Quality Committee Meeting

July 26, 2021

Agenda

Announcements
- New team members
- Upcoming events

Review of July 16th ASPIRE Collaborative Meeting

ASPIRE for improved Geriatric Care:
Germaine Cuff, PhD (NYU Langone) & Rob Schonberger, MD (Yale)
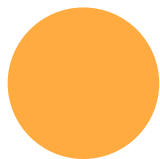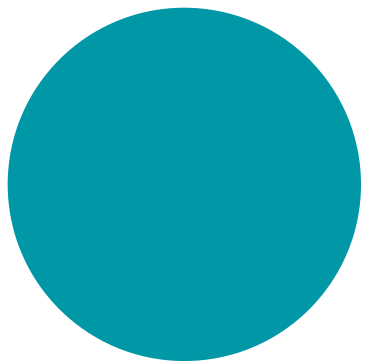
Delirium data in MPOG

Standardized Data File

Measure Updates
- GLU 03 and 04
- TEMP 03
- PAIN 01/02 provider attribution

Meeting Minutes
May 2021

Roll Call – via Zoom or contact us

Announcements

New Coordinating Center Staff!

Rachel Hurwitz

RESEARCH ASSISTANT

Ronnie Riggar

ADMINISTRATIVE ASSISTANT

Tiffany Malenfant, MSN, RN-BC

CLINICAL INFORMATICS SPECIALIST

Andrew Zittleman, MSN, RN
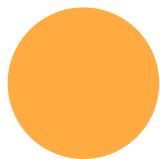
CLINICAL INFORMATICS SPECIALIST

Featured Member July and August 2021
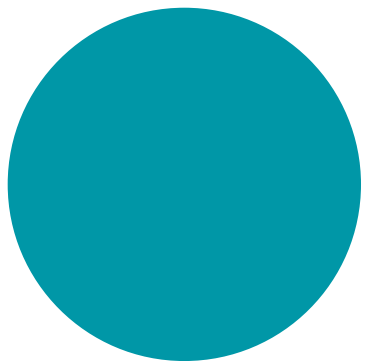
Upcoming Events
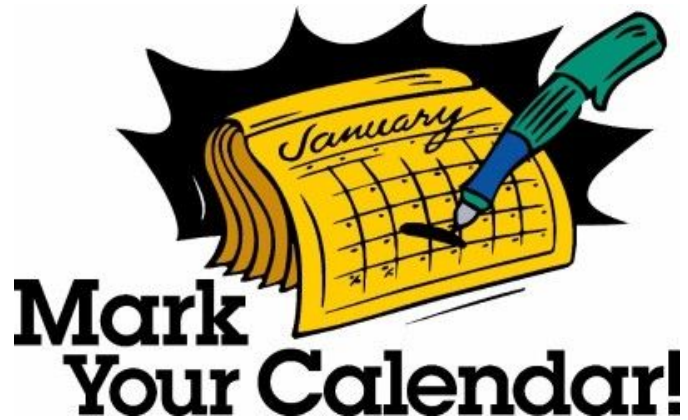
Friday, September 17, 2021, ACQR Retreat - in person + virtual

Friday, October 8, 2021, MPOG Retreat - in person + virtual

Monday, September 27, 2021, MPOG QC - virtual

Monday, November 22, 2021, MPOG QC - virtual

July Collaborative Meeting Recap

Postpartum Hemorrhage: Diagnosis, Treatment and the Michigan Approach

Angel Martino-Horrall, MD

Joshua D Younger, MD
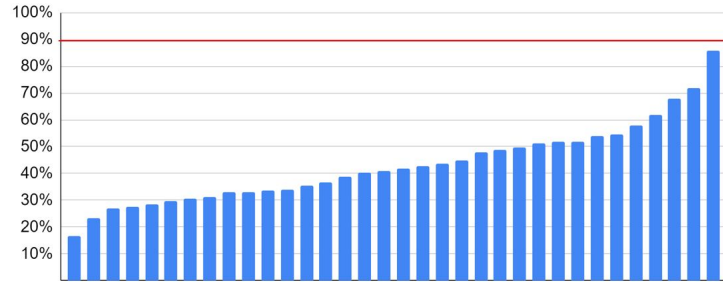
QI Reporting Tool

Have noticed slowness when navigating through screens

Still working through issues before adding opioid equivalency dashboards

Have not been able to officially "retire" old dashboard

We understand this is causing some challenges and are trying to resolve as soon as possible

ASPIRE for Better Geriatric Care
Germaine Cuff, PhD - NYU

Geriatric ASPIRE Measures

- ASA - Brain Health Initiative - Mission: to arm anesthesiologists and other clinicians involved in perioperative care, as well as hospitals, patients and their families caring for older surgical patients with the tools and resources necessary to optimize the cognitive recovery and perioperative experience for adults 65 years and older undergoing surgery.
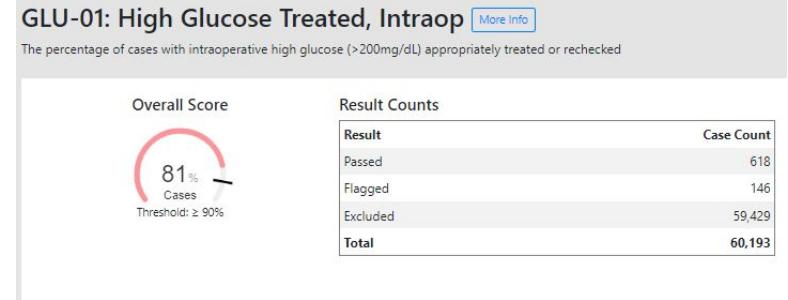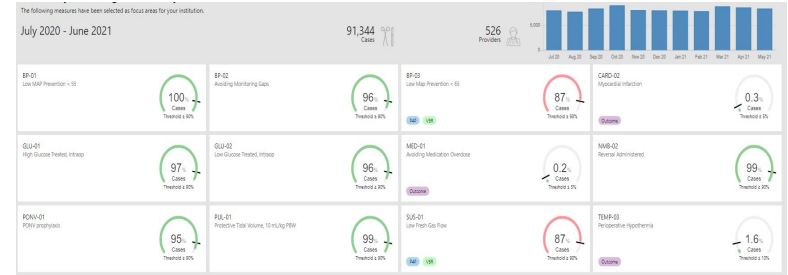
  - https://www.asahq.org/brainhealthinitiative

- IHI – Age Friendly Health Systems Initiative - is an initiative of The John A. Hartford Foundation and the Institute for Healthcare Improvement in partnership with the American Hospital Association and the Catholic Health Association of the United States.

- It's a movement helping hospitals, medical practices, retail pharmacy clinics, nursing homes, home-care providers and others deliver age-friendly care.

  - https://www.johnahartford.org/grants-strategy/current-strategies/age-friendly/age-friendly-health-systems-initiative

- ACS – Geriatric Surgery Verification Program - Developing surgical standards (2 of which are optional) designed to systematically improve surgical care and outcomes for the aging adult population. The standards provide a framework for hospitals to take an

NYU Langone
Health

Suggested Measures

- Percent of patients age >80 undergoing non-cardiac GA who received a benzodiazepine from anesthesia start to anesthesia end.

- Percent of patients age >80 undergoing GA with ETT who received more that 1.5mg/kg of single propofol dose for induction.

- Percent of patients age >65 without preoperative hypotension undergoing GA fro non-cardiac surgery who had episode of MAP<55mmHg within 15 minutes of induction.

- The use of rescue Sugammadex following full reversal by neo/glycol.

NYU Langone Health

MPOG Delirium Data

Background

- UCSF, Dartmouth-Hitchcock, and other sites have expressed interest in using MPOG data to evaluate cognitive function and postoperative delirium
- Ad hoc group met to discuss goals of the work and limitations of the data
  - Brooke Szymanski-Bogart (MPOG)
  - Kate Buehler (MPOG)
  - Lee-Lynn Chen (UCSF)
  - Alexander Abess (Dartmouth-Hitchcock)
  - Anne Donovan (UCSF)
  - Stacie Diener (Dartmouth-Hitchcock)
  - Linda Liu (UCSF)
  - Elizabeth Whitlock (UCSF)
  - Phil Vlisides (UM)
  - Nirav Shah (UM/MPOG)
  - Sachin Kheterpal (UM/MPOG)
- MPOG data analyzed through variable mapping spreadsheets and common unmapped variables across sites summarized
- New MPOG concepts associated with delirium created as needed

New concepts related to Preoperative Screening

Clock Drawing - The patient is asked to draw a clock showing a certain time. Used as a screen for cognitive impairment and dementia

- Clock-Drawing Test - Score (3196)
- Clock-Drawing Test - Numbers (3197)
- Clock-Drawing Test - Hands (3201)
- Clock-Drawing Test - Hour Markers (3203)
- Clock-Drawing Test - Face (3204)
- Clock-Drawing Test - Comments (3206)
- Clock-Drawing Test - Time (3207)
- Clock-Drawing Test - Numbers Clockwise (3208)
- Clock-Drawing Test - Indicates Target Time (3209)
- Clock-Drawing Test - Clock Divided by 12 (3211)
- Clock-Drawing Test - Contour (3216)
- Clock-Drawing Test - Details (3217)

How the Clock-Drawing Test Screens for Dementia
A clinician asks the patient to draw a clock showing a specific time

An abnormally completed clock is cause for further evaluation

A normal clock indicates the absence of dementia

verywell

https://www.verywellhealth.com/the-clock-drawing-test-98619
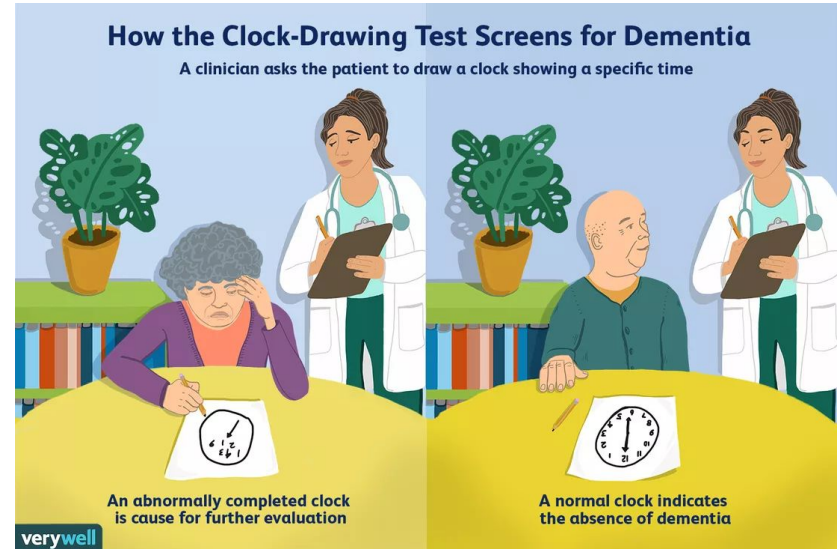
Preoperative Screening - Mini Mental Status Exam

Cognitive function test measuring orientation, attention, memory, language, and visual-spatial skills

- Mini-Mental State Exam Score (3218)
- Mini-Mental State Exam Details (3219)

Patient's Name: _____   Date: _____

Instructions: Score one point for each correct response within each question or activity.

Maximum Score	Patient's Score	Questions
5		"What is the year? Season? Date? Day? Month?"
5		"Where are we now? State? County? Town/city? Hospital? Floor?"
3		The examiner names three unrelated objects clearly and slowly, then the instructor asks the patient to name all three of them. The patient's response is used for scoring. The examiner repeats them until patient learns all of them, if possible.
5		"I would like you to count backward from 100 by sevens." (93, 86, 79, 72, 65, …) Alternative: "Spell WORLD backwards." (D-L-R-O-W)
3		"Earlier I told you the names of three things. Can you tell me what those were?"
2		Show the patient two simple objects, such as a wristwatch and a pencil, and ask the patient to name them.
1		"Repeat the phrase: 'No ifs, ands, or buts.'"
3		"Take the paper in your right hand, fold it in half, and put it on the floor."

http://www.fammed.usouthal.edu/Guides&JobAids/Geriatric/MMSE.pdf

Preoperative Screening - Mini-Cog

Used to detect cognitive impairment and consists of a 3-item recall test and a clock drawing test

- Mini Cog Assessment Score (3221)

Mini-Cog©

Instructions for Administration & Scoring
ID: _____ Date: _____

Step 1: Three Word Registration

Look directly at person and say, "Please listen carefully. I am going to say three words that I want you to repeat back to me now and try to remember. The words are [select a list of words from the versions below]. Please say them for me now." If the person is unable to repeat the words after three attempts, move on to Step 2 (clock drawing).

The following and other word lists have been used in one or more clinical studies.[1-3] For repeated administrations, use of an alternative word list is recommended.

Version 1	Version 2	Version 3	Version 4	Version 5	Version 6
Banana	Leader	Village	River	Captain	Daughter
Sunrise	Season	Kitchen	Nation	Garden	Heaven
Chair	Table	Baby	Finger	Picture	Mountain

Step 2: Clock Drawing

Say: "Next, I want you to draw a clock for me. First, put in all of the numbers where they go." When that is completed, say: "Now, set the hands to 10 past 11."

Use preprinted circle (see next page) for this exercise. Repeat instructions as needed as this is not a memory test. Move to Step 3 if the clock is not complete within three minutes.

http://mini-cog.com/wp-content/uploads/2018/03/Standardized-English-Mini-Cog-1-19-16-EN_v1-low-1.pdf

Preoperative Screening - Montreal Cognitive Assessment

MoCA - 30 item, 10 minute assessment of 8 cognitive domains

- Montreal Cognitive Assessment (MoCA) - Details (3222)
- Montreal Cognitive Assessment (MoCA) - Score (out of 30) (3223)
- Cognitive Screening: MoCA Total Score (3224)
- MoCA:Delayed Recall (how many words did patient recall) (3226)
- MoCA: Read the list of 5 words for the patient to remember (3227)
- MoCA: Oriented to Year? (3228)
- MoCA: Oriented to Place? (3229)
- MoCA: Oriented to Month? (3231)
- MoCA: Oriented to Day? (3232)
- MoCA: Oriented to Date? (3237)
- MoCA: Oriented to City? (3241)
- MoCA: Fluency: Name as many words that start with the letter "F" that you can (1 min) (3242)
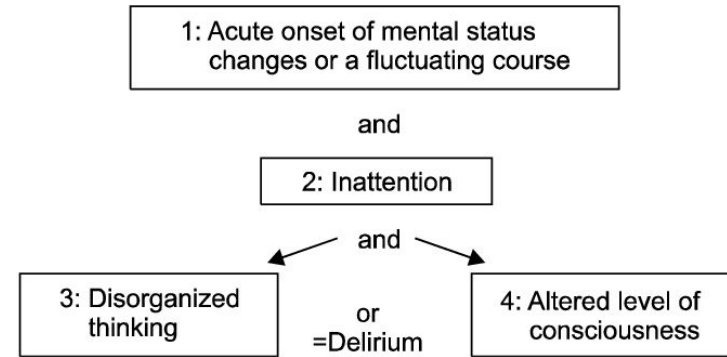
Postoperative Assessments - CAM

Delirium screening tool that assesses for acute onset mental change/fluctuating course, altered LOC, disorganized thinking, and inattention

- Confusion Assessment Method (CAM) Altered LOC (3243)
- Confusion Assessment Method (CAM) Disorganized Thinking (3244)
- Confusion Assessment Method (CAM) Inattention (3246)
- Confusion Assessment Method (CAM) Acute Mental Change and Fluctuating Course (3247)
- Confusion Assessment Method (CAM) Overall CAM-ICU Score (3248)
- Confusion Assessment Method (CAM) Overall CAM-ICU/Short CAM Score (3249)
- Confusion Assessment Method (CAM) Overall CAM-ICU Modified Score (3251)

Postoperative Assessments - Cornell Assessment Pediatric Delirium

- CAPD - Cornell Assessment of Pediatric Delirium Result (3252)
- CAPD - Does the child make eye contact with the caregiver? (3253)
- CAPD - Are the child's actions purposeful? (3254)
- CAPD - Is the child aware of his/her surroundings? (3256)
- CAPD - Does the child communicate needs and wants? (3257)
- CAPD - Is the child restless? (3258)
- CAPD - Is the child inconsolable? (3259)
- CAPD - Is the child underactive-very little movement while awake? (3261)
- CAPD - Does it take the child a long time to respond to interactions? (3262)

RASS Score _____ (if -4 or -5 do not proceed)

Please answer the following questions based on your interactions with the patient over the course of your shift:

	Never 4	Rarely 3	Sometimes 2	Often 1	Always 0	Score
1. Does the child make eye contact with the caregiver?						
2. Are the child's actions purposeful?						
3. Is the child aware of his/her surroundings?						
4. Does the child communicate needs and wants?						

	Never 0	Rarely 1	Sometimes 2	Often 3	Always 4	
5. Is the child restless?						
6. Is the child inconsolable?						
7. Is the child underactive—very little movement while awake?						
8. Does it take the child a long time to respond to interactions?						
					TOTAL	

Pediatric Delirium

AWOL-S, AD8, 4AT

- Unable to find variables for these in available data
- MPOG data is limited to 4 hours before anesthesia start to 6 hours after anesthesia end
- If you would like concepts to be created for the screening tool at your site, please contact the coordinating center for discussion

Other Suggested Assessments

Mapping to the Delirium Concepts

1. Run 'Content Synchronization' on your app suite if not up to date
2. Use 'Variable Mapper' and map to these concepts under the 'Observation Type' or 'Observation Detail Type' categories
3. Once mapped, these concepts will appear in the physiologic section of Case Viewer

Next Steps

Consider incorporating these assessments into practice (Sites)

Analyze concept fill rates (Coordinating Center)

Informational Measures (MPOG QC)

Research Projects including surveys, observational analyses, etc (PCRC)

Quality Improvement Initiatives

→

% of patients are being screened preoperatively for cog impairment or frailty"

% of patients are being screened postoperatively for delirium

Standardized Data File

Mike Mathis

MPOG research process challenges and progress

- Adjusting research passion to data available in MPOG

- Postoperative outcome data limited to mortality, ICD10 discharge diagnoses, lab results

- Understanding what is and is not possible with MPOG data

- Iterative, detailed data query specification and query process

- Time between ideation to data ready for analysis can be many months to years

- DATADirect Self-serve access for local data and multicenter cohort ID maturing

- Most centers use data for quality improvement, so data validation robust and continual

- Hundreds of patient, process, and outcome phenotypes available

- Deep understanding of data quality for existing phenotypes

- Research facilitation process

2017 Strategy: We're building 200+ Legos

- Data common to many different research and QI projects

- Data specific to a project, but helpful in the future

- Making "technics" not "duplos"

- Organizing them is real work

AnesthesiaLeftBound
AnesthesiaRightBound
AnesthesiaStart
AnesthesiaTechniqueBlock
AnesthesiaTechniqueEpidur
AnesthesiaTechniqueGener
AnesthesiaTechniqueLMA
AnesthesiaTechniqueNeura
AnesthesiaTechniqueSpinal
AntiemeticsGiven
ArrivedIntubated
ArrivedIntubated_Cleaned
ArterialLinePlaced
Asa5or6
AsaClass_Cleaned
BaselineBloodPressureMea
Beard_Cleaned
BlockNotes
BMI
Cardiac
CaseDuration
CaseEnd
CaseStart
CasesWithCoreTempLocatic

ComplicationCardiacAdministrative
ComplicationMyocardialInfarctionAdministrative
CryoprecipitateMLDerived
CryoprecipitateMLRaw
CryoprecipitateUnitsRaw
Crystalloids
DataCaptureEnd
DataCaptureStart
EBL
EmergencyStatus
EmergencyStatus_YesNo
EndotrachealTube
ExtubationTimes
FFPMLDerived
FFPMLRaw
FFPUnitsRaw
Fluid01
GeneralAnesthesiaNotesPresent
GlucoseObservationsDuringAnesthesia
Height
HematocritObservationsDuringAnesthesia
HemoglobinObservationsDuringAnesthesia
Holiday
HospitalDischargeCodeCount
IdealBodyWeight
InductionDuration
InductionEnd
InductionStart

2021 Strategy: Time to make the Lego Millennium Falcon

- Combine the building blocks into a usable product

- Standardized data file composed of mature phenotypes

- Released every 6 or 12 months

- Available on MPOG stats server immediately upon PCRC proposal approval

- No data query specification or iterative query process

- What kind of Falcon we talking about?

Standardized Data File Spec

- Some "flat and wide" data
  - Deidentified center and provider IDs
  - Patient and case characteristics
    - Patient demographics & anthropometrics   Patient comorbidities (Elixhauser)
    - Surgery info   Anesthesia technique & base CPT
    -    Case timed events (anes start, surgery start)   Preop labs
    - Clinical summary (fluids, hypotension, ventilator parameters, vasopressor totals)
    - "Clean" outcomes (AKI, mortality, MI)
  - ASPIRE quality metrics: to be discussed with Quality Committee

- A few tall skinny tables
  - ICD10 diagnoses, CPT
  - Medication totals?

- Specification for your commentary via google docs

Appropriate expectations

CAN do with a standardized file

- Focus on mature, common clinical exposures (hypotension, common medications, anesthesia technique, processes of care)

- Explore variation in processes of care, prediction indices

- Use any of the several hundred existing phenotypes

- Build ad-hoc queries with a more robust, automated foundation

CAN'T do with a standardized file

- Use the most recent data from just a few months ago

- Explore novel exposures not currently codified or validated in MPOG phenotypes

- Use raw underlying data to define new outcomes or exposures

- Integrate across emerging MPOG sources (NSQIP, STS, CMS, etc)

Assumptions

- Standardized file only available to contributing MPOG centers (just like NSQIP PUF)

- 2021 File is based upon currently (ie, 2021) available phenotypes or those easily created

- File is placed on MPOG stats server and made available to PCRC approved research team

- Descriptive statistics & documentation available from day 0

- PCRC review process still applies but may be expedited / streamlined
  - Electronic review / voting only since data quality discussions at PCRC unnecessary
  - PI may request a full presentation at PCRC for scientific contribution
  - Some projects may be "standardized data file"+ a few custom elements; full PCRC presentation required

MPOG

Measure
Updates
& Feedback

PAIN 01 and 02 Provider Attribution Proposal

PAIN 01 - Administration of non-opioid adjuncts in pediatric population

PAIN 02 - Administration of non-opioid adjuncts in adult population

Responsible Provider:

    Option 1: Providers signed into case at induction

    Option 2: Providers signed into case for longest duration

    Option 3: Providers signed into case at emergence

    Option 4: All of the above

    Option 5: Continue with no provider attribution

Will decide with ranked choice voting - sent out after meeting

GLU 03/04/05: Provider Attribution Added

GLU 03 - Hyperglycemia managed by Insulin or recheck of glucose
GLU 04 - Hypoglycemia managed by dextrose or recheck of glucose
GLU 05 - Management of Hyperglycemia with Insulin

Responsible Provider
- **Preop Time Period** (preop start through anesthesia start): first providers signed into the case
- **Intraop Time Period**: The provider signed in at the first glucose recheck or first administration of insulin/dextrose. If neither occurred, then the responsible provider is the one signed in 90 minutes after the high glucose measurement.
- **Postop Time Period** (anesthesia end through PACU End): The last providers signed into the case

GLU 03/04 Bug

- Error uncovered that was causing the measures to exclude high/low glucose values at the beginning (preop) and end (PACU) of the measurement period.
- Resolving this error has resulted in the change in score performance for some sites
- Scores updated on dashboard
- Sites with largest changes contacted in advance

TEMP 03 - Temperature Outcome Measures (≤ 36.0 C at end of case)

TEMP 03 was an MPOG QCDR measure and it assigns an 'Incomplete' when there is no temperature recorded, per alignment with the MIPS measure

TEMP 03 is the only measure that has the 'Incomplete' result and it is not compatible with our measure framework

Since we do not participate as a QCDR anymore, we changed Incomplete to Flagged

No material change in performance across sites

Thank You!