Multicenter Perioperative Outcomes Group (MPOG)
PCRC Meeting Notes – Monday, January 8, 2018

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 no changes
    b. Accept with minor changes send revision electronically
    c. Accept with major changes and represent at PCRC
    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.

Attendance:

Michael Aziz (Oregon)	Bhiken Naik (Virginia)
Michael Avidan (Wash U)	Anna Nachamie (Weill Cornell)
Dan Biggs (Oklahoma)	Nathan Pace (Utah)
Mike Burns (Michigan)	Karen Posner (Washington)
Ruth Cassidy (Michigan)	Leif Saager (Michigan)
Douglas Colquhoun (Michigan)	Amy Shanks (Michigan)
Germaine Cuff (NYU Langone)	Allie Thompson (Michigan)
Shelley Housey (Michigan)	Christopher Troianos (Cleveland Clinic)
Sachin Kheterpal (Michigan)	Robert Schonberger (Yale)
Tory Lacca (Michigan)	Tara Semenkovich (Wash U)
Don Likowsky (Michigan)	Jonathan Wanderer (Vanderbilt)
Mike Mathis (Michigan)	Mark Willingham (Wash U)
Patrick McCormick (Memorial Sloan Kettering)	

Announcements/Updates

- EOS Updates:
  - Please complete all data entry
- Clinical Trials Network
  - 4/5 projects submitted involving MPOG as a resource
  - Please let us know if you included MPOG in your submission
- Orphan Disease Program
  - MPOG database may allow for case reports/case series and guide potential clinical care
  - Comment: Should be related to a specific clinical concern in question
  - Comment: Agree with using MPOG resource as a way to aggregate cases
  - Please let us know if you have any clinical input or suggestions regarding this initiative for 2018

STS-MPOG integration updates

- 5 sites actively integrated (~16,000 matched cases)
- Additional sites in process of integrating
- Steps for integration are available on MPOG website

PCRC 0049: Outcomes Following Intraoperative Management in Patients Undergoing Esophagectomy: A Combined Report from the Multicenter Perioperative Outcomes Group and the Society of Thoracic Surgeons

PIs: Tara Semenkovich, MD MPHS, Varun Puri, MD MSCI, Washington University, St. Louis

- Q: Are we parsing the postoperative outcomes optimally?
  - Q: With a 10% expected outcome rate, it would allow for ~12 variables included in primary model.
    - A: Hope to have a larger sample size as more institutions integrate. In the meantime, will look at "bundles of care" to help with power, while larger analysis looking at each intraoperative characteristic separately will make a note of limitation in power.
    - A: Probably will not be powered for many of the secondary outcomes.
      - A: Add in bootstrapping and include optimization scores.
      - Comment: We need to decide what the primary outcome is.
        - A: Bias is to see how many patients are included in the query to guide primary outcome.
        - A: Penalized regression analysis should be incorporated.
        - Q: How large were the other studies?
          - Event rate in general is usually ~8-12% range
          - Studies included hundreds of patients from STS database
        - Comment: Will force in anesthesia clinical variables but will limit other variables via penalized regression
  - Q: Are surgeon and their approach included in the study?
    - A: We will have approach included in this study
    - A: We don't have specific surgeon identifier included currently, but we can consider it; most likely the data will only include thoracic surgeons
    - Comment: Do we have analytical capability to account for both primary anesthesiologist and surgeon? Do we want to include provider in this first project?

        - A: We are not sure how many of these procedures individual surgeons do in the database – will be parsing our data too much. May aggregate on meaningful levels or attribute of providers.
    - Q: How do we want to account for provider as a confounder?
        - A: May look at center effects; can justify to reviewers not including provider attributes due to sample size/power

- Q: How should intraoperative hypotension be analyzed – exposure variable? Intermediate outcome?
    - A: Mediation analyses
    - A: Initial plan to include as a covariate; sensitivity analysis or future study may consider hypotension as a moderator/mediator

- Q: Which should be primary analysis versus sensitivity analysis?
    - A: Two factors to consider – how standardized are these surgeries (is there variation)? Based on variation, will you have power to analyze across subgroups? May not have the numbers to make any meaningful conclusions. List in a descriptive table, but don't stratify in the analysis.
    - A: Intraoperative fluid balance in quartiles may be best path forward to avoid overfitting; individual fluids included in descriptive portion

Final Decision: Electronic revisions

Institution	Vote
Academic Medical Center (AMC) Amsterdam	**N/A**
Beaumont	**N/A**
Bronson	**N/A**
Children's Hospital of Orange County (CHOC)	**N/A**
Cleveland Clinic	**Accept**
Columbia	**N/A**
Henry Ford	**N/A**
Holland	**N/A**
Memorial Sloan Kettering	**N/A**
NY Langone	**Accept**
Oregon Health Science University	**Electronic revisions**
St. Joseph/Trinity	**N/A**
Sparrow	**N/A**
Stanford	**N/A**
University Medical Center of Utrecht	**N/A**
University of Colorado	**N/A**
University of Michigan	**Abstain**
University of Oklahoma	**Electronic revisions**
University of Pennsylvania	**N/A**
University of Tennessee	**N/A**
University of Utah	**Electronic revisions**
University of Vermont	**N/A**
University of Virginia	**Electronic revisions**
University of Washington	**Electronic revisions**
Vanderbilt	**Electronic revisions**
Wake Forest	**N/A**
Washington University, St. Louis	**Abstain**
Weill-Cornell Medical Center – New York Presbyterian	**N/A**
Yale	**Accept**

PCRC 0054: Management of ventilation for esophagectomy – impact on clinical outcomes: A report from the Multicenter Perioperative Outcomes Group and Society of Thoracic Surgeons Database

PI: Randal S. Blank, MD, PhD, University of Virginia

Presented by: Bhiken Naik

- Q: Instead of predefined thresholds on ventilation in the statistical models – consider as continuous variables? A: Will do a histogram of ventilation settings as initial step – maybe data will drive the definition
    - Comment: If we are going to turn into binary variable then histogram is necessary first step
- Q: Are we focusing on the correct LPV variables? Is there a hypothesis/specific aim that should be primary (tidal volume/peep or modified driving pressure)?
    - A: Driving pressure is the more modern way of looking at this; TV/peep is historical/older version. If field is moving toward driving pressure, we should consider this.
    - A: We will use the modified driving pressure
    - Comment: Would be interesting to see how many sites contribute plateau pressure.
        - A: Will probably only have plateau pressure from 1-2 centers
- Q: Are there other surgical variables which might affect the risk of pulmonary complications and should thus be considered in the analysis? Are there management strategies potentially affecting aspiration risk which should also be considered in this study?
    - A: Nothing coming to mind
- Comment: Focus on the data readily available
- Q: For the centers that contribute standard plateau pressure – should we incorporate a comparison analysis between standard reported values and modified values?
    - A: Great point – we will incorporate this!

Final Decision: Accept

Institution	Vote
Academic Medical Center (AMC) Amsterdam	**N/A**
Beaumont	**N/A**
Bronson	**N/A**
Children's Hospital of Orange County (CHOC)	**N/A**
Cleveland Clinic	**N/A**
Columbia	**N/A**
Henry Ford	**N/A**
Holland	**N/A**
Memorial Sloan Kettering	**Accept**
NY Langone	**N/A**
Oregon Health Science University	**Accept**
St. Joseph/Trinity	**N/A**
Sparrow	**N/A**
Stanford	**N/A**
University Medical Center of Utrecht	**N/A**
University of Colorado	**N/A**
University of Michigan	**Abstain**
University of Oklahoma	**N/A**
University of Pennsylvania	**N/A**
University of Tennessee	**N/A**
University of Utah	**Electronic revisions**
University of Vermont	**N/A**
University of Virginia	**Abstain**
University of Washington	**Accept**
Vanderbilt	**Electronic revisions**
Wake Forest	**N/A**
Washington University, St. Louis	**Abstain**
Weill-Cornell Medical Center – New York Presbyterian	**N/A**
Yale	**Accept**