Multicenter Perioperative Outcomes Group (MPOG)

PCRC Meeting Notes – Monday, January 14, 2013

Attendees: P=Present; A=Absent; X=Expected Absence

Active PIs		**Chairs Continued**	
P	Kenneth Abbey, MD - OHSU	**A**	Howard Schapiro, MD - Univ of Vermont
P	Michael Aziz, MD - OHSU	**P**	Kevin Tremper, PhD, MD - Univ of Michigan
A	Mitchell Berman, MD - Columbia	**A**	Warren Sandberg, MD, PhD – Vanderbilt
P	Daniel Biggs, MD – Oklahoma Univ Med Cntr	**A**	Howard Schapiro, MD - Vermont
A	Robert Craft, MD – University of Tennessee	**A**	George Rich, MD - Virginia
A	Douglas Colquhoun, MD – Univ of Virginia	**A**	Jeanine Wiener-Kronish, MD
A	Marcel Durieux, MD – Univ of Virginia	A	Margaret Wood, MD - Columbia
P	Jesse Ehrenfeld, MD - Vanderbilt	**In-Progress PIs**	
P	Ana Fernande-Bustamente, MD - Colorado	**A**	Maged Argalious, MD - Cleveland
A	Alexander Friend, MD – Univ of Vermont	**A**	Michael Avidan, MD - Wash Univ, St. Louis
A	Sandra Holtzclaw, MD - Vanderbilt	**A**	Brian Bateman, MD - MGH
P	Leslie Jameson, MD - Univ of Colorado	**A**	Matthias Eikermann, MD - MGH
P	Sachin Kheterpal, MD - University of Michigan	**A**	Dan Helsten, MD – Wach Univ, St. Louis
P	Nathan Pace, MD – Univ of Utah	**A**	Fabian Kooij, MD - Amsterdam
P	William Paganelli, MD – Univ of Vermont	**X**	Philip Lirk, MD - AMC
A	Stephen Robinson, MD - OHSU	**A**	Timothy Morey, MD - Univ of Florida
A	Kelley Smith, MD – Univ of Utah	**A**	Marco Navetta, MD – Santa Barbara Cottage
P	Jonathan Wanderer, MD - Vanderbilt	**A**	W. Pasma - Utrecht
A	Kevin Wethington, MD - Univ of Utah	**A**	David Robinowitz, MD - UCSF
Chairs		**A**	Scott Springman, MD – Univ of Wisconsin
A	Wolfgang Buhre, MD - Utrecht	**A**	Wilton van Klei, MD – Utrecht
A	F. Kayser Enneking, MD	**MPOG**	
P	Jerry Epps, MD – Univ of Tennessee	P	Mark Dehring
A	Alex Evers, Wash U	**P**	Tory Lacca, MBA
A	Thomas Henthorn, MD – Univ of Colorado	**P**	Fiona Linton
A	Jeffrey Kirsch, MD - OHSU	**P**	Michelle Morris, MS
A	Mervyn Maze, MD - UCSF	**P**	Amy Shanks, MS, PhDc
A	Robert Pearce, MD – University of Wisconsin	**P**	Tyler Tremper

Ground Rules for PCRC:

1. Each protocol must have specific testable hypothesis with data available in MPOG data structure
2. People requesting specific data elements must also supply that data type to MPOG. If you don't submit that data type currently, then you can't get that type of data type out. However, if you have a co-investigator from another site that does supply that data, then you can ask for that type of data. The reason is so someone on the research team understands the limitations of each data element being requested and used
3. To ensure that there is not a lack of clarity about what the status of the proposal is, each proposal will get the following overall decision at the end of each presentation and discussion
    a. Accept with minimal or no changes required
    b. Accept with major changes required
    c. Revise and reconsider at future meeting
    d. Reject
4. Meeting will be recorded to be shared later with members of MPOG via the MPOG website. There were no objections to this via the members that were on the call.

Presentation:
Title: National Practice Patterns for Postoperative Nausea and Vomiting Prophylaxis

Proposed Authors: Jonathan Wanderer, MD, Mphil, Jesse M. Ehrenfeld, MD, MPH, Matthew S. Shotwell, Ph. D and others that are interested

Primary Institution: Vanderbilt

Presented by: Protocol overview presented by Dr. Jonathan Wanderer

Discussion Points:

- From a statistical perspective, how are you making these comparisons for expected to observed administration of PONV prophylaxis? Is it based on risk factors?
    - Look at site of care as a dummy variable for each organization at the institution level or more granular than that but my provider level at?
        - If there is variability due to specific treatment area levels such as ambulatory anesthesiologist versus general anesthesiologists, should include this be included as well.
        - If we can identify if the case happened in a free standing ambulatory center within a specific institution that is very useful information
        - Also, look to see if the patient was booked as an OP or ADP.
    - Look at each institutional guideline to look at variations in institutional guidelines by site and just descriptively describe it.
- Does MPOG have a risk score for each site?
    - MPOG has a risk total score for PONV.
    - This will depend on how well the sites document each individual risk factor
- How many people have PACU med data?
    - That is one major limitation that we have to figure out. Right now we are not putting PACU med data into MPOG from each site. We could, but we are not. Sachin believes that the minority of sites do have PACU medication data.
        - Sachin will query the MPOG members to see how many sites do have PACU medication data
        - This project will spur us to start using PACU medication data
- Idea is to see how the risk factors affect the effect and also the sites. We are looking at the main effect for the site and the risk score as well. In regards to random effects, if we think there is correlation within the site, we could introduce it as a random effect.
- The sites that can contribute are Oregon, Oklahoma, Tennessee, Vanderbilt, Utah, and Michigan for preop. For the postop data are Michigan and Vanderbilt
- What is the quality and consistency of data available across the sites?

SAMBA guidelines (apfel score)

- Smoking
- Gender
- Previous PONV

- Use of opiates (intraop or postop)
    - Could break out long versus short acting
    - Could break out drugs prior to anesthesia induction end

OHSU

- No PACU data
- Consider variation by year
- Consider propofol TIVA
- Consider looking at morphine equivalents as opposed to yes/no to opiates

Colorado

- No droperidol since black box
- No PONV risk factors documentation
- Questionable smoking documentation
- Make sure that "classes of drugs" is outcome, not specific drug
- Given that 100% of patients get opiates and 50% are female, we are focused on smoking and previous PONV really
- Consider breaking down by procedure type
- Use propofol infusion < XX mcg/kg/min as a treatment

Utah

- Is postop really the definition of risk factor
- Do not have PACU data
- Can offer the elements of the risk score
- Are we trying to predict PONV?
- We can at least tabulate how many classes of drugs
- Consider generalized linear regression models

Vermont

- In addition to guideline communication, a focused, structured survey specific to this project would be helpful
- Include manually documented anesthesia technique
- No pacu

Oklahoma

- Most people do get some opiate
- No pacu data
- All four elements of risk factors are in database
- No droperidol

UMHS

- Add aprepitant

Tennessee

    - No official score, but do have the risk factors composing

- How do you deal with time related trends about which medications are given?
- How are you going to deal with propofol infusion when sites are using it as a prophylaxis?
    - If you are doing a combination of a volatile agent and propofol infusion to possible include that as a variable
- Is intraop opiates a good enough proxy as a near neighbor of expected postoperative opiate use since some sites so not have postop data?
    - Yes that is fair to do according to the PI
    - One site, always gives an opiate to a patient intraoperative so that would affect the risk score.
    - Could look at long versus short acting opiates and then if it was an intubation dose of an opiate
    - Could you quantify morphine equivalents to determine that the patient received XXX amount of morphine equivalents? Due to by weight or by hour?
        - Part of the problem with morphine equivalence goes back to the type of procedure since different procedures carry a higher risk for PONV but the actual narcotic in that group is very low. The decision about how many of the drugs you give and how aggressive you are is based on the type of procedure as well as the PONV risk factors.
- Perhaps look at how many have scopolamine patch placed since Vermont will only place the patch for high risk patients
- Look at this by location of procedure such as crani, chest, etc and if the adherence is based on the location of the procedure
    - We can look at this effect in a straight forward analysis
    - Will this study be stratified or adjusted by high risk procedure?
        - Currently was going to use it as a binary high risk procedure or not.
- Need to survey each institution to determine what data is available by each institution and the guidelines. Send out a focused, structured questionnaire to each institution
    - Also, do the institutions follow their protocols or are they ignored
- Need to add aprepitant to the medication list to be queried
- Should pull the data to include what the institution called the case in regards to anesthesia technique. If MPOG is coding it differently, than the site can review those specific cases to determine if he wants to include it as a GA or not.
- Add if there was a low propofol infusion mcg/kg/min below XXX amount with a volatile agent? They are using it as a PONV prophylaxis. This is done by Colorado in high risk patients.
- Can you look at the distribution of the count of different drug groups as a prophylaxis by risk factors?
- We are not trying to predict PONV because we do not have enough PACU data to be able to do that. Potentially next year, more sites will have these PACU data elements and then we can do this.
- Now we can show components of the variation of PONV administration.
- Droperidol used at Vermont, Tennessee, Vanderbilt and Michigan

Institution	Vote
Columbia	**n/a**
Oklahoma University Medical Center	**Accept with Minor Revisions**
Oregon Health Science University	**Accept with Minor Revisions**
University of Colorado	**Accept with Minor Revisions**
University of Michigan	**Accept with Minor Revisions**
University of Tennessee	**Accept with Minor Revisions**
University of Vermont – Dr. Pagenelli	**Accept with Minor Revisions**
University of Utah – Dr. Pace	**Accept with Minor Revisions**
University of Virginia	**n/a**
Vanderbilt	**Accept with Minor Revisions**

Final Decision: Accept with Minor Revisions

Agenda Items:

1. Review of case validation and data validation utilities

2. Review of standardized outcome documentation

Case Validation and Data Validation

- Two types of data validation
    - MPOG data diagnostics: Across the database, we will show you broad level areas in the mapping to determine if the extract is functioning properly. This gets run by your local database, at each institution. STA members also suggested MPOG runs it as well to determine the quality of the data.
        - Tells you your fill rate for each variable.
        - Over time, can show you the number of cases that are showing up in the MPOG database to look for normal distribution
        - We will add on more diagnostics to look at over time to alert a site to take a look at their data.
        - The idea is that each site will look at these diagnostics every 3 months when you are preparing to submit data.
    - Case Validation Utility: Instead of each site manually pulling out cases and putting into an excel spreadsheet; MPOG has developed in 6 months blocks, how many cases you have reviewed.
        - Each site can then pull a random case and then pull the case in their AIMS to determine if the case was properly extracted into MPOG
            - MPOG has built in specific questions that text extraction and mapping to be answered by the site. MPOG expects a yes answer to every question.
            - We also want you to review the physiologic MPOG view as well as the AIMS physiologic data at your site to determine if the data matches well
            - You can generate a report and it will automatically forward the report to the MPOG server with no identifiers
            - This will probably be rolled out within two weeks.
            - There is a new error message as well that you can email the error message to MPOG for help
- Sachin: Is this helpful?
    - All sites think this is very useful
- Sachin: Are there other things that MPOG can do or other items that we can add from a case and/or data validator standpoint? Specifically how to get at data that are mismapped or missing.
    - Please email Sachin any ideas
- This will be rolled out in two weeks and each site will get an individual email that you can download this new validation

Standardized Outcome Documentation

- AQI on April 12 will be working with us to develop standards for a mini H&P that every institution should use.
- Sachin may be asking the MPOG group, to develop standards. This may mean that Sachin might need each sites screen shots from a practice patient so that he can present these findings to AQI from a MPOG perspective?
- Would you adopt a standardized list if it was possible?

Open Forum:

- Revised Mike Aziz proposal has been sent out for review. It was accepted pending moderate revisions. Please go through and read. If you have any additional concerns please email Sachin and Mike directly. Those comments will be incorporated if possible and data will be pulled after one week's time.
- Ana Fernandez has also sent out a revised proposal as well to Sachin. This will be sent out to the group to review as well.
- Is MPOG sending data to AQI? Two sites are giving local MPOG database to AQI. It goes from the institution to AQI, not from MPOG to AQI. No re-mapping is required to send data to AQI.
    - There is also a SAMBA version as well to upload to SAMBA's system
- The NSQIP input utility allows you to input each sites NSQIP data into that institution's system