

# Obstetric Anesthesiology Milestones

The Accreditation Council for Graduate Medical Education



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# Obstetric Anesthesiology Milestones

The Milestones are designed only for use in evaluation of fellows in the context of their participation in ACGME-accredited residency or fellowship programs. The Milestones provide a framework for the assessment of the development of the fellow in key dimensions of the elements of physician competence in a specialty or subspecialty. They neither represent the entirety of the dimensions of the six domains of physician competency, nor are they designed to be relevant in any other context.

### **Obstetric Anesthesiology Milestones Work Group**

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American Board of Anesthesiology

**Review Committee for Anesthesiology** 

## **Understanding Milestone Levels and Reporting**

This document presents the Milestones, which programs use in a semi-annual review of fellow performance, and then report to the ACGME. Milestones are knowledge, skills, attitudes, and other attributes for each of the ACGME Competencies organized in a developmental framework. The narrative descriptions are targets for resident/fellow performance throughout their educational program.

Milestones are arranged into levels. Tracking from Level 1 to Level 5 is synonymous with moving from novice to expert fellow in the specialty or subspecialty. For each reporting period, the Clinical Competency Committee will review the completed evaluations to select the milestone levels that best describe each learner's current performance, abilities, and attributes for each subcompetency.

These levels *do not* correspond with post-graduate year of education. Depending on previous experience, a junior fellow may achieve higher levels early in the educational program just as a senior fellow may be at a lower level later in the educational program. There is no predetermined timing for a resident to attain any particular level. Fellows may also regress in achievement of their milestones. This may happen for many reasons, such as over scoring in a previous review, a disjointed experience in a particular procedure, or a significant act by the fellow.

Selection of a level implies the fellow substantially demonstrates the milestones in that level, as well as those in lower levels (see the diagram on page v).

### **Additional Notes**

Level 4 is designed as a graduation *goal* but *does not* represent a graduation *requirement*. Making decisions about readiness for graduation and unsupervised practice is the purview of the program director. Furthermore, Milestones 2.0 include revisions and changes that preclude using Milestones as a sole assessment in high-stakes decisions (i.e., determination of eligibility for certification or credentialing). Level 5 is designed to represent an expert fellow whose achievements in a subcompetency are greater than the expectation. Milestones are primarily designed for formative, developmental purposes to support continuous quality improvement for individual learners, education programs, and the specialty. The ACGME and its partners will continue to evaluate and perform research on the Milestones to assess their impact and value.

Some milestone descriptions include statements about performing independently. These activities must occur in conformity to ACGME supervision guidelines as described in the Program Requirements, as well as to institutional and program policies. For example, a fellow who performs a procedure independently must, at a minimum, be supervised through oversight.

A Supplemental Guide is also available to provide the intent of each subcompetency, examples for each level, assessment methods or tools, and other available resources. The Supplemental Guide, like examples contained within the Milestones, is designed only to assist the program director and Clinical Competency Committee and is not meant to demonstrate any required element or outcome.

Supplemental Guides and other resources are available on the Milestones page of each specialty section of the ACGME website. On <a href="https://www.acgme.org">www.acgme.org</a>, choose the applicable specialty under the "Specialties" menu, then select the "Milestones" link in the lower navigation bar.

The diagram below presents an example set of milestones for one sub-competency in the same format as the ACGME Report Worksheet. For each reporting period, a fellow's performance on the milestones for each sub-competency will be indicated by selecting the level of milestones that best describes that fellow's performance in relation to those milestones.

Patient Care 1: Technical Skills in Obstetric Anesthesiology					
Level 1	Level 2	Leve	13	Level 4	Level 5
Consistently, safely, and efficiently performs neuraxial anesthesia with minimal complications in low-risk patients	Troubleshoots and manages problems or complications associated with neuraxial anesthesia, with assistance (e.g., provides effective analgesia and anesthesia)	and e neura include neura high- paties	istently, safely, efficiently performs exial anesthesia, ding use of exial ultrasound, in risk or complex ents and/or gent situations	Independently troubleshoots and manages problems or complications associated with neuraxial anesthesia	Serves as a consultant for initiation, management, and troubleshooting of technically challenging neuraxial anesthesia
Consistently, safely, and efficiently performs general anesthesia with minimal complications in low-risk patients and identifies patients who need modification of plan for general anesthesia	Safely provides general anesthesia in emergent clinical situations	adva includ mana	onstrates nced airway skills, ding the agement of a ult airway	Consistently, safely, and efficiently performs general anesthesia with minimal complications in high-risk or complex patients, including airway management	Serves as a consultant for management of complex general anesthetics of a pregnant patient
		$\mathbb{Q}^{-}$			
Comments:				Not Yet C Not Yet A	ompleted Level 1
Selecting a response box in the			Selecting a response box on the line in		
middle of a level implies that				s indicates that milest	
milestones in that level and in lower levels have been substantially				have been substanti as well as <b>some</b>	ally
demonstrated.	ii substantially			he higher level(s).	

Patient Care 1: Technical Skills in Obstetric Anesthesiology				
Level 1	Level 2	Level 3	Level 4	Level 5
Consistently, safely, and efficiently performs neuraxial anesthesia with minimal complications in low-risk patients	Troubleshoots and manages problems or complications associated with neuraxial anesthesia, with assistance (e.g., provides effective analgesia and anesthesia)	Consistently, safely, and efficiently performs neuraxial anesthesia, including use of neuraxial ultrasound, in high-risk or complex patients and/or emergent situations	Independently troubleshoots and manages problems or complications associated with neuraxial anesthesia	Serves as a consultant for initiation, management, and troubleshooting of technically challenging neuraxial anesthesia
Consistently, safely, and efficiently performs general anesthesia with minimal complications in low-risk patients and identifies patients who need modification of plan for general anesthesia	Safely provides general anesthesia in emergent clinical situations	Demonstrates advanced airway skills, including the management of a difficult airway	Consistently, safely, and efficiently performs general anesthesia with minimal complications in high-risk or complex patients, including airway management	Serves as a consultant for management of complex general anesthetics of a pregnant patient
Comments:  Not Yet Completed Level 1  Not Yet Assessable				

Patient Care 2: Triage and Coordination of Obstetric Anesthesia Care				
Level 1	Level 2	Level 3	Level 4	Level 5
Identifies risk factors that may predispose patients to common medical or obstetric complications and develops a comprehensive anesthetic plan for patients requiring routine care	Identifies risk factors that may predispose patients to complex or uncommon medical or obstetric complications and identifies the need for additional evaluation	Formulates and tailors anesthetic plans that include consideration of medical, obstetric, and anesthetic risk factors, as well as patient preference and available resources, for patients requiring complex care	Adapts the anesthetic plan to balance the ethical and other wellbeing considerations for the infant and the mother in complex clinical situations	Designs and implements multidisciplinary institutional protocols for efficient diagnosis and coordination of care for pregnant patients with specific high-risk conditions
Defines clinically appropriate priorities when caring for multiple obstetric patients and identifies limited resources	Coordinates and works cooperatively with other members of the obstetric anesthesia care team	Directs resources to optimize care for multiple patients simultaneously	Proactively advocates for and directs resources to optimize care for multiple patients with complex needs simultaneously	Develops policies and procedures with the interprofessional team to address high patient workload and other institutional barriers to care
Comments:  Not Yet Completed Level 1  Not Yet Assessable				

Patient Care 3: Crisis Management for the Obstetric Patient				
Level 1	Level 2	Level 3	Level 4	Level 5
Participates as a member of the crisis response team; constructs appropriately prioritized differential diagnoses that include the most likely etiologies for common, acute clinical deterioration; and initiates appropriate therapy	Participates as a member of the crisis response team; constructs appropriately prioritized differential diagnoses that include the most likely etiologies for uncommon, acute clinical deterioration; and initiates appropriate therapy	Develops and executes a plan to manage uncommon clinical crises in a patient with complex comorbidities	Assumes leadership of a crisis response team	Serves as a consultant in critical situations, and is a resource to others in the care team
Recognizes and initiates treatment of common anesthetic complications and adverse events	Recognizes major anesthetic complications, and participates in the multi- disciplinary management team	Directs the management of major anesthetic complications	Organizes resources for interdisciplinary and interprofessional management of patient complications	Designs and implements institutional policies and protocols for the management of anesthetic complications and crises
Comments:	Comments:  Not Yet Completed Level 1  Not Yet Assessable			

Patient Care 4: Antepartum Consultation, Assessment, and Peri-Anesthetic Care Planning				
Level 1	Level 2	Level 3	Level 4	Level 5
Performs an assessment and formulates a plan for pregnant patients, including common issues that impact obstetric anesthesia care	Performs an assessment and formulates an anesthetic plan for complex pregnant patients	Performs an assessment and formulates an anesthetic plan for critically ill pregnant patients	Advises the multidisciplinary team and integrates the anesthetic plans into the care of medically complex and critically ill obstetric patients	Coordinates the multidisciplinary team involved in the care of medically complex and critically ill obstetric patients
Describes the use of a consultation and lists useful resources	For simple consultations, delineates the clinical question, obtains additional clinical information, can access available resources, recommends next steps, and completes documentation, with assistance	For complex consultations, delineates the clinical question, obtains additional clinical information, applies relevant resources, and recommends next steps with assistance; manages simple consultations independently	Manages complex consultations independently, including addressing conflicting management goals with comprehensive, timely documentation of findings and recommendations	Is recognized as an expert in providing comprehensive consultations
Comments:  Not Yet Completed Level 1  Not Yet Assessable				

Patient Care 5: Point-of-Care Ultrasound for Obstetric Patients				
Level 1	Level 2	Level 3	Level 4	Level 5
Independently selects proper ultrasound equipment and settings for indicated scenarios and conducts and interprets point-of-care ultrasound	Uses point-of-care ultrasound to identify common problems	Uses point-of-care ultrasound to assess clinically complex situations	Expertly uses point-of- care ultrasound to diagnose and develop a management plan	Participates in the development of institutional protocols for point-of-care ultrasound
Identifies neuraxial anatomy on ultrasound	Uses ultrasound to identify interspinous spaces and the midline in patients with uncomplicated neuraxial anatomy	Uses ultrasound to identify interspinous spaces and the midline in patients with complex neuraxial anatomy	Expertly uses ultrasound to identify interspinous spaces and the midline in patients with complex neuraxial anatomy	Promotes the use of neuraxial ultrasound for new and emerging indications
	Uses ultrasound for performance of truncal blocks in patients with uncomplicated anatomy	Uses ultrasound for performance of truncal blocks in patients with complex anatomy	Expertly uses ultrasound for performance of truncal blocks in patients with complex anatomy	
Comments:  Not Yet Completed Level 1  Not Yet Assessable				

Level 1	Level 2	Level 3	Level 4	Level 5
Demonstrates knowledge of the implications of altered maternal anatomy and physiology for the anesthetic care of healthy patients	Demonstrates knowledge of the anesthetic implications of altered maternal anatomy and physiology for the care of patients with coexisting medical conditions (e.g., human immunodeficiency virus (HIV), cardiac disease, pulmonary hypertension)	Demonstrates knowledge of the evidence base that underpins anesthetic management of common and complex conditions	Integrates knowledge of maternal anatomy, physiology, and the obstetric management plan to develop an anesthetic management plan for a patient with coexisting disease	Integrates knowledge of maternal anatomy, physiology, and the obstetric management plan to serve as a consultant in obstetric anesthesiology
Demonstrates knowledge of obstetric management, including indications for delivery and expected complications, in healthy, low-risk patients	Demonstrates knowledge of obstetric management, including indications for delivery and expected complications, in patients with complex comorbidities	Demonstrates knowledge of the evidence base that underpins obstetric management of common and complex conditions	and obstetric comorbidities	

Medical Knowledge 2: Obstetrics and Neonatology Knowledge Applied to Obstetric Anesthesiology				
Level 1	Level 2	Level 3	Level 4	Level 5
Demonstrates basic knowledge of normal newborn physiology	Demonstrates basic knowledge of abnormal newborn physiology	Demonstrates comprehensive knowledge of normal and abnormal newborn physiology	Demonstrates knowledge of how newborn physiology impacts delivery planning	Exhibits detailed and up-to-date knowledge of current research in obstetrics and neonatology
Demonstrates knowledge of the impact of anesthesia on the mother and fetus	Demonstrates knowledge of the medically complex neonate and how it impacts the anesthetic plan	Integrates knowledge of the medically complex neonate into the development of the anesthetic plan	Works collaboratively with the multidisciplinary team to prioritize anesthetic, obstetric, and neonatal considerations of the medically complex mother-fetal dyad	Serves as a consultant for fetal surgery
Demonstrates knowledge of basic fetal heart rate patterns	Demonstrates knowledge of measures of fetal well-being (e.g., biophysical profile)	Demonstrates knowledge of how fetal well-being data impacts delivery planning	Incorporates data about fetal well-being in the development of an anesthetic plan	Serves as a consultant in the development of an anesthetic plan for fetal well-being
Comments:  Not Yet Completed Level 1  Not Yet Assessable				

Systems-Based Practice 1: Patient Safety and Quality Improvement in Obstetric Anesthesiology					
Level 1	Level 2	Level 3	Level 4	Level 5	
Demonstrates knowledge of common events that impact patient safety	Identifies system factors that lead to patient safety events	Participates in analysis of patient safety events (simulated or actual)	Conducts analysis of patient safety events and offers error prevention strategies (simulated or actual)	Actively engages teams and processes to modify systems to prevent patient safety events	
Demonstrates knowledge of how to report patient safety events	Reports patient safety events through institutional reporting systems (simulated or actual)	Participates in disclosure of patient safety events to patients and patients' families (simulated or actual)	Discloses patient safety events to patients and patients' families (simulated or actual)	Acts as a role model or mentors others in the disclosure of patient safety events	
Demonstrates knowledge of basic quality improvement methodologies and metrics	Describes departmental quality improvement initiatives	Participates in department quality improvement initiatives	Demonstrates the skills required to identify, develop, implement, and analyze a quality improvement project	Creates, implements, and assesses quality improvement initiatives at the institutional level or above	
Comments:  Not Yet Completed Level 1					

Level 1	Level 2	Level 3	Level 4	Level 5
Demonstrates knowledge of care coordination	Coordinates care of patients in routine clinical situations effectively using the roles of interprofessional team members	Coordinates care of patients in complex clinical situations effectively using the roles of interprofessional team members	Role models effective coordination of patient-centered care among different disciplines and specialties	Analyzes the process of care coordination and participates in the design and implementation of improvements
Identifies and performs key elements for safe and effective transitions of care and hand-offs	Identifies and performs safe and effective transitions of care/hand-offs in routine clinical situations	Performs safe and effective transitions of care/hand-offs in complex clinical situations	Role models and advocates for safe and effective transitions of care/hand-offs within and across health care delivery systems	Improves quality of transitions of care within and across health care delivery systems to optimize patient outcomes
Demonstrates knowledge of population and community health needs and inequities	Identifies specific population and community health needs and inequities for the local population	Uses institutional resources effectively to meet the needs of a patient population and community	Participates in changing and adapting practice to provide for the needs of specific populations	Advocates for populations and communities with health care inequities in the peri-operative setting

Systems-Based Practice 3: Physician Role in Health Care Systems in Obstetric Anesthesiology				
Level 1	Level 2	Level 3	Level 4	Level 5
Identifies key components of the complex health care system (e.g., hospital, finance, personnel, technology)	Describes how components of a complex health care system are interrelated, and how they impact patient care	Discusses how individual practice affects the broader system (e.g., length of stay, readmission rates, clinical efficiency)	Manages various components of the complex maternal health care system to provide efficient and effective patient care and transitions of care	Advocates for or leads systems change that enhances high-value, efficient, and effective maternal-fetal care
States factors impacting the costs of anesthetic care	Documents anesthetic detail to facilitate accurate billing and reimbursement	Explains the impact of documentation on billing and reimbursement	Practices and advocates for costeffective maternal patient care	Engages in external activities related to advocacy for costeffective maternal care
Comments:  Not Yet Completed Level 1				

Practice-Based Learning and Improvement 1: Evidence-Based Practice and Scholarship in Obstetric Anesthesiology				
Level 1	Level 2	Level 3	Level 4	Level 5
Completes assigned/ recommended readings and reviews literature related to specific patient problems	Critically evaluates the scientific literature and understands limitations in addressing clinical issues	Independently integrates evidence-based practices into clinical care	Participates in development of evidence-based clinical protocols and guidelines	Participates in editorial reviews and other scholarly activity for peer-reviewed medical journals
Participates in journal clubs, morbidity and mortality conferences, and other educational activities	Uses self-directed literature review to modify patient care	Participates in scholarly activity related to the subspecialty	Disseminates scholarly activity (e.g., abstract presentation, manuscript submission)	Participates in and leads professional society and other activities to advance scholarship
Comments:  Not Yet Completed Level 1				

Practice-Based Learning and Improvement 2: Reflective Practice and Commitment to Personal Growth in Obstetric Anesthesiology				
Level 1	Level 2	Level 3	Level 4	Level 5
Accepts responsibility for personal and professional development by establishing goals	Demonstrates openness to performance data (feedback and other input) to inform goals	Seeks performance data episodically, with adaptability and humility	Intentionally seeks performance data consistently, with adaptability and humility	Role models consistently seeking performance data with adaptability and humility
Identifies the factors that contribute to performance deficits	Analyzes and acknowledges the factors that contribute to performance deficits	Institutes behavioral change(s) to improve performance	Considers alternatives to improve performance	Models reflective practice
Actively seeks opportunities to improve	Designs and implements a learning plan, with prompting	Independently creates and implements a learning plan	Integrates performance data to adapt the learning plan	Facilitates the design and implementation of learning plans for others
Comments:  Not Yet Completed Level 1				

Practice-Based Learning and Improvement 3: Mentorship and Teaching in Obstetric Anesthesiology					
Level 1	Level 2	Level 3	Level 4	Level 5	
Demonstrates self- awareness and identifies gaps in knowledge, skills, and experience; incorporates feedback	Teaches medical students, residents, and patients in informal settings; seeks faculty mentorship for self	Teaches health professionals in formal settings (e.g., nursing in-service training, residency teaching conference); mentors medical students	Organizes educational activities at the program level; mentors residents and other health care professionals	Designs and implements clinical rotations, curricula, or learning and assessment tools; models and teaches mentoring to others	
Comments:  Not Yet Completed Level 1					

Level 1	Level 2	Level 3	Level 4	Level 5
Identifies potential triggers for professionalism lapses	Demonstrates insight into professional behavior in routine situations	Demonstrates professional behavior in complex or stressful situations	Recognizes situations that may trigger professionalism lapses and intervenes to prevent lapses in oneself	Coaches others when their behavior fails to meet professional expectations
Describes when and how to report lapses in professionalism	Takes responsibility for one's own professionalism lapses	Recognizes need to seek help in managing and resolving complex interpersonal situations	Actively solicits help and acts on recommendations to resolve complex interpersonal situations	
Demonstrates knowledge of the ethical principles underlying patient care	Analyzes straightforward situations using ethical principles	Analyzes complex situations using ethical principles	Recognizes and uses resources for managing and resolving ethical dilemmas	Identifies and seeks to address system-level factors that induce or exacerbate ethical problems or impede their resolution

Professionalism 2: Accountability/Conscientiousness in Obstetric Anesthesiology				
Level 1	Level 2	Level 3	Level 4	Level 5
Responds promptly to requests or reminders to complete tasks	Performs tasks and responsibilities in a timely manner	Performs tasks and responsibilities in a timely manner with appropriate attention to detail in routine situations	Prioritizes tasks and responsibilities in a timely manner with appropriate attention to detail in complex or stressful situations	
Takes responsibility for failure to complete tasks	Recognizes situations that may impact one's own ability to complete tasks and responsibilities in a timely manner	Takes responsibility for tasks not completed in a timely manner and identifies strategies to prevent recurrence	Proactively implements strategies to ensure that the needs of patients, teams, and systems are met	Designs and implements an institutional systems approach to ensure timely task completion and shared responsibility
Comments:  Not Yet Completed Level 1				

Professionalism 3: Well-Being in Obstetric Anesthesiology					
Level 1	Level 2	Level 3	Level 4	Level 5	
Recognizes the importance of addressing personal and professional well-being	Lists available resources for personal and professional well-being	With assistance, proposes a plan to promote personal and professional well-being	Independently develops a plan to promote personal and professional well- being	Creates institutional- level interventions that promote colleagues' well-being	
	Describes institutional resources that are meant to promote well-being	Recognizes which institutional factors affect well-being	Describes institutional factors that positively and/or negatively affect well-being	Describes institutional programs designed to examine systemic contributors to burnout	
Comments:  Not Yet Completed Level 1					

This subcompetency is not intended to evaluate a fellow's well-being. Rather, the intent is to ensure that each fellow has the fundamental knowledge of factors that affect well-being, the mechanisms by which those factors affect well-being, and available resources and tools to improve well-being.

Interpersonal and Communication Skills 1: Patient- and Family-Centered Communication in Obstetric Anesthesiology					
Level 1	Level 2	Level 3	Level 4	Level 5	
Communicates with patients and their families in an understandable and respectful manner	Customizes communication in the setting of personal biases and barriers with patients and patients' families	Explains complex and difficult information to patients and patients' families	Facilitates difficult discussions with patients and patients' families	Mentors others in the facilitation of crucial conversations	
Provides timely updates to patients and patients' families	Actively listens to patients and patients' families to elicit patient preferences and expectations	Uses shared decision- making to make a personalized care plan	Effectively negotiates and manages conflict among patients, patients' families, and the health care team	Mentors others in conflict resolution	
Comments:  Not Yet Completed Level 1					

Interpersonal and Communication Skills 2: Patient Counseling in Obstetric Anesthesiology					
Level 1	Level 2	Level 3	Level 4	Level 5	
Demonstrates understanding of the informed consent process	Answers questions about treatment plans and seeks guidance when appropriate	Counsels patients through the decision- making process, including answering questions, for simple clinical problems	Counsels patients through the decision- making process, including answering questions, for complex clinical problems	Counsels patients through the decision- making process, including answering questions, for uncommon clinical problems	
Comments:  Not Yet Completed Level 1					

Interpersonal and Communication Skills 3: Interprofessional and Team Communication in Obstetric Anesthesiology				
Level 1	Level 2	Level 3	Level 4	Level 5
Respectfully requests or receives consultations	Clearly, concisely, and promptly requests or responds to a request for consultation	Uses closed-loop communication to verify understanding	Coordinates recommendations from different members of the health care team to optimize patient care	Role models flexible communication strategies that value input from all health care team members, resolving conflict when needed
Uses language that values all members of the health care team	Communicates information effectively with all health care team members	Adapts communication style to fit team needs	Maintains effective communication in crisis situations	Leads an after-event debrief of the health care team
Respectfully receives feedback from the health care team	Solicits feedback on performance as a member of the health care team	Communicates concerns and provides feedback to peers and learners	Communicates constructive feedback to superiors	Facilitates regular health care team-based feedback in complex situations
Comments:  Not Yet Completed Level 1				

Interpersonal and Communication Skills 4: Communication within Health Care Systems in Obstetric Anesthesiology				
Level 1	Level 2	Level 3	Level 4	Level 5
Accurately records information in the patient record; demonstrates judicious use of documentation shortcuts	Accurately records information in the anesthetic record for non-complex cases	Accurately records information in the anesthetic record and communicates complex care decisions for complex cases	Uses medical record functionality to highlight challenges in anesthetic care to facilitate future perioperative management	Explores innovative uses of the medical record to facilitate perioperative management
Safeguards patients' personal health information	Documents required data in formats specified by institutional policy	Appropriately selects direct and indirect forms of communication based on context	Models exemplary written or verbal communication	Guides departmental or institutional policies and procedures around communication
Communicates	Respectfully	Respectfully	Uses appropriate	Initiates difficult
through appropriate channels as required	communicates concerns about the	communicates concerns about the	channels to offer clear	conversations with appropriate
by institutional policy	system	system and contributes to solutions	suggestions to improve the system	stakeholders to improve the system
Comments:  Not Yet Completed Level 1				