minimal tactile stimulation. No	hernia repair. The patient has decreased
nterventions are required to maintain a patent airway and spontaneous ventilation s adequate.	level of consciousness, but awakens either to voice command or when touched lightly on the shoulder. The patient appropriately follows verbal commands. The airway is patent and ventilation is adequate. This experience is counted in this category.
	Administering sedative, narcotic and/or anxiolytic medication for a patient receiving a forearm surgery with a regional block in place. The patient has decreased level of consciousness, but awakens either to voice command or when touched lightly on the shoulder. The patient appropriately follows verbal commands. The airway is patent and ventilation is adequate. This experience is counted in this category.
Deep sedation is a drug-induced depression of consciousness during which	A student is administering midazolam and

		patients cannot be easily aroused, but respond purposefully following repeated or painful stimulation. The ability to independently maintain ventilatory function may be impaired. Patients may require assistance in maintaining a patent airway, and spontaneous ventilation may be inadequate. Reflex withdrawal from a painful stimulus is not considered a purposeful response.	liberal doses of fentanyl in preparation for flexible videoscopic intubation. The patient requires a jaw lift to achieve a respiratory rate of 6 per minute, and responds purposely to deep tactile stimulation (i.e., does not respond to verbal or light tactile stimuli). This experience is counted in this category.
		General Anesthesia is a drug-induced loss of consciousness during which patients are not arousable, even by painful stimulation. The ability to independently maintain ventilatory function is often impaired. Patients often require assistance in maintaining a patent airway, and positive pressure ventilation may be required because of depressed spontaneous ventilation or drug-induced depression of neuromuscular function. Cardiovascular function may be impaired.	A student is administering propofol for a colonoscopy. The patient requires a jaw lift to achieve a patent airway, has a respiratory rate of 6 per minute, and is not responsive to deep painful stimulation. The patient does not respond as the proceduralist performs the colonoscopy. The patient is under general anesthesia. This clinical experience is not counted in the moderate/deep sedation category; rather, it is counted as a general anesthetic.
Arterial Technique			
	(25)		
	• •	This category is used anytime an arterial catheter is used to monitor arterial waveforms and other clinical variables.	Examples include standard arterial lines, as well as newer technologies that employ arterial lines such as FloTrac sensor (with either Vigileo or EV1000 platform), VolumeView sensor (with TruWave transducer and EV1000 platform), LiDCOplus, PiCCO.
Central Venous Catheter		Insertion of a central venous catheter is distinctly different from inserting a pulmonary artery catheter. These experiences are recorded in separate categories.	
Placement ⁷ – Non-PICC (total of a & b) (10)[2	15]		
	[5]	The placement of an introducer qualifies as a central venous catheter insertion. If	

⁷ Simple models and simulated experiences may be used to satisfy this requirement. For students enrolled on or after January 1, 2020, no clinical experiences can be obtained by simulation alone. Insertion of Peripherally-Inserted Central Catheters (PICC) do not meet the requirements for Central Line Placement.

Placement	[5]		
Pulmonary Artery Catheter			
Monitoring	(15)	This category is used anytime a central venous catheter is used to monitor central venous waveforms and other clinical variables. Monitoring right atrial pressure with a pulmonary artery catheter is counted under pulmonary artery catheter monitoring, not under this category.	Examples include standard central venous catheters, as well as newer technologies that employ central venous lines such as VolumeView sensor (with TruWave transducer and EV1000 platform) and PiCCO. It is anticipated that others will be available in the future.
b. Simulated			
a. Actual			
Placement – PICC (total of a & b)		Insertion of a Peripherally-Inserted Central Catheters (PICC) does not meet the requirement for Central Venous Catheter Placement.	
		For students enrolled on or after January 1, 2020, no clinical experiences can be obtained by simulation alone.	
b. Simulated		both a central venous catheter insertion and a pulmonary artery catheter insertion. The student should perform the procedure including insertion and directing of the needle. Assistance can be provided, but the procedure must be performed by the student. Simple models and simulated experiences may be used to satisfy this requirement.	
		the student also floats a pulmonary artery catheter, the student would count it as	

CLINICAL EXPERIENCES	Interpretive Guidelines	Examples
Monitoring	[10] This category includes invasive monitoring using a pulmonary artery catheter.	
Other		
Ultrasound guided techniques (total of a &	b) (20) ⁺	
a. Regional	(10) [†] Regional includes neuraxial, truncal, and peripheral nerve blocks. No clinical experiences can be obtained by simulation alone.	
1. Actual regional ⁺		
2. Simulated regional [†]		
b. Vascular	(10) [†] This includes both central and peripheral vascular structures. Vascular includes arterial, peripherally inserted central catheters, central venous, and peripheral access. No clinical experiences can be obtained by simulation alone.	
1. Actual vascular [†]		
2. Simulated vascular [†]		
Point of Care Ultrasound (POCUS) [†]	Refers to the use of portable ultrasonography at a patient's bedside for diagnostic (e.g., symptom or sign-based examination) purposes. This is exclusive of using ultrasound for image-guidance purposes such as for regional anesthesia or vascular access.	Under appropriate supervision, the student uses ultrasound to assess cardiac function and/or gastric volume preoperatively.
		Under appropriate supervision, the student uses tranesophageal ultrasound intraoperatively to assess fluid status and/or cardiac function.
a. Actual [†]		
b. Simulated [†]		
Intravenous catheter placement	(100)	If an intravenous catheter is placed using ultrasound, the procedure would be counted in this category, and also in:
		 Other Olltrasound guided b. Vascular
Advanced noninvasive hemodynamic moni	toring Newer <u>non-invasive</u> technologies have emerged as reliable methods to monitor cardiac output and other hemodynamic variables. The data derived from the various technologies are useful in determining appropriate patient management.	Examples include the Venus 1000, NiCO ₂ , BioZ CardioProfile, NICOM, ClearSight, and USCOM. It is anticipated that others will be available in the future.

Assessment of chest X-ray [†]	(5) [10]	The expectation is that the student accurately recognizes normal and abnormal findings on chest x-rays that may have immediate perianesthetic implications (e.g., pneumothorax, pulmonary edema) along with evaluating proper positioning of various tubes (e.g., endotracheal tubes, chest tubes) and invasive vascular access lines (e.g., central venous catheters). One "case" should be counted as the evaluation of one chest x-ray and student's evaluation is assessed. The chest x-ray source can be a current or past patient or from an institutional or commercial library of chest x-rays. This experience can be gained in a healthcare institution, classroom, simulation center, or by using online resources.	The student completes an online learning module where the approach to evaluating chest x-rays is presented. The module also asks the student to evaluate a number of chest x-rays. A faculty member assesses the student's evaluation of the chest x-rays. This may be done by the faculty reviewing the student's score on a post-test. The student is assigned to the postanesthesia care unit. Under appropriate supervision, the student intubates a patient in respiratory distress. A chest x-ray is done post-procedure. The supervising provider and the student evaluates the chest x-ray. The supervising provider asks the student about their evaluation of chest x-ray such as if the endotracheal tube is properly placed and if there are any other findings with peri- anesthetic implications.
			Students are asked in the classroom or in the simulation laboratory to evaluate chest x-rays obtained from private or public sources.

⁺ Effective for all students matriculating into an accredited program on or after January 1, 2022.