The Society for Obstetric Anesthesia and Perinatology (SOAP) Centers of Excellence (COE) for Anesthesia Care of Obstetric Patients' Designation Application

First Name_____

Last Name_____

Credentials_____

Email Address_____

Phone Number_____

Institution_____

Institution Address_____

Institution City_____

Institution State_____ **Institution Country**_____

Institution Zip/Postal Code_____

Please describe your institution's current practice in response to the expected COE criteria outlined below. Provide detailed responses and mention specifics (such as personnel, equipment, location etc.) as they relate to each stipulated criterion.

Institutional Details:

1. Describe the institution where you provide obstetric anesthesia services
   - ☐ Academic/university affiliated
   - ☐ Private/county/community
   - ☐ Military/VA
   - ☐ Other (please specify)

2. How many deliveries are there at your institution? _____ per year

3. What is the current cesarean delivery rateat your institution? _____%

4. What is your institution's general anesthesia rate for cesarean delivery?
   For scheduled/elective cesarean delivery _____%
   For unplanned/intrapartum cesarean delivery _____%

5. What percentage of laboring women at your institution receive neuraxial analgesia? _____%

6. What is your institution's "wet-tap" rate in the obstetric setting? _____%

7. How many labor and delivery rooms are in your obstetric unit? _____

8. How many operating rooms are in your obstetric unit? _____

Staffing for your obstetric anesthesia service:

1. How many faculty that cover the obstetric anesthesia service have completed an ACGME-accredited obstetric anesthesia fellowship and/or have equivalent expertise and experience in obstetric anesthesia?

2. On a daily basis, how many staff are assigned to provide dedicated coverage for the obstetric anesthesia service?

Daytime:

*Attending physician: _____
Fellows: _____
Residents: _____
CRNA/CAAs: _____
Others (specify): _____

Night-time/weekends:

*Attending physician: _____
Fellows: _____
Residents: _____
CRNA/CAAs: _____
Others (specify): _____

COE Criteria for Anesthesia Care of Obstetric Patients

Personnel:

1. Obstetric anesthesiologist leadership
    - * The obstetric anesthesia lead is a board-certified physician anesthesiologist that has completed an ACGME-accredited obstetric anesthesia fellowship and/or has equivalent expertise in obstetric anesthesia. If equivalent expertise, the basis for this must be clearly delineated (e.g. specific training in obstetric anesthesia, years of practice with a focus on obstetric anesthesia, evidence of expertise based on academic contributions). *Please provide the curriculum vitae of the lead obstetric physician anesthesiologist with your application.*

- The obstetric anesthesia lead and the majority of core faculty members are SOAP members and show evidence of ongoing participation in continuing medical education relevant to the practice of obstetric anesthesia (e.g. attendance at a SOAP conference or equivalent meeting at least every other year, and can provide examples of evidence-based updates to clinical practice).

2. Dedicated coverage
    - *In-house (24/7) coverage of obstetric patients, by at least one board-certified (or equivalent) physician anesthesiologist who is dedicated to covering the obstetric service without additional responsibilities for non-obstetric patients.
    - Institutional policy dictates the physician anesthesiologist dedicated to the obstetric floor should be present for placement and induction of neuraxial labor analgesia procedures with rare exceptions (e.g. simultaneous emergency), and should be present at induction and emergence from general anesthesia.

3. Backup system
    - *Ability to mobilize (within a reasonable (30-60 minute) timeframe) additional anesthesia personnel in case of obstetric emergencies or high clinical volume beyond the capacity of in-house staff assigned to the obstetric service.

Equipment, Protocols and Policies:

1. Obstetric hemorrhage management
    - Hemorrhage risk stratification algorithm and management protocol instituted. Protocols should consider core elements of the National Partnership Obstetric Hemorrhage Bundle (1), California Maternal Quality Care Collaborative Obstetric Hemorrhage Toolkit (2), or comparable recommendations to manage obstetric hemorrhage.
    - *Availability of a massive transfusion protocol with O-negative blood and other blood products, and emergency release system for available blood. Blood bank protocol needs to have been tested and functional on the obstetric unit.
    - *Rapid-infuser device to assist with massive resuscitation (e.g. Belmont® Rapid Infuser, Level 1® Fast Flow Fluid Warmer) readily available for use on the obstetric unit.
    - Plans for difficult peripheral and/or central intravascular access, e.g. ultrasound and intraosseous kits available.
    - Point-of-care equipment to assess hematocrit and/or coagulation. Outline if thromboelastography (TEG®) and thromboelastometry (ROTEM®) are available to guide management.
    - Availability of intraoperative cell salvage in patients who refuse banked blood and/or during high-risk cesarean deliveries.
    - *Provide your institution's obstetric hemorrhage protocols, checklists and/or algorithms*.

2. Airway management
    - *Difficult airway cart (with laryngoscopes, endotracheal tubes, rescue airway devices (e.g. supraglottic airway device, such as a laryngeal mask airway), video-laryngoscope, and surgical airway equipment) immediately available on the obstetric unit.
    - *Suction and a means to deliver positive pressure ventilation (e.g. bag-valve mask device) immediately available in readily accessible locations where neuraxial analgesia/anesthesia and/or general anesthesia are administered.
    - In-house (24/7) backup of personnel with surgical airway access skills.

3. Other emergency resources
    - *Lipid emulsion, appropriate supplies and protocols that will allow a timely response to local anesthetic systemic toxicity.
    - Dantrolene and sterile water vials, along with other supplies to allow a timely response to malignant hyperthermia.
    - Cognitive aids and clinician awareness of resources to manage emergencies, and training to facilitate team member awareness of the location and means to retrieve resources to better manage emergencies.

4. Multidisciplinary team-based approach
    - *Describe systems in place to ensure inter-professional communication and situational awareness on your obstetric unit such as: board sign-out at each shift change of anesthesiology staff; pre-procedural timeouts; post-procedural briefings, as indicated; daily multidisciplinary rounds or huddles to discuss management plans for women on labor and delivery, antepartum and postpartum.
    - Timeout performed prior to all anesthetic interventions.
    - Timely evaluation by the anesthesiology service of: 1) all women undergoing scheduled cesarean delivery and other obstetric-related surgeries, and 2) the vast majority of women presenting to labor and delivery. Women presenting to labor and delivery should be triaged and/or evaluated by the anesthesiology service soon after admission.
    - A system in place to screen and identify all high-risk patients. Early evaluation of high-risk antenatal patients prior to admission for scheduled surgery or labor and delivery (e.g. high-risk clinic).
    - Multidisciplinary evaluation of cardiac and other high-risk obstetric patients.
    - Availability (24/7) of surgical backup, ideally in-house (e.g. trauma and/or gyn-onc surgeons).
    - Protocol or pathway to activate interventional radiology.
    - Intensive care unit available to receive obstetric patients.
    - Nursing staff who provide post-anesthesia care in the obstetric unit with appropriate competencies to recover surgical patients.

- *Obstetric emergency response team with a policy that includes obstetric conditions and/or vital sign parameters that warrant activation, and means of notifying all members of the response team.
- *Simulation drills: An active multidisciplinary program with obstetric and anesthetic emergency simulation drills (e.g. stat cesarean delivery, maternal cardiac arrest, difficult/failed intubation, obstetric hemorrhage, eclampsia). Outline drill scenarios as well as the percentage of anesthesiology faculty (who cover obstetric anesthesia call), obstetricians, nurses, and other personnel who have participated in obstetric simulation (or inter-professional team training) in the last five years. Ideally, physicians providing obstetric anesthesia should participate in at least one simulation drill or training session every four years. Simulation drills for anesthesiology providers only, if no formal multidisciplinary program exists or to supplement pre-existing drills.

5. Institutional resources
    - Ability to provide anesthesia care for postpartum tubal ligation procedures within 24 hours of delivery, or urgent cerclage placement within 12 hours of surgical request.
    - *Additional operating room (with nursing/techs/obstetric and anesthesiology personnel) available at all times for emergency obstetric procedures (if all obstetric unit operating rooms are occupied).
    - Ability to provide invasive monitoring and other advanced management techniques for high-risk patients on the obstetric unit, including arterial lines, central lines, cardiac output monitoring, and transthoracic/transesophageal echocardiography.
    - Ability to manage women who need vasoactive drug infusions, intensive care or cardiac care, and/or additional monitoring requirements (e.g. monitored bed, telemetry).

Cesarean Delivery Management:

*A standardized clinical care pathway (e.g. enhanced recovery protocol) utilized by the institution and all obstetric anesthesia providers. Describe the institution's general approach to standardizing care; specific aspects of the protocol can be outlined next to each criterion listed below.

1. *Routine utilization of a pencil-point needle, 25-gauge or less for the provision of spinal anesthesia.

2. Multimodal analgesia protocols
    - *Analgesic protocols which include low dose long-acting neuraxial opioid (such as 100-150 mcg intrathecal morphine or equivalent long-acting opioid, or 2-3 mg epidural morphine or equivalent long-acting opioid), and supplemental multimodal oral analgesics (ideally scheduled non-steroidal anti-inflammatories and acetaminophen).

- Ability to provide local anesthetic wound infusions or regional nerve/fascial plane blocks when appropriate.
- *Institutional effort to minimize opioid usage, such as limiting rescue opioid doses (e.g. <30 mg oxycodone/24 hours), non-opioid rescue analgesic options (e.g. transversus abdominis plane blocks, gabapentin), and efforts to limit the number of opioid tablets (e.g. 20-30 tablets) prescribed on discharge.

3. Temperature management
    - *Strategies to prevent maternal and fetal intraoperative hypothermia, e.g. active warming, warm intravenous fluids, appropriate ambient delivery/operating room temperature. Measurement of maternal temperature during general and neuraxial anesthesia. Report your standardized minimum operating room temperature for cesarean delivery.

4. Appropriate antibiotic prophylaxis to prevent surgical site infection.
    - *Protocols to ensure timely administration (prior to skin incision) of an appropriate antibiotic(s), dosed according to the patient's weight, appropriate re-dosing strategies, alternative antimicrobial agents if allergies known/detected, and additional antibiotics considered for high-risk patients.
    - Outline which antibiotics are immediately available in the operating room for emergency cesarean deliveries, and describe how additional antibiotics are acquired urgently from pharmacy.

5. Spinal hypotension prevention and treatment
    - A standardized approach to prevent and treat hypotension after spinal anesthesia. Ideally, prophylactic infusion of phenylephrine to maintain blood pressure within 10% of baseline, with boluses of phenylephrine and ephedrine as appropriate to treat hypotension, as well as utilization of an intravenous fluid pre-load or co-load prior to, or during spinal anesthesia.

6. Postoperative nausea and vomiting prophylaxis and treatment
    - Risk stratification method to identify women at increased risk for postoperative nausea and vomiting.
    - *At least one prophylactic antiemetic agent routinely administered. Alternative class of antiemetic agent available for additional prophylaxis and/or treatment of nausea and vomiting.

7. Postpartum monitoring
    - Risk stratification for women at increased risk for respiratory depression, and screening for obstructive sleep apnea.

- Monitoring for respiratory depression consistent with the SOAP Consensus Recommendations for the Prevention and Detection of Respiratory Depression Associated with Neuraxial Morphine Administration for Cesarean Delivery Analgesia (3), and the American Society of Anesthesiologists (ASA) Practice Guidelines for the Prevention, Detection, and Management of Respiratory Depression Associated with Neuraxial Opioids (4).
- Nursing care and monitoring consistent with the Association of Women's Health, Obstetric and Neonatal Nurses (AWHONN) and ASA recommendations.

8. Neonatal care
    - Anesthesiology service supportive of baby-friendly breastfeeding practices (e.g. ability to safely facilitate skin-to-skin in the operating room, when possible).
    - In-house (24/7) clinician (separate from the anesthesiology service) with appropriate training to provide neonatal resuscitation.

Labor Analgesia:

1. Low concentration local anesthetic solutions for administering neuraxial labor analgesia
    - *Use of low concentration local anesthetic solutions. Ideally ≤0.1% bupivacaine or ≤0.15% ropivacaine.
    - *Use of neuraxial opioids (e.g. fentanyl or sufentanil) and/or other adjuvants (e.g. clonidine) added to epidural local anesthetic solutions.
    - Standardized epidural solutions used by all providers. Ideally, pharmacy-provided pre-mixed epidural solutions.

2. Neuraxial techniques
    - *Combined-spinal epidural techniques available/offered in addition to standard labor epidural analgesia.
    - *Patient controlled epidural analgesia (PCEA) and ideally background programmed intermittent epidural boluses (PIEB) utilized for the provision of neuraxial labor analgesia.
    - *Routine utilization of flexible (flex-tipped/wire-reinforced) epidural catheters for labor epidural analgesia.

3. Regular assessment of labor analgesia effectiveness
    - *Regular assessment of neuraxial labor analgesia effectiveness. Ideally, pain scores documented by nursing staff (e.g. every 1-2 hours) supplemented with regular anesthesia provider rounds or evaluations (e.g. every 2-4 hours).
    - Ongoing monitoring (e.g. blood pressure, assess motor/sensory levels) and protocols to manage potential side effects or complications associated with neuraxial analgesia.

- Postpartum monitoring consistent with AWHONN recommendations.

Recommendations and Guidelines Implementation:

- *At a minimum, evidence of implementation of the Practice Guidelines for Obstetric Anesthesia by the ASA Task Force on Obstetric Anesthesia and SOAP (5). Select key recommendations not otherwise addressed in other areas of this application:
    - Platelet count prior to neuraxial block placement: No requirement for routine testing in healthy women
    - Appropriate liquid and diet restrictions: Intrapartum (allow clear liquids in uncomplicated patients); cesarean delivery (clear liquids up to 2 hours prior)
    - Timing of neuraxial analgesia: Allow neuraxial analgesia in early labor (no specific cervical dilation required)
- Evidence of implementation of the SOAP Consensus Statement on the Management of Cardiac Arrest in Pregnancy (6).
- Examples of implementation of key aspects of the National Partnership Maternal Safety Bundles (7).
- A system to coordinate care for women receiving ante- and postpartum thromboprophylaxis as outlined by the SOAP Consensus Statement on Neuraxial Anesthesia in Obstetric Patients Receiving Thromboprophylaxis (8). A process by which obstetric anesthesia providers are informed about women receiving thromboprophylaxis.

Quality Assurance and Patient Follow-up:

- *An anesthesiologist serves as a member of the team that develops and implements multidisciplinary clinical policy, e.g. quality improvement committee, patient safety committee.
- *Follow-up with structured interview/consultation on all patients who received either labor analgesia, cesarean anesthesia or anesthesia for other procedures (e.g. postpartum tubal ligation, cerclage). Patients should be reviewed, or protocol criteria fulfilled prior to discharge or transfer from labor and delivery. All patients who received an anesthetic procedure should be reviewed by the anesthesia service on the postpartum floor prior to hospital discharge.
- A robust system in place to follow-up on all patients with anesthesia-related complications.
- *A system in place to evaluate and treat (with an epidural blood patch, if necessary) a post-dural puncture headache (PDPH) in a timely fashion. Optimally, outpatient PDPH should be evaluated and treated on the obstetric unit and not in the emergency department.
- A means to routinely collect patient feedback on maternal experience of care, with a specific focus on anesthetic and analgesic care.

- The anesthesiologist is an active participant in multidisciplinary root cause analysis or equivalent program to evaluate maternal and/or fetal adverse events. Provide examples of effective implementation of identified system solutions.
- A system to educate nurses, obstetricians and allied professions on obstetric anesthesia-related care.

References:

1. Council on Patient Safety in Women's Health Care. Obstetric Hemorrhage. http://safehealthcareforeverywoman.org/patient-safety-bundles/obstetric-hemorrhage/ (accessed May 2018)
2. California Maternal Quality Care Collaborative. OB Hemorrhage Toolkit V 2.0. https://www.cmqcc.org/resources-tool-kits/toolkits/ob-hemorrhage-toolkit (accessed May 2018)
3. SOAP Neuraxial Morphine Consensus Statement for Membership Review. https://soap.org/neuraxial-morphine-consensus-statement.php (accessed May 2018)
4. Practice Guidelines for the Prevention, Detection, and Management of Respiratory Depression Associated with Neuraxial Opioid Administration: An Updated Report by the American Society of Anesthesiologists Task Force on Neuraxial Opioids and the American Society of Regional Anesthesia and Pain Medicine. Anesthesiology. 2016;124(3):535-52
5. Practice Guidelines for Obstetric Anesthesia: An Updated Report by the American Society of Anesthesiologists Task Force on Obstetric Anesthesia and the Society for Obstetric Anesthesia and Perinatology. Anesthesiology. 2016;124(2):270-300
6. Lipman S, Cohen S, Einav S et al. The Society for Obstetric Anesthesia and Perinatology Consensus Statement on the Management of Cardiac Arrest in Pregnancy. Anesth Analg. 2014;118(5):1003-16
7. Council on Patient Safety in Women's Health Care. Patient Safety Bundles. http://safehealthcareforeverywoman.org/patient-safety-bundles/ (accessed May 2018)
8. Leffert L, Butwick A, Carvalho B et al. The Society for Obstetric Anesthesia and Perinatology Consensus Statement on the Anesthetic Management of Pregnant and Postpartum Women Receiving Thromboprophylaxis or Higher Dose Anticoagulants. Anesth Analg. 2018;126(3):928-944