Multicenter Perioperative Outcomes Group (MPOG)
PCRC Meeting Notes – Monday, March 11, 2013

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

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

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: Impact of intraoperative blood pressure variation on adverse outcomes in thoracic surgical patients: A report from the Multicenter Perioperative Outcomes Group

Proposed Authors:, Michael R. Bronsert, PhD, MS, Jules Lin, MD, Sachin Kheterpal, MD, MBA, Leslie C. Jameson, MD, Karl E. Hammermeister, MD, William G. Henderson, MPH, PhD

Primary Institution: Colorado

Presented by: Robert A. Meguid, MD, MPH

Discussion Points:

- Background presented on how this project fits with the existing literature and how this project will add to the literature by Dr. Robert Meguid
- Methodology for BP analysis reviewed by Dr. Karl Hammermeister
    - Reviewed methodology for BP and outcomes
    - Expressed magnitude and duration by calculating an area over and under a threshold. In the past, thresholds have been arbitrarily defined. In this project, they have decided to let the population define the definition. They have started off with investigating the mean of all BP in all patients. There is a mixture of non-invasive and arterial pressures. Discussions have been made to develop a model to convert arterial and non-invasive but for the moment they are not pursuing this avenue. They are defining the thresholds based on mean pressure based standard deviations above and below the mean. The data are currently divided into interquartile ranges. The data shown are systolic blood pressure.
        - Question: What is the definition of standard deviation? How is it derived?
            - All the blood pressures in the database.
        - Question: Did each patient contribute more than one blood pressure?
            - Yes
        - Statement: This ignores two sources of variance? Did you consider modeling the two sources of variance since you have repeated measures within patients and across patients
            - No they did not do this
        - Question: Did you remove the high/low artifacts from the arterial blood pressure?

        - Yes they did. They also removed non-physiologic values and tried to remove most of the artifacts are occurring.
    - Used invasive versus non-invasive if both blood pressures were present
    - Approximately 50% of patients have invasive blood pressure measurements, perhaps more
    - Statement: Clinically, what does the data tell us? Should we keep the BP within a specific quartile? What happens to the patients outside the two standard deviation group? Do you not get a signal?
        - Answer: If you ignore the quartile, they are all significant. If you can simply state that if you keep the pressure above a specific threshold would be clinically useful?
        - Is the quartile based analysis additive?
    - Question: Could you use the patient's own BP to apply mean and standard deviation to patient specific rather than the entire population?
        - They have not done this yet because they only have the AIMS data and the early BP's look to be remarkably variable.
        - Suggestion was to take the first two BP's in AIMS and use that as a baseline because the patient variation is enormous. Suggestion was to look at the variation in patients when presenting for this study
        - Question: If you are sampling every 15 seconds, but cuff pressure is occurring at the most every 3 minutes. How do you smooth?
            - They do not smooth for non-invasive blood pressure and only smooth the arterial pressure
    - Data collection on-set is beginning of EtCO2 and end is the end of EtCO2
- Outstanding issues to be addressed:
    - How inter-patient variation is being handled. Should it be addressed as a sensitivity analysis? You would want to keep the patient at a patient-specific norm instead of a population-norm
    - What dataset do you want to interact with? At this point in time, text driven data the type of data that is available for this type of research.
    - This project may have overlap with the Tennessee project and determine if one combined project is necessary or if we can divide into two projects and specifically state that in a publication

Institution	**Vote**
Columbia	**n/a**
Oklahoma University Medical Center	**Revise and reconsider**
Oregon Health Science University	**Revise and reconsider**
University of Colorado	**Revise and reconsider**
University of Michigan	**Revise and reconsider**
University of Tennessee	**Revise and reconsider**

University of Vermont – Dr. Pagenelli	**Revise and reconsider**
University of Utah – Dr. Pace	**Revise and reconsider**
University of Virginia	**n/a**
Vanderbilt	**Revise and reconsider**

Final Decision: Revise and Reconsider

General Discussion Issues

- Is there a matrix on the website for which site is contributing what type of data?
    - No we do not have this currently available but we will put that on the website
- You can only query data for which you submit to MPOG

MPOG Application Suite Overview

- You will receive an update to the database itself and we will reach out to each of you and your IT leads to roll this out. Updating the database is a quick activity as well.
- We would like to show the case validator and for you to validate your cases
    - We recommend you review 20 cases/6 months of contribution of your cases
    - We ask for service specific validation across a variety of different specialties
    - Sachin will send out a detailed word document on how to use the MPOG Case Validation Utility against your AIMS actual data for which you will state yes or no to specific questions
    - This replaces the excel spreadsheets. The reporting is also automated as well back to MPOG
- Question: Can each individual site, tell what other sites have validated their cases so therefore each site can see which sites have actually reviewed and validated their data.
    - This will be updated and be available on the website
- Question: Should we go back and re-validate the older cases with this new technique?
    - The bias of the group is to go back and re-validate using the new tool to improve the quality
- MPOG Data Diagnostics
    - We can now determine the type of data that may be missing large amount of data elements from a macro level for each site.