



From Epidurals to EXITs: Perspectives on OB Anesthesiology Fellowship

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Recently, there was a news report of a 29-week obstetric patient in Colorado with severe COVID-19 pneumonia who required placement on ECMO (asamonitor.pub/3susTaG). Following cannulation for ECMO, delivery of her premature neonate by cesarean section ensued. Her successful outcome required coordination among many team members, including a fellowship-trained OB anesthesiologist. An OB anesthesiology fellowship can provide the skills and confidence to care for such critically ill patients.



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Some trainees learn very early on that the obstetric anesthesiology rotation provides for some of the most rewarding clinical experiences. A typical day on L&D may range from routine patient care, such as treating labor pain with lumbar epidurals and celebrating in the OR with new parents during scheduled cesarean sections, to more emergent situations, such as resuscitating a new mother with post-partum hemorrhage or converting to general anesthesia when a placenta accreta is discovered during a routine cesarean section. Through these experiences, one ends their shift feeling a strong sense of contribution to ensuring the health of mother and child.

The realm of obstetrical patients and their care continues to become more complex. Maternal cardiac disease and cardiac-related mortality are on the rise (*Anesthesiology* 2021;135:164-83). Likewise, the incidence of placenta accreta spectrum is increasing and accounts for a significant amount of maternal morbidity and mortality (*Obstet Gynecol* 2018;132:e259-e275). An OB anesthesia fellowship affords high-volume exposure to patients with cardiac and other medical comorbidities that place them at high risk for adverse outcomes in pregnancy. For example, at the University of Michigan, the Cardio-Obstetrics Program includes multidisciplinary teams from maternal-fetal medicine, adult and pediatric cardiology, and anesthesiology. The opportunity to coordinate patient care from this perspective is an excellent learning experience. Additionally, the University of Michigan is an accreta center, through which fellows are involved in many cesarean hysterectomies and resuscitations.

Fellowship training also provides increased exposure to emerging advanced medical technology that is gaining popularity in various clinical settings. Centers that employ these technologies, such as rotational thromboelastometry, allow fellows to become masters in transfusion medicine, which is essential in the hemorrhaging patient. OB anesthesiologists become highly skilled at vascular access and guiding massive resuscitation efforts where three liters of blood loss is not uncommon, sometimes when the patient is still awake with a neuraxial anesthetic,

all the while ensuring safe delivery of the fetus. Fellows also have the opportunity to engage in more longitudinal care with antepartum patients, whereas exposure to such patients during residency would typically only be for a few weeks while on rotation.

Furthermore, with recent advances, fetal surgery is becoming a more widely used option for treatment of a wide array of fetal conditions. Fetal surgery ranges from minimally invasive to open procedures and even ex-utero intrapartum treatment (EXIT), which involves operating on the fetus through a hysterotomy prior to separating it from the placental circulation (*Paediatr Anaesth* 2017;27:873). Caring for such increasingly complex obstetric patients necessitates additional training that goes beyond the experience gained in residency. OB anesthesia fellows learn neonatal resuscitation through NICU rotations and provide anesthesia for fetal surgery cases.

A fellowship also provides an opportunity to engage in the education of residents through daily clinical activities and didactics. Through educational activities and participation in multidisciplinary meetings, fellows can strengthen their patient care plans, which strengthens their ability to run a labor and delivery unit in the future. A fellowship provides dedicated time to dive headfirst into current literature and an opportunity to design and implement a research project. Fellows are placed at the forefront of discovering causes of poor maternal and fetal outcomes and implementing policies to address those disparities in



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care. The ability to explore deficiencies in practice and optimize outcomes is essential to both academic and private practice clinicians working on an L&D unit, where new policies must regularly be created and executed.

When considering subspecialty training in obstetrical anesthesiology, it is important to recognize that, while the L&D setting can be a chaotic place where emergencies develop in a matter of seconds, patient care can be incredibly fulfilling. There are very few other clinical settings where an anesthesiologist has the ability to interact with patients during life-changing events, such as childbirth. The increasing complexity of patients and emerging surgical interventions, such as fetal surgery, make obstetrical anesthesiology an exciting field. The teaching, research, and leadership opportunities afforded by subspecialty training in obstetrical anesthesiology are abundant and can make for a very fulfilling career in both the academic and private sectors. ■

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