Multicenter Perioperative Outcomes Group (MPOG)
PCRC Meeting Notes – Monday, August 14, 2017

Attendance

P	Joshua Berris (Beaumont)	**P**	Tory Lacca (Michigan)
P	Dan Biggs (Oklahoma)	**P**	Chris Ladd (Michigan)
P	Katie Buehler (Michigan)	**P**	Sean Mackey (Stanford)
P	Mike Burns (Michigan)	**P**	Mike Mathis (Michigan)
P	Ruth Cassidy (Michigan)	**P**	Ann Nachamie (Cornell)
P	Douglas Colquhoun (Michigan)	**P**	Bhiken Naik (Virginia)
P	Robert Craft (Tennessee)	**P**	Nathan Pace (Utah)
P	Germaine Cuff (NYU Langone)	**P**	Karen Posner (Washington)
P	Ken Cummings (Cleveland Clinic)	**P**	Leif Saager (Michigan)
P	Alexander Friend (Vermont)	**P**	Rob Schonberger (Yale)
P	Shelley Housey (Michigan)	**P**	Xinyu Tan (Michigan)
P	Leslie Jameson (Colorado)	**P**	Allie Thompson (Michigan)
P	Kai Kuck (Utah)	**P**	John Vandervest (Michigan)

Announcements

- Congrats to Dr. Berman and the entire PCRC 002 team on the recent publication in Anesthesiology
- Twitter account – **@MPOGASPIRE** – is now active
- MOCA Part 4 approval
- MPOG retreat on Friday, October 20th at annual ASA Meeting – registration is open on the website
- ICD 9/10 discharge codes, mortality data and anesthesia professional fee codes (CPT) – please continue to work on contributing these data. Please also contribute surgical CPT codes, if possible.
- Enhanced observational study (EOS) data collection will begin in the next few weeks.

PCRC 0044 - "PCRC 0044 - An Automated Method for Assigning Current Procedure Terminology (CPT) Codes Using Machine Learning and the MPOG Registry"

Principle Investigator: Michael Burns, PhD, MD
Institution: University of Michigan

Discussion/Questions

- Comment: Machine learning can be a useful tool for MPOG – vastly improve completeness/accuracy of anesthesia CPT codes and early identification of anesthesia CPT codes can allow for more timely feedback for quality improvement measures and feedback.
- Q: Do we need accurate surgical CPT codes to determine anesthesia CPT codes?
    - A: No, anesthesia CPT codes are assigned by the sites, and we do not need surgical CPT codes for this project.
- Q: If the coders are using rules from manuals, can this be programmed into the machine learning algorithm?
    - A: Yes, some of the coding rubric can be incorporated into the machine learning algorithm. If there is too much overlap of codes, then the description can be too vague, and we would need to use validation techniques to help distinguish.
- Q: If localized coding and errors, do we need to account for the source of the data.
    - A: Yes, we use institution ID to account for source of the data.

- Q: How much hand validation is required?
    - A: For incorrectly assigned CPT codes, probably quite a bit.
- Q: Do we think this algorithm will be better than a billing specialist reviewing the data?
    - A: We see two phases to this project. The first phase is to reproduce what is already in our data (can we reproduce assigning CPT codes). Second phase is showing users where the errors are occurring and how we may be able to help redistribute resources for cases that may take more focused review/validation.
- Q: Are multiple CPT codes an issue?
    - A: In MPOG, we take the highest base-unit value CPT code that is relevant to the case.
    - Comment: May want to add this to the proposal
- Q: Which MPOG field is used for procedure text?
    - A: Use actual procedure text when possible. If no actual procedure text, then we use scheduled procedure text, but the majority of sites have actual procedure text.
- Q: When surgical CPT code is in procedural text, how do we handle this?
    - A: We omit all numerical characters in the text. We also omit surgical CPT codes that are entered into anesthesia CPT codes.
- Q: What if you uncover patterns of deliberate "up-coding" – will MPOG report this?
    - A: This is an academic research project with limitations associated with our predictive algorithm.
    - A: At the end of the research project, upon individual request of the site, if possible, we can provide patterns that are found by site.
- Q: Everyone who participates should get a report about the pattern of how they code and then it will be up to the institution on how to proceed.
    - A: For MPOG, this is a research project. Anything beyond the research and quality improvement is outside the scope of this project. Final product from this research project is a summarized, de-identified product.
- Q: Intellectual property aspect to this project. How will the final product be shared?
    - A: This is an MPOG project. This will be an MPOG product. Whatever product is produced will be an MPOG tool available for our participating sites. For non-participating sites, then it may be commercially available.
- Q: How many distinct CPT codes?
    - A: ~200 anesthesia CPT codes (entire library of anesthesia CPT codes)
- Q: What are the case numbers per anesthesia CPT codes for estimating?
    - A: Large range for estimation based on CPT codes.
    - A: Combination of number of cases and uniqueness that matters.
- Q: Question regarding collaboration – what if another site has a particularly qualified collaborator?
    - A: New area for all of MPOG with tremendous potential. Developing expertise will be beneficial for MPOG. If a site knows of an experienced colleague in this area, then we would be open to collaboration.

FINAL DECISION: Accept

Institution	Vote
Academic Medical Center (AMC) Amsterdam	**N/A**
Beaumont	**Accept**
Bronson	**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	**N/A**
St. Joseph/Trinity	**N/A**
Sparrow	**N/A**
Stanford	**Accept**
University Medical Center of Utrecht	**N/A**
University of Colorado	**Accept**
University of Michigan	**Abstain**
University of Oklahoma	**N/A**
University of Pennsylvania	**N/A**
University of Tennessee	**Accept**
University of Utah	**Accept w/revisions**
University of Vermont	**N/A**
University of Virginia	**Accept**
University of Washington	**Accept**
Vanderbilt	**N/A**
Wake Forest	**N/A**
Washington University, St. Louis	**N/A**
Weill-Cornell Medical Center – New York Presbyterian	**Accept w/revisions**
Yale	**Accept**