Obstetric Anesthesia Subcommittee Minutes

March 17, 2020

12:00-1:00pm EST

Webex

X	Sharon Abramovitz, Weill Cornell		Angel Martino, Sparrow Health System
	Ami Attali, Henry Ford- Detroit		Arvind Palanisamy, Washington University
	Melissa Bauer, Michigan Medicine		Carlo Pancaro, Michigan Medicine
X	Dan Biggs, University of Oklahoma	X	Mohamed Tiouririne, University of Virginia
	David Swastek, St. Joseph Mercy Ann Arbor	X	Brandon Togioka, Oregon Health Science University
	Eric Davies, St. Joseph Mercy Oakland		Joshua Younger, Henry Ford, Detroit
	Ghislaine Echevarria, NYU Langone		Marie-Louise Meng, Duke
X	Ronald George, University of California-San Francisco		Ashraf Habib, Duke
	Jenifer Henderson, St. Joseph Oakland	X	Nirav Shah, MPOG Associate Director
X	Rachel Kacmar, University of Colorado	X	Katie Buehler, MPOG Clinical Program Manager
	Joanna Kountanis, Michigan Medicine	X	Meridith Bailey, MPOG QI Coordinator
X	Carlos Delgado Upegui, University of Washington	X	Brooke Szymanski, MPOG QI Coordinator
X	Stephanie Lim, University of California-San Francisco	X	Jessica Wren, Henry Ford Macomb/Wyandotte ACQR
X	Michelle Lucier, Henry Ford Detroit/WB ACQR		

1. **OB Anesthesia Subcommittee Leadership**
    a. Seeking one of you or your obstetric anesthesia colleagues to lead or co-lead this committee
    b. Work with MPOG team (faculty/programmers/nurses) to create measures
    c. Need someone practicing OB anesthesia to advise on measures and future directions
    d. Contact Nirav (nirshah@med.umich.edu) or Kate (kjbucrek@med.umich.edu) if interested
2. **12/2019 Meeting Recap**
    a. Reviewed Call for Measure Survey Results
        i. **#1: Prolonged hypotension before cesarean delivery: 4.38/5.00**
        ii. #2: General Anesthesia Rate for Cesarean Delivery: 3.63/5.00
        iii. #3: Non-opioid adjunct used for post cesarean delivery pain: 3.38/5.00
        iv. **#4: Antibiotic Timing for cesarean delivery: 3.25/5.00**
            1. **Opted to add Antibiotic Selection Measure to assess azithromycin use**
        v. #5: First temperature in PACU for cesarean delivery: 3.13/5.00
        vi. #6: PONV in PACU for cesarean delivery: 3.13/5.00

b. Coordinating Center to create 'phenotype' to identify labor epidural cases that converted to cesarean delivery: done
c. Coordinating Center to assess the use of ICD 9/10 codes for capturing outcomes, specifically SSIs: In progress
d. 2020 Selected Measures for Cesarean Delivery
    i. Antibiotic Timing
    ii. Antibiotic Selection
    iii. Prolonged Hypotension

3. OB_ABX 01: Antibiotic Timing for Cesarean Delivery Specification Review

a. Description: Percentage of cesarean deliveries with documentation of antibiotic administration initiated within one hour before surgical incision
b. Measure Time Period: 60 minutes prior to Surgical Incision through Surgical Incision
c. Inclusions:
    i. Elective, urgent, or emergent cesarean delivery*
        1. *Dan Biggs, University of Oklahoma*- should we include emergent cesarean deliveries in this measure? It is not unusual to have a baby out within 10 minutes of the initial decision to convert to cesarean delivery
            a. Currently, this measure includes emergency cases but allows for antibiotic to be delivered any time between anes start and end rather than 60 minutes before incision- committee determines this to be acceptable
    ii. Patients undergoing cesarean section with hysterectomy (CPT: 01969)

*MPOG has created a 'phenotype' to sort cases based on procedure text, CPT codes, and note documentation to identify cesarean delivery cases. CPT codes alone do not seem to be reliable in determining case type.

    iii. Case Type Categories:
        1. Labor Epidural
        2. Cesarean Delivery
        3. Labor Epidural converted to Cesarean
        4. Unable to determine
    iv. All cases with actual or predicted CPT codes 01961, 01967, and/or 01968 will be processed through the algorithm to determine denominator for cesarean delivery measures
    v. Algorithm
        1. Begins with concepts such as anesthesia start, anesthesia end, documentation of anesthetic agents, flows, procedure start and finish, muscle relaxants
        2. Determines if a case is surgical or non-surgical
        3. Looks at other documentation if provided to further refine output
            a. Neonate delivered
            b. Duration of anesthetic
        4. 94-96% accurate
        5. Will be foundational for all OB measures in order to determine case type (labor epidural, c-section, conversion to c-section)
        6. Will first use the phenotype for the antibiotic timing measure but anticipate using for all OB specific measures
        7. Will go back to other measures that include/exclude labor epidurals or c-sections and will use the algorithm to properly exclude cases rather than CPT codes alone

8. *Dan Biggs, University of Oklahoma*- Could duramorph be used to further refine algorithm? Only used for labor epidurals
9. *Mohamed Tiouririne, University of Virginia*- Using duramorph more for vaginal tears
10. MPOG will look into this and if needed, will add to the algorithm to improve accuracy

d. Exclusions:
   i. Obstetric Non-Operative Procedures- determined using OB anesthesia type algorithm
   ii. Cesarean delivery with documentation of infection prior to incision and mapped to one of the following MPOG concepts*
      1. 50181 Compliance- Prophylactic Antibiotic Variance Note
      2. 50182 Compliance- Prophylactic Antibiotic Variance Note Detail

      * Will only check for one of these notes if an antibiotic is not administered.
   iii. If 'Patient on scheduled antibiotic/documented infection' - exclude
e. Measure Start Time: 60 minutes before procedure start (For Vancomycin, 120 minutes before procedure start)
f. Measure End Time: Surgical Incision Time (50235), if not available then AACD Procedure Start Date/Time (50006)
   i. **For cases without a documented surgical incision time or procedure start time, the case will be flagged for review.
g. Success: Documentation of at least one antibiotic administration within one hour of surgical incision. See 'Other Measure Build Details' for emergency cases and antibiotic timing exceptions.
   i. Will not count "check box" field "prophylactic antibiotic administered"- must be documented in the medication administration record (MAR) with antibiotic administered with dose & time
   ii. Documentation of "Not ordered" or "not indicated" will be flagged as well for review, unless feedback received that these cases should be excluded
h. Responsible Provider: All anesthesia providers signed in at the time of incision. If surgical incision time is not documented, then providers signed in at the procedure start time will be attributed.
i. Other Measure Build Details:
   i. For emergency cases, success is determined by documentation of any of the following antibiotics initiated between anesthesia start and anesthesia end.
      1. Should emergency cases be excluded? Or should the measure look at whether or not an antibiotic was given at any point between anesthesia start and end?
      2. *Brandon Togioka, Oregon Health Science University* - It would be appropriate to look to see whether or not one was given, is beneficial to give at some point
   ii. Any of these antibiotics administered within the timeframe will result in success for this measure focused on antibiotic timing, rather than selection.

Antibiotic	**MPOG Concept**	**Appropriate Start Time**
Azithromycin	10048	Between Anesthesia Start and Anesthesia End Change to 60 minutes before incision through Anesthesia End
Cefazolin	10107	Within 60 minutes before incision

Cefepime	10108	Within 60 minutes before incision
Cefotaxime	10109	Within 60 minutes before incision
Cefotetan	10110	Within 60 minutes before incision
Cefoxitin	10111	Within 60 minutes before incision
Ceftriaxone	10114	Within 60 minutes before incision
Cefuroxime	10115	Within 60 minutes before incision
Clindamycin	10131	After delivery of neonate before anesthesia end Change to 'Within 60 minutes before surgical incision'
Gentamicin	10202	Within 60 minutes before incision
Vancomycin	10444	Within 120 minutes before incision

Acceptable Antibiotics/Timing:

j. *Mohamed Tiouririne, University of Virginia* – appropriate time frame for azithromycin, others seem ok
k. *Brandon Togioka, Oregon Health Science University* - Why is clindamycin timeframe different? Clindamycin should be the same timeframe as the other ABX
    i. Understanding based on forum that it should be given after cord clamping
    ii. We don't capture cord clamping, defer to neonate delivered
    iii. *Rachel Kacmar, University of Colorado* – our institution gives before incision
    iv. *Ronald George, University of California- San Francisco* - clindamycin give like cefazolin, azithro before cord clamp
    v. Lack of standardization on azithromycin timeframe- some before and after cord clamping
l. Committee agrees that clindamycin should be changed to be given within 60 minutes before surgical incision
m. Committee also agrees that azithromycin should be initiated within 60 minutes before surgical incision through anesthesia end
n. MPOG will start to review cases at this point and will reach out via forum if we have more questions- Will push to dashboard soon after case review

4. Antibiotic Selection Measure, proceed?

a. MPOG can build this measure- could be institution level (no attribution)
b. Surgeon orders antimicrobial prophylaxis – may be helpful for organization but not an anesthesia-specific measure
c. Feedback:
    i. OB can order without anesthesia input
    ii. Required to administer as ordered, but can give suggestions
    iii. Each surgical site infection is already reviewed at each institution, including abx choice and timing
d. Does this group wish to focus on this?
    i. *Dan Biggs, University of Oklahoma* – Anesthesia has zero input on abx selection at his institution, surgeon orders. Anesthesia only administers what is ordered
    ii. *Mohamed Tiouririne, University of Virginia* – At UVa, anesthesia only changes the antibiotic order if we see a discrepancy in the orders.

iii. Would this be helpful to your institutions to share this data?
    1. *Mohamed Tiouririne, University of Virginia* - keep on table to discuss at next meeting
    2. *Dan Biggs, University of Oklahoma* - I think it is good information to share with colleagues but not a priority

5. Prolonged Hypotension Measure Specification Review

a. Highest rated on the survey, but high variability in definition of hypotension
b. 12/2019 Discussion: Consider MAP value in addition to SBP as it has become common practice to ignore DBP and is not necessarily best practice. Considerations are different in women with pre-eclampsia vs. non-hypertensive women.
    i. A Cochrane review revealed numerous ways to define hypotension but the majority of studies refer to SBP- see Table 1: https://www.cochranelibrary.com/cdsr/doi/10.1002/14651858.CD002251.pub3/full
c. Assess if hypotension that was treated instead/also?
d. <u>Measure Time Period:</u> Spinal placement time to delivery of neonate
e. <u>Hypotension Definition:</u>
    i. For MPOG data, baseline BP means a BP taken either in preop or labor and delivery
        1. *Ronald George, University of California- San Francisco* – baseline doesn't work well in this setting, having an absolute value of SBP ≥ 90mmHg sounds reasonable
        2. *Rachel Kacmar, University of Colorado* - absolute value does not account for patients with pre-eclampsia. They would need a different value for baseline
        3. *Dan Biggs, University of Oklahoma* - What is acceptable pressure for someone who's pressure starts at 220? Committee agrees – no clear consensus in this area
        4. *Mohamed Tiouririne, University of Virginia* - Don't want to decrease BP in preeclamptic patients by >20%
        5. What should we use for baseline:
            a. *Mohamed Tiouririne, University of Virginia* - first BP in OR is an appropriate surrogate for baseline
            b. *Carlos Delgado Upegui, University of Washington* - practice is to look at first BP and titrate phenylephrine as appropriate to keep around that value
            c. *Dan Biggs, University of Oklahoma* - sometimes gradually bring pressures down. Is 20% reasonable if someone's pressure is really high?
            d. *Mohamed Tiouririne, University of Virginia* – Normally do not want BP <140/90
        6. Options:
            a. Could exclude patients with pre-eclampsia from measure based on discharge diagnosis information
            b. Could provide more informational view for these patients on the new dashboard: one informational measure for patients with pre-eclampsia and a second informational measure for patients without eclampsia

i. Use SBP <80% baseline (>20% decrease from baseline) for patients with pre-eclampsia
ii. Use SBP < 90mmHg for patients without pre-eclampsia

f. Definition of 'Prolonged:'
    i. What is a reasonable duration?
    ii. 5 or 10 minutes?
        1. *Mohamed Tiouririne, University of Virginia* - Can MPOG look at two time frames: (1) between spinal and birth and (2) after birth?
            a. Yes- can assess cumulative minutes of hypotension through delivery & total minutes of hypotension from spinal through anes end
        2. *Rachel Kacmar, University of Colorado* - there is often more tolerance for hypotension after baby is out

g. Inclusions:
    i. Elective, urgent, or emergent cesarean delivery*
    ii. Patients undergoing cesarean section with hysterectomy (CPT: 01969)
    iii. **Note:** Includes epidural, spinal, combined spinal epidural, & general anesthesia cases for cesarean section delivery
    iv. *MPOG has created a 'phenotype' to sort cases based on procedure text, CPT codes, and note documentation to identify cesarean delivery cases. CPT codes alone do not seem to be reliable in determining case type.

h. Exclusions:
    i. Separate out preeclamptic patients in a separate measure- see above
    ii. Emergency c-sections with diagnosis of placental abruption (O45*), Rupture of uterus (spontaneous) before onset of labor (O71.0), Newborn affected by intrauterine blood loss from ruptured cord (P50.1), Abnormal uterine or vaginal bleeding, unspecified (N93.9), Placenta previa with hemorrhage, third trimester (O44.13), Hemorrhage from placenta previa, antepartum condition or complication (641.13), Hemorrhage from placenta previa, delivered, with or without mention of antepartum condition (641.11)

i. Prolonged Hypotension for Cesarean Delivery Discussion Conclusions:
    i. Committee agrees there is a lack of literature and standardization in regards to treating hypotension for cesarean delivery- will proceed with descriptive measure that will help institutions understand variability and determine next steps
    ii. MPOG to build one informational measure for patients with pre-eclampsia using SBP <80% baseline (>20% decrease from baseline) & assess cumulative minutes below 80% baseline for two time periods before and after delivery
    iii. MPOG to build a second informational measure for patients without pre-eclampsia using SBP < 90mmHg as the threshold. Measure will assess cumulative number of minutes below 90mmHg for two time periods: before and after delivery.
    iv. Will share institution comparison across MPOG sites
    v. Provider Attribution- Committee agrees this measure will be informational/descriptive only- no attribution
    vi. Will send out more detailed spec on forum for further feedback

6. Meeting Conclusion

a. Forge ahead with antibiotic timing measure

b. Start working on a hypotension measure which accounts for variability in evidence and preeclampsia patients as well
    i. Will release to forum for review
c. Looking for obstetric anesthesiologist to lead subcommittee- contact Coordinating Center if interested

Meeting adjourned at 1258