COMPLETE

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Page 2: General InformationDirector of Obstetric Anesthesia

Q1

Name of the Director of Obstetric Anesthesia

First	**Thomas**
Last	**Pfeiffer**

Q2

Credential/Degree

MD

Q3

Email address

Thomas.Pfeiffer@sluhn.org

Q4

Institution SiteThis application is for a single physical site, a single labor and delivery and its supporting units, not a hospital system.

St. Luke’s University Health Network – Anderson Campus

Q5

Name of Anesthesia Group if applicable

Anesthesia Specialists of Bethlehem

Q6

Institution - Site Address

Street	**1872 St. Luke's Blvd**
City	**Easton**
State	**PA**
Zip Code	**18045**
Country	**USA**

Page 3: Application and Institution Details

Q7

Please mark the application designation that is applicable to you

Previously applied without success (but with fee waiver for reapplication)

Q8

Describe the institution type for which this application is submitted (key question that will inform the review process for all questions flagged with an *)Tertiary/Referral Center (transfers “in” for specialty maternal care)

No

Q9

Mark all that apply to your institution*

Train/teach other learners (student nurse anesthetists, anesthesiology assistants, medical students, etc.)

Q10

What level of maternal care does the applying institution/site provide according to the American College of Obstetricians and Gynecologists (ACOG) level of maternal care (Level 1, 2, 3, or 4)? (https://www.acog.org/clinical/clinicalguidance/obstetric-care-consensus/articles/2019/08/levels-of-maternal-care)

Level 3

Q11

How many annual deliveries?

2861

Q12

What is the current cesarean delivery rate percentage at your institution? Please list your answer as a percentage. Do not enter percentage sign in your answer.

33.3

Q13

How many labor and delivery rooms are in the obstetric unit?

9

Q14

How many operating rooms are in (dedicated to) your obstetric unit?

2

Page 4: General Anesthesia Rates

Q15

What is the institution's overall general anesthesia rate (percentage) for all cesarean delivery excluding complicated surgical cases with cesarean-hysterectomies for PAS or other? (this is an essential criterion)

4.2

Q16

What is the general anesthesia rate (percentage) for scheduled (e.g. planned/elective) cesarean delivery?

3.8

Q17

What is the general anesthesia rate (percentage) for unscheduled (e.g. unplanned/urgent/intrapartum) cesarean delivery?

6.4

Q18

Is there a quality assurance review of all cases requiring general anesthesia(irrespective of your institution's general anesthesia rate)? (this is an essential criterion) Please provide (attached with the application) evidence of your quality assurance review process.

Yes

Page 5: Obstetric Anesthesia Practice

Q19

What percentage of laboring patients receive neuraxial analgesia? Please list your answer as a percentage. Do not include percentage sign in answer

87.3

Q20

What is the labor epidural analgesia replacement rate (percentage)? Recommendation: the labor epidural replacement rate should ideally be 3-6%. Please list your answer as a percentage. Do not include the percentage sign in your answer.

0.6

Q21

What is the institution's accidental dural puncture (ADP or “wet tap”) rate (percentage) in the obstetric setting? Recommendation: the accidental dural puncture rate should ideally be ≤2%.Please list your answer as a percentage. Do not include the percentage sign in your answer.

0.28

Q22

What is your institution's post-dural puncture headache (PDPH) rate (percentage) in the obstetric setting? This should include PDPH from spinal procedures as well as ADP (wet-taps)Please list your answer as a percentage. Do not include the percentage sign in your answer.

0.24

Q23

What is your institution's epidural blood patch (EBP) rate (percentage of PDPH that receive EBP) in the obstetric setting? Please list your answer as a percentage. Do not include the percentage sign in your answer.

42.9

Q24

A quality assurance review of all ADP and PDPH should be in place. Please describe your quality assurance review method.

All patients who have a PDPH and/or receive a EBP are reviewed as part of our monthly QI meeting

Page 6: Personnel and Staffing:

Q25

Outline the expertise and experience of the obstetric anesthesia lead. Suggested word count of 200-300 words. (this is an essential criterion)Recommendation: The obstetric anesthesia lead must be a U.S. or international board-certified physician anesthesiologist who 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, several years of practice with a focus on obstetric anesthesia, and/or evidence of expertise based on academic contributions).

Dr. Thomas R. Pfeiffer, MD is a board certified, ACGME fellowship trained obstetric anesthesiologist. As an obstetric anesthesia fellow he gained extensive knowledge relating to obstetric anesthesia, participated in clinic research projects, and was invited to give an oral presentation of his academic project at the annual SOAP conference. He has over seven years of experience as an attending OB anesthesiologist serving as the director of obstetric anesthesia for Anesthesia Specialists of Bethlehem P.C. which is the network group for St. Luke's University Health Network (SLUHN) and is involved in several multidisciplinary clinical and quality improvement committees. He participated in the planning for the Women & Babies Pavilion of St. Luke's Anderson Campus during construction of the new labor and delivery unit which opened in January 2020. He participates in the monthly, multidisciplinary Complex Mother's Meeting to review and coordinate care planning for parturients with comorbidities requiring extensive care. He participates in the monthly, multidisciplinary Mother-Baby Safety Meeting to discuss quality improvement initiatives. He created a high-risk OB anesthesia outpatient clinic where he personally evaluates patients to optimize complex comorbidities that impact anesthetic care. He is also the co-director for anesthesia education for SLUHN and in that capacity he organizes education initiatives for the anesthesia department by helping guide journal clubs, grand rounds presentations, simulation sessions, and CME workshops. He is responsible for coordinating the anesthesia elective for medical students at the Temple St. Luke's School of Medicine and serves as an advisor for those students wishing to pursue a residency in anesthesiology. Additionally, he organizes an airway elective for various residents, fellows, and APs to improve their skills in managing difficult airways.

Q26

Please indicate the total administrative/non-clinical time that the institution/department is allocating to the obstetric anesthesia lead.Recommendation: ideally, some dedicated time should be allocated to the leadPlease list your answer as a percentage. Do not include the percentage sign in your answer.

Approximately two days per month, 10%

Q27

How many faculty/Anesthesia Physician (MD) in total cover the obstetric anesthesia service (day, night, weekends, and holidays)?

29 physicians cover the obstetric anesthesia service

Q28

How many of the total faculty/Anesthesia Physician (MD) that cover the obstetric anesthesia service are obstetric anesthesia specialists (have completed an ACGME-accredited obstetric anesthesia fellowship, and/or have equivalent expertise and experience in obstetric anesthesia such as specific training in obstetric anesthesia, several years of practice with a focus on obstetric anesthesia, and/or evidence of expertise based on academic contributions) that cover the anesthesia service? Please enter the actual number and the percent of total faculty.

1 physician or approximately 3.5%

Q29

During the weekday daytime - how many staff are assigned to provide dedicated coverage for the obstetric anesthesia service? Check and indicate the number under all that apply

*Attending physician:	**1**
Certified Registered Nurse Anesthetists (CRNA) / Certified Anesthesiologist Assistants (CAA)	**1**

Q30

During the weekday nighttime - how many staff are assigned to provide dedicated coverage for the obstetric anesthesia service?

Attending physician*:	**1**
Certified Registered Nurse Anesthetists (CRNA) / Certified Anesthesiologist Assistants (CAA)	**1**

Q31

During the weekends/holiday daytime, how many staff are assigned to provide dedicated coverage for the obstetric anesthesia service?Check and indicate the number under all that apply

Attending physician*:	**1**
Certified Registered Nurse Anesthetists (CRNA) / Certified Anesthesiologist Assistants (CAA)	**1**

Q32

During the weekends/holiday nighttime, how many staff are assigned to provide dedicated coverage for the obstetric anesthesia service?Check and indicate the number under all that apply

Attending physician*:	**1**
Certified Registered Nurse Anesthetists (CRNA) / Certified Anesthesiologist Assistants (CAA)	**1**

Q33

Estimate the proportion of each shift covered by attending specialists in obstetric anesthesia vs. generalists. Please list the percentage. Do not include the percentage sign in your answer.

Daytime	**3.5**
Nighttime	**3.5**
Weekend/holiday daytime	**3.5**
Weekend/holiday nighttime	**3.5**

Q34

Outline your supervision policy.* (this is an essential criterion) Please indicate the category of those supervised in your answer. (Anesthesia residents and fellows, CRNAs, students of other kinds)Please indicate the institutional policy for supervision in various situations, including, but not limited to induction and emergence and neuraxial blocks.Recommendation: For academic centers that train residents or fellows, institutional policy should dictate that the physician anesthesiologist dedicated to the obstetric floor is present (regardless of the level of experience of the trainee) for placement and induction of neuraxial labor analgesia procedures with rare exceptions (e.g. simultaneous emergency), and should be present (regardless of the level of experience of the trainee) at induction and emergence from general anesthesia. For team-based (physician plus CRNA) care models, physician leadership and active medical management involvement is necessary. Evidence of physician contribution to education and training of fellow, resident, CRNA and Student Registered Nurse Anesthetist (SRNA) should be provided.

An attending physician is always present for placement and induction of neuraxial analgesia/anesthesia for labor or cesarean delivery. An attending physician is always present for the induction and emergence of general anesthesia. This may be performed solely by the attending physician or with the assistance of a CRNA. The obstetric anesthesia lead as well as several members of the anesthesia department are members of SOAP and have attended and/or presented at SOAP conferences. The obstetric anesthesia lead has facilitated creation of simulation training pertaining to management of OB anesthesia emergencies in our sim lab. The OB lead provides education sessions periodically during the departments weekly meetings. The lead also mentors and instructs medical students participating in their anesthesia elective with specific focus on OB anesthesia.

Q35

Outline your coverage model.* (this is an essential criterion)Recommendation: In-house (24/7) coverage of obstetric patients, by at least one board-certified (or equivalent) physician anesthesiologist dedicated to covering the obstetric service without additional responsibilities for non-obstetric patients is emphasized.If a low volume center (<1500 deliveries per year), non-dedicated coverage with minimal additional responsibilities may be acceptable.If a very high volume center (>5000 deliveries per year), solo dedicated coverage may not be adequate unless there is a readily available physician anesthesiologist backup with adequate numbers of trainees/CRNAs to support the clinical load.If applicable, provide the full list of out-of-unit responsibilities, and the frequency at which faculty are called to complete these duties outside the obstetric unit.

There is always one in-house board certified anesthesiologist solely dedicated to cover the obstetric service at all times. During the day there are at least two additional anesthesiologists who serve as backup for OB and provide anesthesia services for non-OB patients elsewhere in the hospital. During the evening/overnight as well as weekends/holidays there is an anesthesiologist in-house covering the OB unit with a second anesthesiologist on call from home with a 30 minute response time to assist as needed for emergencies. Additionally, there is an in-house CRNA solely responsible for the obstetric service at all times weekdays, weekends, and holidays. In addition, there is at least one additional in-house CRNA who is responsible for non-obstetric sites but acts as backup as needed for the obstetric service.

Q36

Outline your backup system.* (this is an essential criterion)Recommendation: the ability to mobilize (within 30-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 is required.

One anesthesiologist and one CRNA staff the obstetric unit in-house at all times. When additional staff is required for emergency situations or high clinical volume there is at least one additional CRNA present in-house at all times who can provide backup. Additionally, there are 2 anesthesiologists present in-house weekdays from 7am until 4pm available for backup. During the hours of 4pm until 7am as well as on weekends and holidays there is always a backup anesthesiologist on call from home with a 30-minute response time to assist the in-house anesthesiologist and CRNA.

Q37

Outline if anesthesia techs or equivalent are staffed on the obstetric unit. Describe their availability (24/7 or only daytime) and if anesthesia technicians are dedicated to the obstetric service.

There is one anesthesia tech dedicated to the obstetric unit during the daytime. Additionally, there are one to two additional anesthesia techs present during the day who staff other operative sites and can act as backup. During the night, weekends, and holidays there is an anesthesia tech on call from home with a 30-minute response time who can be called in if needed.

Q38

Provide evidence of ongoing participation in continuing medical education andprofessional practice improvement. (this is an essential criterion)Recommendation: The obstetric anesthesia lead and the majority of core faculty members need to show evidence of ongoing participation in continuing medical education relevant to the practice of obstetric anesthesia (e.g. SOAP/subspeciality membership – target for attending specialists being SOAP members > 80% - with attendance at a SOAP conference or equivalent obstetric anesthesia-focused meeting at least every other year, and can provide examples of professional practice improvement or evidence-based updates to clinical practice).

The obstetric anesthesia lead as well as several members of the anesthesia department are members of SOAP and have attended and/or presented at SOAP conferences. Obstetric anesthesia lead has facilitated creation of simulation training pertaining to management of OB anesthesia emergencies in our sim lab. Our lead has created an OB anesthesia consultation service to evaluate high risk parturients and make recommendations to facilitate optimized care. OB anesthesia lead participates in regular interdisciplinary meetings related to mother-baby safety and high risk parturients. The OB lead as well as other attending anesthesiologists provide education sessions periodically during the departments weekly meetings. The lead also mentors and instructs medical students participating in their anesthesia elective with specific focus on OB anesthesia.

Q39

If applicable, please also outline efforts made to ensure continuing medical education for all non-core faculty that cover the obstetric service.

All members of our practice are encouraged to attend at least 60% of all education sessions including grand rounds, journal clubs, and simulation labs. These activities are made available for CME when applicable by the ASA.

Q40

Outline obstetric anesthesia-related staff meetings.Recommendation: regular (e.g. every 1-2 months) staff meetings for obstetric anesthesia providers to provide clinical service updates and ongoing education is recommended.

Staff meetings occur once per month to give updates related to the OB anesthesia service. This occurs for our anesthesiologists and CRNA at regularly scheduled staff meetings and additionally this information is also shared at our monthly, multidisciplinary Mother-Baby Safety Meeting to ensure all team members are brought up to speed.

Page 7: Equipment, Protocols and Policies

Q41

Outline your routine utilization of a pencil-point needle (25-gauge or smaller) for the provision of CSE or DPE labor analgesia. (this is an essential criterion)Recommendation: There are strong recommendations for using small gauge pencil-point needles for all spinal procedures in the obstetric population. Please explain if cutting-edge needles are used, and which efforts are underway to implement a change towards using pencil-point needles

The kits for placement of spinals and CSE contain 25 or 27 gauge needles. 100% of the needles utilized are 25 gauge or smaller for CSE and DPE.

Q42

Describe your use of low-concentration local anesthetic solutionsRecommendation: ideally ≤ 0.1% bupivacaine or ≤ 0.15% ropivacaine).

We utilize premixed local anesthetic solutions provided by our pharmacy: 0.1% ropivacaine with 2mcg/ml fentanyl or 0.1% ropivacaine. Our first line choice is 0.1% ropivacaine with 2mcg/ml fentanyl and will utilize plain 0.1% ropivacaine if a patient has a contraindication to fentanyl ie severe pruritis.

Q43

Outline your use of neuraxial opioids (e.g. fentanyl or sufentanil) and/or other adjuvants (e.g. clonidine) added to epidural local anesthetic solutions.

These adjuvants are used routinely for epidural labor analgesia, we use a premixed solution of 0.1% ropivacaine with 2mcg/ml fentanyl after placing an epidural. Additionally, we will utilize 100mcg of fentanyl or 100mcg clonidine in epidural top-up's for labor analgesia.

Q44

Describe how standardized epidural solutions are provided and used by all providers. Recommendation: ideally, pharmacy-provided pre-mixed epidural solutions.

All epidural solutions are pre-mixed and provided by our pharmacy. They are stocked in our epidural carts on the labor floor as well as in our anesthesia carts in the ORs. Additional bags may be obtained from the Accudose in our anesthesia workroom. These are checked and stocked multiple times per day by our anesthesia techs and pharmacy staff.

Q45

Outline if and which alternative neuraxial techniques are offered in addition to standard labor epidural analgesia (e.g., CSE, DPE, single-shot spinal).

In addition to standard epidural labor analgesia use of CSE and DPE are utilized in a case by case basis. Single shot spinals are used less often for labor analgesia, reserved for use if delivery is imminent.

Q46

Please provide an estimated percentage breakdown of the utilization of these techniques, with the total equaling 100%. Please list your answer as a percentage. Do not include the percentage sign in your answers.

Standard epidural	**91.5**
CSE	**8.5**
Other (describe)	**We are unable to capture the rate of use of DPE due to limitations from our EMR, if a patient has a DPE it is notated in the "notes" section of the procedure note**

Q47

Outline your labor epidural maintenance techniques. Recommendation: Patient-controlled epidural analgesia (PCEA) and ideally background programmed intermittent epidural boluses (PIEB) should be utilized for provision of neuraxial labor analgesia.

All labor rooms are supplied with epidural pumps that can provide functionality for both PCEA and PIEB.

Q48

Describe your routine utilization of flexible (flex-tipped/wire-reinforced) epidural catheters for labor epidural analgesia. (this is an essential criterion)

All epidural and CSE kits are stocked with flexible (flex-tipped/wire-reinforced) epidural catheters. These are utilized for all neuraxial procedures where an epidural catheter is placed.

Q49

Outline how you provide regular assessment of neuraxial labor analgesia effectiveness. (this is an essential criterion)Recommendation: 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).

Labor nurses are continually at bedside for all patients and document a pain score once per hour. Anesthesia providers assess effectiveness of labor analgesia several times throughout their shift, approximately every 2-3 hours. In addition, anesthesia providers are notified for pain exacerbations not relieved by epidural demand boluses and evaluate if an epidural top-up is needed. Analgesia is assessed 30-60 minutes after neuraxial labor analgesia placement or epidural top-up by an anesthesia provider.

Q50

Describe your protocol for managing epidural breakthrough pain. Describe your system used to track labor epidural catheter replacement rates.

Patients have a PCEA/PIEB pump for labor analgesia and are encouraged to utilize demand boluses as needed for breakthrough pain. If the demand bolus is insufficient to control breakthrough pain then the anesthesia team will administer an epidural top up. If more than two top up’s are insufficient to manage pain then the patient is given the option to have her epidural replaced. The two top up’s contain different local anesthetics and adjuvants ie first top up may be 0.25% bupivacaine with 100mcg of clonidine and if ineffective then 2% lidocaine with 100mcg of fentanyl is trialed. We are able to use our EMR to track how many patients receive more than one epidural placement during their labor as an indicator of our replacement rate.

Q51

Describe your ongoing monitoring (e.g. blood pressure, assessment of motor/sensory levels) and protocols to manage potential side effects or complications associated with neuraxial analgesia.

All patients are continuously monitored and labor nurses follow our hospital protocol to notify anesthesia of any of the following:
• Respiratory rate < 10 breaths/min
• Unrelieved pain
• Over-sedation
• Nausea / vomiting
• O2 sat <88%
• Other medication side effects (e.g. hypotension, pruritus, constipation, etc.)
• Patient non-compliance with Epidural/PCEA pump therapy or monitoring procedures (SpO2 and/or etCO2).
• Catheter separation
• Bleeding at the site of catheter insertion
• Numbness, tingling, decreased movement of lower extremity(s)
• Checks for decrease in motor strength or back pain, to determine possibility of epidural hematoma
All patients have blood pressures checked every 3 minutes for 15 minutes after labor epidural placement and epidural top off and if vitals are stable blood pressures are then checked every 15 minutes.

Q52

Outline your nursing postpartum monitoring protocolRecommendation: institutional protocol, should be consistent with the Association of Women's Health, Obstetric and Neonatal Nurses (AWHONN) recommendations.

Complete vital signs are obtained on arrival to the unit and every four hours x 24 hours, then every eight hours until discharge. Selected vital signs may be obtained more frequently based on previous findings or risk factors. Post Cesarean Section: after the transfer set of vital signs, they are obtained every hour x 4, every 4 hours x 48 hours, and then every eight hours until discharge. The lung sounds will be assessed, along with assessment and documentation of the maximum incentive spirometry achieved, for all patients who have had a cesarean delivery. Fundal and urinary assessment is performed in accordance with AWHONN recommendations.

Q53

Describe intravenous patient-controlled opioid analgesia options offered, and outline protocol specifics including opioids available, administration settings and monitoring requirements.

Patients are offered remifentanil PCA for labor analgesia if they are not candidates for neuraxial analgesia. A pdf of our remifentanil PCA protocol is attached to this application.

Q54

Outline the availability of nitrous oxide for labor analgesia, and if available provide protocol specifics.

We do not have nitrous oxide available for labor analgesia

Page 8: Equipment, Protocols and Policies

Q55

Outline, describe, and provide your enhanced recovery protocol as defined by the SOAP Enhanced Recovery After Cesarean (ERAC) Consensus Statement (3). (this is an essential criterion)Recommendation: A standardized enhanced recovery protocol or clinical care pathway that is utilized by the institution and all obstetric anesthesia providers is essential.

We have a standard ERAC protocol followed for all patients. It is attached in a PDF document with this application for review.

Q56

Outline your routine utilization of a pencil-point needle (25-gauge or smaller) for the provision of spinal and CSE anesthesia for cesarean delivery. (this is an essential criterion)Recommendation: There are strong recommendations for using small gauge pencil-point needles for all spinal procedures in the obstetric population. Please provide an explanation if cutting edge needles are used, and which efforts are underway to implement a change towards using pencil-point needles

All of the kits for placement of spinals and CSEs contain pencil-point 25 or 27 gauge needles.

Q57

Describe your approach and outline policies and/or protocols to prevent and/or treat insufficient anesthesia or intraoperative pain during cesarean delivery. (this is an essential criterion)Outline how neuraxial block are tested before incision and strategies/protocols used to ensure blocks are adequate for surgery.Outline strategies/protocols to treat intraoperative pain (intravenous analgesic medication supplementation, and if known, the percentage of patients receiving IV analgesic supplementation at your institution), and describe the follow-up for patients that experience intraoperative pain.Recommendation: institutional protocols (e.g. visual aids) and written policies are preferable (please upload if applicable).

All patients are tested for adequacy of neuraxial anesthesia by loss of temperature discrimination with an alcohol swab by the anesthesiologist and by pinching skin at the incision site and superiorly to the epigastrium by the obstetrician with an Allis clamp. Patients with an inadequate level can have spinal anesthesia attempted again or in the case of CSE placement their epidural can be bolused, if medically feasible. If after two attempts at neuraxial anesthesia there continues to be an inadequate level then patient will have the option of proceeding with general anesthesia. If a patient has inadequate neuraxial anesthesia and epidural boluses are insufficient for intraoperative pain relief surgical progress is paused, if feasible, and then general anesthesia is induced. If the case is near completion with inadequate neuraxial anesthesia and the final subcutaneous and skin layers are being closed patients may be given MAC sedation. All patients are followed up by the anesthesia team on the day of delivery to assess control of any intraoperative pain. Additionally, patients are called by the nursing staff to inquire about their satisfaction with the care delivered during delivery, one of the questions asked includes an assessment of intraoperative pain.

Q58

Outline your post-cesarean delivery analgesic protocol. (this is an essential criterion) Recommendation: Analgesic protocols should include a low dose of 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 analgesics (ideally scheduled non-steroidal anti-inflammatory drugs and acetaminophen).

As long as there is no contraindication patients are given 50-150mcg of intrathecal morphine or 3mg of epidural morphine depending on neuraxial anesthetic employed. If appropriate, patients receive a course of NSAIDs ie ketorolac and scheduled acetaminophen and ibuprofen with oxycodone and IV hydromorphone as needed for breakthrough pain. If a patient had general anesthesia for their cesarean delivery they will receive bilateral TAP blocks at the conclusion of their procedure and then will be followed by the anesthesiologist covering our acute pain service.

Q59

Describe your ability to provide local anesthetic wound infusions or regional nerve/fascial plane blocks when appropriate. Are regional blocks performed by obstetric anesthesia providers or the acute pain/regional anesthesia service?

These blocks are performed by obstetric anesthesia providers under ultrasound guidance with use Exparel for prolonged action. Patients are then followed up by the anesthesiologist covering the acute pain service postoperatively.

Q60

Outline institutional efforts 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. 10-20 tablets) prescribed on discharge. (this is an essential criterion)

Efforts to reduce opioid usage include utilization of long acting neuraxial morphine, regional nerve blocks, non-opioid analgesic adjunct medications. Patients with opioid tolerance will have a CSE placed for their cesarean delivery with the epidural remaining in place for use for postoperative PCEA. Patients with regional blocks for postoperative pain control or opioid tolerance are followed by the acute pain service to optimize pain control and use of non-opioid medications.

Q61

Describe your standardized protocol or plan of action to manage patients with opioid use disorders, and/or chronic pain. Recommendation: institutional protocols (e.g. visual aids) and written policies are preferable (please upload if applicable).

These patients will have a CSE placed for their cesarean delivery with the epidural remaining in place for use for postoperative PCEA. If neuraxial anesthesia is not feasible then regional plane blocks with Exparel are utilized. Patients are followed by the anesthesiologist covering the acute pain service for analgesic optimization. Patients with opioid use disorder who have a vaginal delivery are also assessed by the anesthesiologist covering our acute pain service with referral for treatment/rehab via our relationship with drug treatment programs. If known prior to delivery, these patients are referred and evaluated by the anesthesiologist covering our Surgical Optimization Center to formulate a plan for postpartum pain.

Q62

Outline strategies to prevent maternal and fetal intraoperative hypothermia. (e.g. active warming, warm intravenous fluids, appropriate ambient delivery/operating room temperature.Active warming and a standardized minimum operating room temperature of at least ≥73oF (22.8oC), and/or operating room temperature based on gestational age for cesarean delivery is recommended. (this is an essential criterion)

The operating room temperature is set to a minimum of 73 degrees and raised as appropriate to prevent hypothermia. Patients receive Bair huggers, warmed IV fluids, and warm blankets to maintain body temperature. Neonates are placed in Panda warmers to maintain body temperature when needed.

Q63

Describe your approach to the measurement and documentation of maternal temperature during general and neuraxial anesthesia.

During general anesthesia maternal temperature is measured via esophageal temperature probes. During neuraxial anesthesia skin temperature is measure in the axilla.

Q64

Describe your antibiotic prophylaxis protocols, specifically how the following are ensured: timely administration (prior to skin incision) of appropriate antibiotic(s); implementation of a weight-based dosing approach; implementation of an appropriate redosing strategy; identification of alternatives if allergies known/detected; and consideration of additional antibiotics if applicable for high-risk patients. (this is an essential criterion)Recommendation: institutional protocols (e.g. visual aids) and written policies are preferable (please upload if applicable).

The OB service orders the appropriate weight based dose of antibiotic prophylaxis as part of the patient hospital admission. The nursing staff provides the anesthesia team with the appropriate pre-mixed prophylactic antibiotics upon room entry. The anesthesia team starts the antibiotic infusion while setting up the patient for neuraxial anesthesia. Antibiotic administration, timing, and re-dosing is confirmed during the surgical time out procedure prior to commencement of cesarean delivery. Cefazolin is the primary antibiotic used for prophylaxis, patients are administered 1g if they weigh less than 80kg, 2g if they weigh between 80-120kg, and 3g if they weigh more than 120kg. If a patient has a penicillin allergy and unable to take cefazolin then they are given 900mg of clindamycin and 1.5mg/kg gentamycin. If a patient has ruptured membranes and requires cesarean delivery they are also administered 500mg azithromycin. If cesarean delivery is prolonged, for instance longer than 4 hours for cefazolin then the same prophylactic dose is administered again. Likewise, if there is excessive blood loss (>1500ml) then another dose of antibiotic is administered.

Q65

Outline which antibiotics are stored in the operating room for emergency cesarean deliveries, and describe how additional antibiotics are acquired urgently from pharmacy.

Antibiotics stored in the OR for emergency use include: vancomycin, cefazolin, clindamycin, ampicillin, and metronidazole.

Q66

Outline your standardized approach to prevent and treat hypotension after spinal anesthesia. (this is an essential criterion)Recommendation: Ideally, prophylactic infusion of phenylephrine to maintain blood pressure within 10% of baseline, with boluses of phenylephrine and/or ephedrine and/or norepinephrine as appropriate to treat hypotension, as well as intravenous fluid pre-load or co-load during spinal or CSE anesthesia should be utilized.

All patients are given an IV fluid preload upon admission for cesarean delivery. A minimum of one liter of lactated ringers given via free flow from patient IV 90-120 minutes prior to initiation of neuraxial anesthesia. Once in the operating room, patients have a co-load of lactated ringers freeflowing during neuraxial anesthesia placement. Patients routinely have a phenylephrine infusion started immediately after placement of spinal anesthesia and boluses of phenylephrine, ephedrine, and/or norepinephrine are utilized to maintain blood pressure within 10% of baseline.

Q67

Describe your approach to risk stratify patients at risk for perioperative nausea and vomiting

Patients are interviewed before every anesthetic to determine their risk for PONV. All patients receive at least two different antiemetics after every operative procedure and are ordered for at least two additional antiemetics for PACU care. Patients routinely receive 4mg of ondansetron and 10mg of dexamethasone for PONV prophylaxis. If further prophylaxis and/or treatment of PONV is required patients are given one or more of the following medications: metoclopramide, diphenhydramine, scopolamine patch. Scopolamine patches are utilized sparingly due to its negative effects on lactation. If PONV is suspected to be secondary to hypotension patients are treated with phenylephrine IV bolus and/or infusion as well as IV/IM dosing of ephedrine with other vasopressors as needed.

Q68

Outline your perioperative antiemetic prophylaxis and treatment protocol.Recommendation: A standardized approach ideally involving at least one prophylactic antiemetic agent routinely administered, with an alternative class of antiemetic agent available for additional prophylaxis (in patients at higher risk for PONV) and for treatment of nausea and vomiting.Institutional protocols (e.g. visual aids) and written policies are preferable (please upload if applicable).

All patients receive at least two antiemetic prophylactic agents upon umbilical cord clamping and have additional antiemetics ordered as part of their postoperative PACU orders. Please see question 67 for additional details.

Q69

Outline which medications are immediately available for treatment of intraoperative shivering (e.g. dexmedetomidine, clonidine, etc) and pruritus (e.g. nalbuphine) in the operating room and recovery unit.Recommendation: institutional protocols (e.g. visual aids) and written policies are preferable (please upload if applicable).

Medications immediately available for treatment of intraoperative shivering and pruritus include: Nalbuphine, clonidine, lorazepam, meperidine, diphenhydramine, nalbuphine, and naloxone.

Q70

Describe your approach to risk stratification to identify patients at increased risk for respiratory depression, and screening for obstructive sleep apnea.

All patients receive screening for respiratory depression based on history of sleep apnea, morbid obesity, COPD, supplemental oxygen dependence, or planned extensive surgery. Screening for OSA is done on every patient during admission using standard STOP BANG criteria.

Q71

Describe your monitoring and treatment for respiratory depression after cesarean delivery. (this is an essential criterion)Recommendation: the institutional protocol should be consistent with the SOAP Consensus recommendations for the Prevention and Detection of Respiratory Depression Associated with Neuraxial Morphine Administration for Cesarean Delivery Analgesia for the Prevention, Detection and Management of Respiratory Depression Associated with Neuraxial Opioids (4, 5).

All patients who receive neuraxial morphine are triaged based on history of sleep apnea, morbid obesity, COPD, supplemental oxygen dependence, or planned extensive surgery. Patients are considered high risk if they have a history of sleep apnea, morbid obesity (BMI>40), COPD, need for supplemental oxygen, or if surgery is prolonged. Patients who meet criteria for being high risk are included in our Patient Safety Net monitoring for remote pulse oximeter use as well as continuous capnography for at least 24 hours postop. Patients have a remote, continuous pulse oximeter that connects to our central monitor at all of the nursing stations and if an alarm is triggered in addition to notification at the central monitor a secure message is sent to the patient’s nurse via our hospital wide messaging system.

Q72

Outline your post-operative nursing care and monitoring.Recommendation: post-operative nursing care should be consistent with the Association of Women's Health, Obstetric and Neonatal Nurses (AWHONN) and ASA recommendations.

Complete vital signs are obtained on arrival to the unit and every four hours for 24 hours, then every eight hours until discharge. Selected vital signs may be obtained more frequently based on previous findings or risk factors. Patients that are post cesarean delivery receive vital signs every hour for 4 hours, then every 4 hours for 48 hours, and then every eight hours until discharge. The lung sounds will be assessed, along with assessment and documentation of the maximum incentive spirometry achieved, for all patients who have had a cesarean delivery. Fundal and urinary assessment is performed in accordance with AWHONN recommendations.

Q73

Describe how your anesthesiology service is supportive of baby-friendly breastfeeding practices (e.g. ability to safely facilitate skin-to-skin in the operating room or recovery unit, when possible).

Our hospital supports the Keystone 10, PA's Department of Health's quality improvement breastfeeding initiative. It is based on 10 principles that are similar to those that guide Baby-Friendly. Our anesthesiology team assists in facilitating skin-to-skin in the OR and PACU, whenever possible.

Q74

Outline how an in-house (24/7) clinician (separate from the anesthesiology service) with appropriate training to provide neonatal resuscitation is available.

A neonatal team, comprised of a neonatal provider and neonatal nurse, attends all cesarean deliveries, and high-risk vaginal deliveries. Neonatal providers and nurses are in-house at all times.

Page 9: Equipment, Protocols and Policies

Q75

Outline your hemorrhage risk stratification algorithm and management protocol.Recommendation: 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.

Our hemorrhage risk stratification and management protocol is based on the CMQCC OB hemorrhage toolkit. This protocol is reviewed on a yearly basis, a copy is attached to this application for reference.

Q76

Describe your massive transfusion protocol. (this is an essential criterion)Availability of a massive transfusion protocol with O-negative blood and other blood products, and an emergency release system for available blood is essential. Blood bank protocol needs to have been tested and be functional on the obstetric unit.

Our hospital network has a trauma-specific transfusion protocol and a “Code Crimson” massive transfusion protocol. Upon initiation, our blood bank will immediately release 6 units O+ or O- uncrossmatched PRBC’s, 4 units thawed FFP and 1 unit platelets until a provider discontinues the Code Crimson. We also have an emergency release protocol where emergency O+ or O- blood is released when a massive transfusion event is not anticipated. These protocols are tested monthly with simulation sessions involving all involved practitioners and techs. Our “Code Crimson” protocol is attached to the application for reference.

Q77

Describe your type and number of rapid-infuser devices to assist with massive resuscitation (e.g. Belmont® Rapid Infuser, Level 1® Fast Flow Fluid Warmer). (this is an essential criterion)Recommendation: These devices are preferably stored on the unit, especially in high volume centers and tertiary/referral centers. Describe where yours are stored and accessibility to the L & D unit.

We have a Belmont Rapid Infuser. This is shared between the obstetric unit and our level 2 trauma bay which are adjacent to each other so the Belmont is stored between both units for use in both. This is maintained daily by our anesthesia tech. In a situation where we are using the Belmont in a level A trauma alert and there is a simultaneous need for massive resuscitation on L&D we may utilize one of the Level 1 transfusers from the ICU.

Q78

Outline how obstetric blood loss is recorded (quantitative versus estimated blood loss) and how the incidence of postpartum hemorrhage is tracked.

Obstetric blood loss is recorded quantitatively via gravimetric technique and if PPH is suspected this is value is followed up by colorimetric technique. The incidence of postpartum hemorrhage is tracked by patient safety reporting and by our clinical documentation coding integrity department

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Q79

Outline plans for difficult peripheral and/or central intravascular access*, e.g. ultrasound and intraosseous kits available.

Difficult peripheral IV access can be assisted by the use of ultrasound guidance, Accuvein vein finder device, and intraosseous kits which are all available on the obstetric unit.

Q80

Describe your point-of-care equipment to assess hematocrit and/or coagulation. Outline if thromboelastography (TEG®), thromboelastometry (ROTEM®), sonorheometry (QuantraTM) or other viscoelastic monitoring technology are available to guide management. *Recommendation: Point of care equipment is preferred. If your facility does not have this please provide information on how quickly HCT and coagulation labs are turned around and mechanism in place to facilitate rapid turnaround in obstetric hemorrhage emergencies.

We have an ISTAT point of care blood analyzer present on the obstetric unit. TEG and ROTEM are available in our lab to help guide management as well.

Q81

Outline availability of intraoperative cell salvage for patients who refuse banked blood, and/or during high-risk cesarean deliveries. * How are patients who refuse blood transfusion identified prior to presenting for delivery, counseled regarding blood product options, and prepared or optimized for delivery? If appropriate for your facility, please describe criteria which would prompt transfer of these patients to a facility with a higher level of care. For example, indicate if cell salvage is readily available 24/7, or if available but only for scheduled cases, and if applicable where it is located. (this is an essential criterion)

Intraoperative cell salvage is available on the obstetric unit at all times. Patients who refuse blood transfusion are identified by their obstetrician during antepartum visits and are referred for consultation with the OB anesthesiologist as part of the high-risk OB anesthesia consult service. At least twice per month the OB anesthesiologist sees patients with high-risk medical conditions complicating labor and delivery including those who refuse blood transfusion to discuss their blood product options and discern which products, if any, they will accept. All patients who have low hemoglobins beyond the expected physiologic anemia pregnancy are referred to the anesthesiologist covering our Surgical Optimization Center and receive an anemia protocol including IV iron administration.

Q82

Describe your hemorrhage quality assurance review process.Recommendation: Quality assurance review of all “severe” hemorrhage cases (defined at an institutional level, e.g. > 4 unit blood transfusion) and all unplanned intrapartum hysterectomies should be in place so that opportunities for improvement can be identified and initiated.

Any patient that has a quantitative blood loss great than 1500cc goes through the Peer Review process and is discussed in our OB Quality and Safety Committee meetings. This also includes any unplanned intrapartum hysterectomies.

Q83

Briefly describe and provide your institution’s obstetric hemorrhage toolkit (including protocols, checklists and/or algorithms).* (this is an essential criterion)

Our obstetric hemorrhage toolkit is the California Maternal Quality Care Collaborative’s “Improving Health Care Response to Obstetric Hemorrhage V3.0”, and use the protocols, checklists, and algorithms contained within. Attached is a copy of our institutions Code Crimson policy as well as our OB Hemorrhage Risk Assessment Tool which outline our response to obstetric hemorrhage.

Q84

Outline your policies/procedures for suspected abnormal placentation (e.g. placenta accreta/percreta) cases. * (this is an essential criterion)Describe the location (obstetric or main operating suite), staffing (e.g. obstetric anesthesia specialists), planning process (e.g. multidisciplinary meeting) and other considerations (e.g. blood management) for these cases.If appropriate for your facility, please describe criteria which would prompt transfer of these patients to a facility with a higher level of care. (this is an essential criterion)

Any patient with suspected abnormal placentation with placenta accreta spectrum are identified by their obstetrician and MFM team. These patients are discussed at our monthly multidisciplinary Complex Mothers Meeting to outline their plan for delivery. Patients are delivered in the main OR suite with a multidisciplinary team including OB anesthesia, OB/GYN, GYN oncology, trauma surgery, urology, MFM, neonatology, critical care, etc immediately available if needed. The blood bank is present for all planning discussions and unless otherwise directed every patient has 6 units of pRBCs, 6 units of FFP, and 1 6-pack of platelets prepared for delivery.

Q85

Outline your difficult airway cart and supplies (laryngoscopes, endotracheal tubes, rescue airway devices (e.g. supraglottic airway device such as a laryngeal mask airway), videolaryngoscope and surgical airway equipment) that are stored on the obstetric unit.

There is a difficult airway cart outside the OB ORs which contain various sized laryngoscopes, endotracheal tubes, LMAs, McGrath video laryngoscope, oral/nasal airway, Ambubag, bougie, cricoid kit, and face masks.

Q86

Describe if you have an obstetric-specific difficult airway protocol on the difficult airway cart and in obstetric operating rooms. (this is an essential criterion)

Our difficult airway algorithm is posted on the difficult airway cart and above the anesthesia machines inside the ORs. We have an OB-specific difficult airway algorithm, it prioritizes the use of rapid sequence induction to minimize risk of aspiration as well as monitoring both maternal and fetal well being.

Q87

Describe the availability of suction devices.Recommendation: Suction and a means to deliver positive pressure ventilation (e.g. bag-valve mask device) is required to be immediately available in readily accessible locations where neuraxial analgesia/anesthesia and/or general anesthesia are administered, including labor rooms where epidurals are administered.

Ambubags are located on the difficult airway cart, on both neuraxial anesthesia carts, on the MH cart, on the anesthesia machines inside the ORs, in every labor suite, triage room, and inside the anesthesia workroom on the obstetric unit. Suction devices are available in the OB ORs and in every triage room and labor suite.

Q88

Describe your in-house backup plan to provide personnel with surgical airway access skills if needed 24/7. *What is the plan for a cannot ventilate/cannot intubate scenario at your facility? Do you have personnel in-house or on call who can provide a surgical airway? Please provide specifics.

All anesthesia personnel are encouraged to maintain the skills in surgical airway access by attending a yearly education clinical skills lab. Additionally, there is a trauma surgery team present in-house at all times if needed for assistance with surgical airway access.

Q89

Outline your lipid emulsion availability, appropriate supplies, and protocols that allow a timely response to local anesthetic systemic toxicity. (this is an essential criterion)

Lipid emulsion therapy supplies and the printed protocol for use is located on both neuraxial anesthesia carts, anesthesia carts in the ORs, as well as the code cart.

Q90

Outline your malignant hyperthermia protocol. (this is an essential criterion)Recommendation: Dantrolene formulations and sterile water vials, along with other supplies must be available to allow a timely response to malignant hyperthermia.

We have a dedicated malignant hyperthermia cart containing all supplies and written protocol located directly outside the OB ORs.

Q91

Outline cognitive aids and training resources.Recommendation: cognitive aids and clinician awareness of resources to manage emergencies should be available, and training to facilitate team member awareness of the location and means to retrieve resources to better manage emergencies.

Cognitive aids for emergencies are located on the emergency airway cart, code cart, MH cart, as well as posted above the anesthesia carts in the OB ORs. Simulations for common OB emergencies occur regularly in a multidisciplinary fashion on both the obstetric unit as well as in our sim lab.

Q92

Outline availability and usage by obstetric anesthesia providers of ultrasound devices for peripheral and central intravenous access, neuraxial blocks, regional blocks (e.g. transversus abdominis/quadratus lumborum/erector spinae), and point-of-care evaluations (gastric, airway, lung, and cardiac).*

We have a dedicated ultrasound machine for use by the anesthesia team to aid in peripheral and central intravenous access, neuraxial blocks, regional blocks, and point-of-care evaluations. It is located on the obstetric unit in our anesthesia work room.

Q93

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 patients on labor and delivery, antepartum and postpartum. (this is an essential criterion)

There is a sign out of all patients currently on the obstetric unit at each shift change of anesthesia providers. A pre-procedural time out occurs before initiation of neuraxial anesthesia. Another pre-procedural time out occurs before commencement of cesarean delivery. A multidisciplinary huddle including anesthesia, OB, MFM, and nursing occurs twice daily to discuss all patients currently on the obstetric unit. A multidisciplinary huddle occurs for each patient who develops a category 2 fetal heart rate strip to outline the strategy for delivery.

Q94

Outline how timeouts are performed prior to all anesthetic interventions.

The patient's nurse initiates a pre-anesthesia timeout prior to all anesthetic procedures with participation of the anesthesia provider, patient, obstetrician, and nurse to ensure all safety criteria have been met.

Q95

Outline evaluations by the anesthesiology service of patients (1) undergoing scheduled cesarean delivery and other obstetric-related surgeries, and (2) the majority of patients presenting to labor and delivery. Please describe the process for “high-risk” patients being brought to the attention of the anesthesia service and evaluated (triage or consultation).

(1) All patients presenting for scheduled obstetric procedures have a complete history and physical exam and outline of their anesthetic plan prior to their procedure. (2) All laboring patients are evaluated in the same manner upon admission to the L&D unit and prior to initiation of neuraxial analgesia. Any patient with a concerning medical co-morbidity is identified and discussed during the multidisciplinary huddle and then evaluated by anesthesia. If a “high-risk” patient is identified earlier in the course of their pregnancy they are seen by our director of OB anesthesia as part of the high-risk OB anesthesia referral service and then discussed at our monthly interdisciplinary Complex Mothers Meeting.

Q96

Outline the system in place to screen and identify all high-risk patients prior to admission (in the antenatal period). Discuss early anesthesia evaluation of high-risk antenatal patients prior to admission for scheduled surgery or labor and delivery (e.g. high-risk anesthesia clinic).

High risk patients are discussed at the monthly multidisciplinary Complex Mothers Meeting. High risk patients are referred to the OB anesthesia consult service for evaluation by the OB Anesthesia lead.

Q97

Describe the availability of surgical backup.* Please describe the availability and time to mobilize general surgeons, gyn-onc surgeons, trauma surgeons as needed 24/7. In house? On call??

Surgical backup is available by the trauma service which is in-house at all times. GYN oncology is also on call at all times from home with a 30 minutes response time.

Q98

Outline your protocol or pathway to activate interventional radiology.*

Interventional radiology participates in multidisciplinary meetings when applicable and are on call as needed for emergent procedures.

Q99

Describe the intensive care units available to receive obstetric patients (e.g. expertise, proximity to the obstetric unit and capacity).*

There is a 16 bed ICU available to receive obstetric patients in the adjacent tower to the obstetric unit connected by a breezeway.

Q100

Outline the qualifications of nursing staff who provide post-anesthesia care in the obstetric unit and describe their competencies to recover surgical patients from both neuraxial and general anesthesia.

The nurses in labor and delivery are qualified to recover postoperative patients in PACU. Our nurses are required to take the MALS (maternal advanced lifesaving) course yearly and are BLS certified.

Q101

Describe your obstetric emergency response team and policy.* Outline obstetric conditions and/or vital sign parameters that warrant activation, the means of notifying all members of the response team, and the approach for including anesthesiologists in the response to obstetrical emergencies such as hemorrhage, severe hypertension and nonreassuring fetal heart rate.

Our institution has developed a “Perinatal Alert Team” to facilitate immediate communication among an expanded group of individuals to provide added expertise and resources to manage emergencies in a patient who is pregnant, delivering, or postpartum. Objective vital sign triggers would include a heart rate <40 or >130, systolic BP<90 or >180, respiratory rate <12 or >28 breaths per minute, as well as many other subjective and objective triggers. The team may be directly contacted via the hospital’s TigerConnect texting system, or via hospital operator; an anesthesiologist is always included on that page/text to respond to the obstetrical emergency. Obstetric conditions that would warrant activation of our “Perinatal Alert Team” include emerging life-threatening conditions that require expanded evaluation by the anesthesia team as well as MFM, trauma surgery, OR personnel, critical care, blood bank, etc. Examples of these conditions include peripartum/postpartum hemorrhage, eclampsia, non-reassuring fetal heart tones, change in maternal mental status, high spinal anesthesia, respiratory distress, etc. A copy of the Perinatal Alert Team guidelines has been provided for further review.

Q102

Outline your simulation drills and training.* (this is an essential criterion)

We have monthly simulation drills on the obstetric unit and practice our response to common OB emergencies. These are multidisciplinary and include participation from anesthesia, OB, nursing, MFM, surgery, etc. Additional, anesthesia specific drills for common OB emergencies are performed in our sim lab multiple times per year.

Q103

Outline the percentage of anesthesiology faculty/Anesthesia Physician (MD) (who cover obstetric anesthesia call), obstetricians, nurses, and other personnel who have participated in obstetric simulation (or inter-professional team training) in the last 5 years, or if more frequent please indicate if yearly _____%. Please indicate number and describe.

100
All staff are required to participate in our obstetric simulations which are held monthly for the anesthesia staff and additionally multiple times per year we hold multidisciplinary sim sessions.

Q104

Describe simulation training scenarios practices and compliance with The Joint Commission (JACHO) requirements for obstetric hemorrhage and preeclampsia simulations. (https://www.jointcommission.org/standards/r3-report/r3-report-issue-24-pc-standards-formaternal-safety/#.YofbDHbML-g)Recommendation: Physicians providing obstetric anesthesia should participate in at least one simulation drill every five years. An active multidisciplinary program with obstetric and anesthetic emergency simulation drills (e.g. emergent cesarean delivery, maternal cardiac arrest, difficult/failed intubation, obstetric hemorrhage, and eclampsia) is preferable. Simulation drills for anesthesiology providers only may be acceptable, if no formal multidisciplinary program exists, or to supplement pre-existing drills.

Our simulation drills on the L&D unit are multidisciplinary and occur monthly. Scenarios include emergent cesarean delivery, postpartum hemorrhage, maternal cardiac arrest, and eclampsia. All members of the anesthesia department participate in the drills when they occur. Additionally, we have anesthesia specific drills covering these same scenarios in our sim lab to supplement this training and make sure all members of our department have had an opportunity to participate.

Q105

Describe your ability to provide anesthesia care for postpartum tubal ligation procedures within 24 hours of delivery, and urgent cerclage placement within 12 hours of surgical request. Outline policies/procedures to ensure postpartum tubal ligation are prioritized and performed in a timely manner as per ACOG recommendations. (https://www.acog.org/clinical/clinical-guidance/committee-opinion/articles/2021/06/access-topostpartum-sterilization)

Anesthesiologists are available to the OB unit 24/7 to provide anesthesia for postpartum ligations and cerclages. These procedures can be performed in the labor and delivery OR, and urgent cerclage placements can be performed within 12 hours or sooner if necessary.

Q106

Outline options for an additional operating room (with nursing/tech/obstetric and anesthesiology personnel) that is available at all times for emergency obstetric procedures (if all obstetric unit operating rooms are occupied).*

We have 5 additional operating rooms available in our main OR suite to use as backup sites for emergency obstetric procedures. One of those ORs is always kept in reserve with staff in house in anticipation of emergency cases.

Q107

Describe your ability to provide invasive monitoring and other advanced management techniques for high-risk patients on the obstetric unit, or in another unit, including arterial lines, central lines, cardiac output monitoring, and transthoracic/transesophageal echocardiography.*

Supplies, including ultrasound, are available to place invasive monitoring and perform evaluation including arterial lines, central lines, TTE at all times on the L&D unit. We do not have cardiac output and TEE monitors on the labor unit but they are available to be brought from our cardiac cath lab and ICUs if needed.

Q108

Outline your management of patients who need vasoactive drug infusions, intensive care or cardiac care, and/or additional monitoring requirements (e.g. monitored bed, telemetry). *Describe your ability to provide invasive monitoring including arterial lines, central lines, cardiac output monitoring, echocardiography, vasoactive drug infusions, intensive care, cardiac care, and other advanced management techniques. What can be accommodated in your obstetric unit? Describe what requires transfer to another unit? Describe what requires transfer to another hospital?

If a patient requires a higher level of care or monitoring, she can be transferred to the ICU which is in the adjacent tower connected by a breezeway. Patients requiring vasoactive drug infusions or invasive monitoring such as arterial lines and echocardiography can be managed by the anesthesia team on the OB unit until an ICU bed is available. We do not need to transfer patients to another facility for a higher level of care.

Q109

Outline your approach to educating expectant people, patients and families.

We have new parenting classes held regularly to provide education pertaining to labor and delivery for families including a tour of the unit. Our OB Anesthesia lead has created a video which is shown during all of these classes. Parents with additional questions and concerns are welcome to request a referral to the OB Anesthesia lead for a more in depth discussion. Our "Baby and Me" center continues this education after delivery with breastfeeding classes and postpartum support for families.

Q110

Outline your approach to educating nurses, obstetricians and other healthcare providers.

The anesthesia department regularly participates in simulations, discussions at root cause analyses, grand rounds, and department meetings. Our OB Anesthesia lead regularly gives lectures pertaining to the anesthesia care of the parturient to the OBGYN residents, attendings, nurses, and support staff.

Q111

Outline your approach, if applicable, to educating obstetric anesthesia training for residents, fellows, CAAs, and/or SRNAs.

We do not train anesthesia residents, fellows, CAAs, or SRNAs

Q112

Outline the initiatives that you have done at your institution to better meet the needs of patients from the most prevalent racial and ethnic minority group(s) that your facility serves (e.g. implicit bias training of healthcare providers; provision of health educational resources for non-English speakers). * (this is an essential criterion)

Our institution provides yearly training to our staff to increase awareness and promote diversity, equity, and inclusion. The hospital network's "Community Health and Preventative Medicine Department" focuses on improving access to care and reducing health disparities as one of their top health priorities. They conducted a "Community Health Needs Assessment" to guide them in this determination. The network has 17 community health clinics, including dental, family, and pediatric health clinics. Our institution also has a "Baby and Me Center" which offers prenatal education, lactation assistance, and postpartum support for the mothers.

Q113

Describe efforts to promote diversity, equity and inclusion of your workforce (e.g. support pipeline programs for groups underrepresented in medicine; diversity, equity and inclusion hiring/promotion practices; microaggression and bystander response training; mentorship/sponsorship of individuals from groups underrepresented in medicine and female trainees and faculty). (this is an essential criterion)

We pride ourselves in having a department composed of practitioners from all walks of life and strive to have diverse representation in all of our committees and leadership. Our anesthesia department has a DEI committee (our OB anesthesia lead is a member) that focuses on providing training, simulations, relevant speakers, etc specific to anesthesia providers. We have created a mentorship group that serves as a resource for individuals commonly underrepresented in medicine who serve in our department. We have several ombudsmen who are available to bring issues to our DEI committee for review and remediation.

Page 10: Recommendations and Guidelines Implementation

Q114

At a minimum, provide evidence of implementation of the Practice Guidelines for Obstetric Anesthesia by the ASA Task Force on Obstetric Anesthesia and SOAP (6). * 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 patients● 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)

All patients admitted to the obstetric unit have a CBC drawn as part of their admission labs ordered by their obstetrician, however in healthy patients this is not required for neuraxial anesthesia and does not delay placement.
All laboring patients are maintained on a clear, liquid diet and all patients scheduled for cesarean delivery are allowed clear liquids up until 2 hours prior to their procedures as advised by the ASA NPO guidelines.
No specific cervical dilation is required for neuraxial labor analgesia and patients may request at any time.

Q115

Outline evidence of implementation of the SOAP Consensus Statement on the Management of Cardiac Arrest in Pregnancy (7).

We have implemented the SOAP Consensus Statement on the Management of Cardiac Arrest in Pregnancy in several ways. We have a monthly lecture on maternal obstetric emergencies including cardiac arrest. All anesthesia providers must have up to date ACLS and BLS training. We perform monthly simulations and drills concerning obstetric emergencies including cardiac arrest. All providers are aware of our Perinatal Alert system as well as Code Blue protocols to alert the appropriate care teams in the event of a maternal cardiac arrest. Our code cart with defibrillator is present on the obstetric unit and checked twice daily.

Q116

National Partnership Maternal Safety Bundles (8): Confirm that aspects of the following Maternal Safety Bundles have been implemented. For each enter a Yes or a No.● Obstetric Hemorrhage● Severe Hypertension in Pregnancy● Maternal Venous Thromboembolism● Cardiac Conditions in Obstetrical Care● Care for Pregnant and Postpartum People with Substance Use Disorder

- Obstetric Hemorrhage - YES
- Severe Hypertension in Pregnancy - YES
- Maternal Venous Thromboembolism - YES
- Cardiac Conditions in Obstetrical Care - YES
- Care for Pregnant and Postpartum People with Substance Use Disorder - YES

Q117

Provide examples of implementation of key aspects of National Partnership Maternal Safety Bundles; outline at least one example of an item that has been implemented to address each domain (Readiness, Recognition and Prevention, Response, and Reporting and System Learning) for the following:● Obstetric Hemorrhage● Severe Hypertension in PregnancyRecommendation: institutions should consider implementation of all available safety bundles.

- Obstetric Hemorrhage

Our labor and delivery units have implemented and participate in Maternal Care Bundles in partnership with Premier (a healthcare improvement company uniting an alliance of approximately 4,400 U.S hospitals and health systems). Premier collaborates with the Alliance for Innovation on Maternal Health (AIM) to support safe maternal care to reduce severe maternal illness and deaths. One example of the “bundles” being utilized in obstetric hemorrhage is our use of the California Maternal Quality Care Collaborative’s OB hemorrhage toolkit. As part of that toolkit, we complete an assessment to determine maternal hemorrhage risk on admission to labor and delivery and on admission to postpartum.

- Severe Hypertension in Pregnancy

ACOG’s clinical guidelines direct us in our management of severe hypertension in pregnancy. An example of this the use of standardized order sets for nifedipine, hydralazine, and labetalol is included in our protocol.

Q118

Outline your approach to coordinate care for patients receiving ante- and postpartum thromboprophylaxis as outlined by the SOAP Consensus Statement on Neuraxial Anesthesia in Obstetric Patients Receiving Thromboprophylaxis (9).Describe a process by which obstetric anesthesia providers are informed about patients receiving thromboprophylaxis.

All patients who are receiving ante- and postpartum thromboprophylaxis are identified and presented at our monthly, multidisciplinary High Risk Mothers meeting. Our OB Anesthesia lead is present for all of these meetings and choice of thromboprophylaxis, hold times before neuraxial anesthesia, and timing to resume medication are guided by the SOAP Consensus Statement on Neuraxial Anesthesia in Obstetric Patients Receiving Thromboprophylaxis in conjunction with ASRA recommendations.

Q119

Outline your implementation of recommendations from SOAP Interdisciplinary Consensus Statement on Neuraxial Procedures in Obstetric Patients with Thrombocytopenia.

Patients with thrombocytopenia are identified and presented at our monthly, multidisciplinary High Risk Mothers meeting. Our OB Anesthesia lead helps optimize patient's platelet count through our Surgical Optimization Center where they are evaluated by hematology as well and cause/treatment of thrombocytopenia is identified. Patients are treated with medications such as steroids, IV iron infusion, or transfused to optimize their platelet counts before delivery.

Page 11: Quality Assurance and Patient Follow-up

Q120

Describe how an anesthesiologist serves as a member of the team that develops and implements multidisciplinary clinical policies, e.g. quality improvement committee, patient safety committee. *Outline current quality assurance and other patient care initiatives that the obstetric anesthesia division is leading, and/or involved in.

Our OB Anesthesia lead is a member of the interdisciplinary Complex Mothers Meeting as well as the monthly Mother Baby Safety meeting. These meetings outline care planning for mothers with complex medical comorbidities as well as review and implement OB specific quality improvement initiatives. Additionally, our vice chair of anesthesia chairs our network anesthesia performance improvement committee which is tasked with improving patient care throughout our network and identifying areas of opportunity for improvement in anesthesia care and outcomes. Currently, the OB anesthesia team is organizing and implement a post epidural fall risk assessment to aid in early mobility postpartum and decrease risk for falls secondary to residual effects of neuraxial anesthesia. A pdf outlining this initiative is attached to this application.

Q121

Outline involvement of obstetric anesthesia staff in hospital committees. Describe committees (e.g. peer review, blood management) that the obstetric anesthesia staff are involved in, and their role in these committees.

OB Anesthesia is a key member of the Complex Mother meetings and Mother Baby Safety meetings. These interdisciplinary committees meet monthly to discuss care planning and safety initiatives for the obstetric unit. Additionally, he is a member of our DEI committee and education committee which meets at least quarterly to discuss initiatives specific to their goals. He is also a member of our practice's board of directors and regularly reports updates related to OB anesthesia to other leaders of our practice.

Q122

Describe how patients receive follow-up with structured interview/consultation who received either labor neuraxial analgesia, cesarean anesthesia, or anesthesia for other procedures (e.g. postpartum tubal ligation, cerclage).*Recommendation: 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.

All patients are examined and reviewed after delivery when neuraxial analgesia is concluded and the epidural catheter is removed as well as in the PACU after surgical procedures. All patients are additionally followed up on PPD #1 to ensure there are no complications prior to discharge. After discharge, all complex patients are reviewed again at the monthly Complex Mothers meeting.

Q123

Outline your system to follow-up on all patients with anesthesia-related complications.

Patients with an anesthesia related complication are entered into a shared list on our EMR which is accessed by all members of the anesthesia team. These patients are then seen either in-house while they are admitted or via phone after discharge for a minimum of 3 days after the complication. These patients are again discussed at our anesthesia QI meeting to identify opportunities for improvement.

Q124

Describe your system to evaluate and treat (with an EBP, if necessary) a PDPH in a timely fashion. Are EBPs generally performed early (within 12-48 hours) or delayed? Who performs the EBP and which location(s) are EBPs performed in prior to and after discharge?* Recommendation: outpatient PDPH should be evaluated and treated on the obstetric unit and not in the emergency department.

Any patient with a PDPH is entered into the shared OB anesthesia complication list on our EMR and then followed up for a minimum of 3 days after their PDPH. Epidural blood patch is performed 24 hours after the wet tap if conservative management fails. If the patient is admitted and requires a blood patch they are transferred to our OB PACU where the anesthesiologist and CRNA perform the procedure. If the patient is discharged and it is determined she requires a blood patch she is then directed to return to triage on L&D for evaluation bypassing the ED. If a blood patch is necessary then she has the procedure performed in our OB PACU. Patients are then followed for 3 days after blood patch to monitor symptoms. Patient do not have to present to the ED to be evaluated and treated for PDPH.

Q125

Outline if the anesthesiologist is an active participant in multidisciplinary root cause analysis, maternal case conferences, or equivalent program to evaluate maternal and/or fetal adverse events. Provide examples of effective implementation of identified system solutions.

The OB Anesthesia lead is present for all root cause analyses to evaluate maternal/fetal adverse events. Recently, OB anesthesia was part of the team that outlined the use and trial of a noninvasive, continuous hemoglobin monitor to improve early detection of postpartum hemorrhage and the creation and implementation of our PEFRAS (post epidural fall risk assessment score) protocol that evaluates patients for risk for falls after neuraxial anesthesia.

Q126

Describe your approach to routinely collecting patient feedback on maternal experience of care, with a specific focus on anesthetic and analgesic care.

Nursing uses the Press Ganey survey to measure patient experience. The OB specific portion of the survey has questions regarding pain control and adequacy of labor analgesia as well as anesthesia for cesarean delivery. Additionally, all patients are seen by a member of the anesthesia team on PPD #1 to perform a post anesthesia evaluation and receive feedback regarding their care.

Page 12: Supplemental Documentation

Q127

Please upload the CV of the lead Obstetric Anesthesia #1

Thomas%20R%20Pfeiffer%20CV.pdf (79KB)

Q128

Please upload supplemental documentation #2.

ERAC%20Protocol.pdf (39.6KB)

Q129

Please upload supplemental documentation #3.

Charter_Network_Anesthesia_PI.doc (43.5KB)

Q130

Please upload supplemental documentation #4.

Code%20Crimson.pdf (1.6MB)

Q131

Please upload supplemental documentation #5.

OB%20Hemorrhage.pdf (539.7KB)

Q132

Please upload supplemental documentation #6.

OB%20Hemorrhage%20Risk%20Assessment%20Tool.pdf (540.4KB)

Q133

Please upload supplemental documentation #7.

PEFRAS.pdf (553.5KB)

Q134

Please upload supplemental documentation #8.

Perinatal%20Alert%20Team.pdf (1.5MB)

Q135 **Respondent skipped this question**

Please upload supplemental documentation #9.

Q136 **Respondent skipped this question**

Please upload supplemental documentation #10.