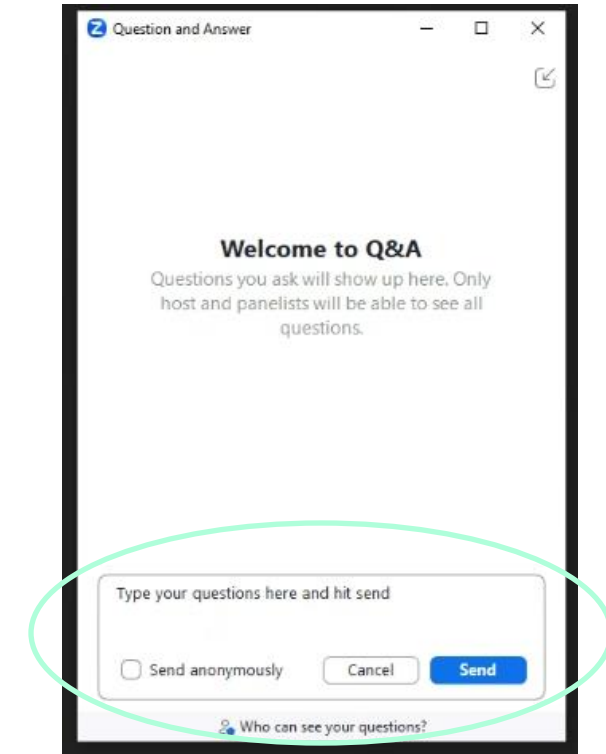
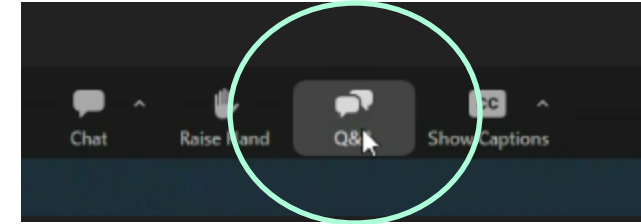


Virtual Participant Housekeeping

Zoom Webinar

- **To ask a question**
 - Click the Q&A button at the bottom of your screen.
 - Type your question and hit send.
 - We will be monitoring the questions and will relay them through the microphone onsite.



In-Person Participant Housekeeping

- If you want to ask a question, please go to the microphone in the front of the room
- Wifi Information
 - Name: Warwickconf
 - Access Code: Warwick3
(Also see bottom of your agenda)

Please recycle your badges at end of day

CME
Information

Last day to claim CME:

October 25, 2024, by 3pm Eastern

Organization Code: **umich**

Activity Code: **69031**

See insert with agenda for in-person attendees or
the website for further instructions

Questions or Concerns?

Contact the activity coordinator(s) at
lacca@umich.edu, driggar@umich.edu or
smiatafr@umich.edu or visit
www.micme.medicine.umich.edu



MPOG 2024 Retreat Welcome

Sachin Kheterpal MD MBA
Executive Director, MPOG

Thanks

- Henrietta Addo
- Mike Burns
- Robert Coleman
- Nick Douville
- Chris Heiden
- Jay Jeong
- George Mashour
- Rebecca Pantis
- Sandy Rozek
- Calvin Shenk
- Sushma Vallamkonda
- Meridith Wade
- Mei Calabio*
- Serena Wang **
- Mahmoud Shehabeldin **
- Byungki Kim **
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- Diane O'Dell
- Michelle Romanowski
- Nirav Shah
- Frances Guida Smiatacz
- Shelley Vaughn
- Rachel Stumpf*
- Xinyi Liu**
- Rayann Yassine **
- Ssu Ying Chen**
- Alexis Stanczuk**

MPOG chairs, PIs , ACQRs, quality champions, and software developers

All the clinicians, IT staff, researchers, QI specialists, and administrators out there

*New to MPOG Coordinating Center

** UM MAISE team members



A tragic note...



Matthew Arthur Carl Zapf, MD (1988-2024)

Vanderbilt University Anesthesiologist,
Researcher & MPOG member

Husband, Father, Friend, Son & Brother



Growing, Maturing, & Innovating



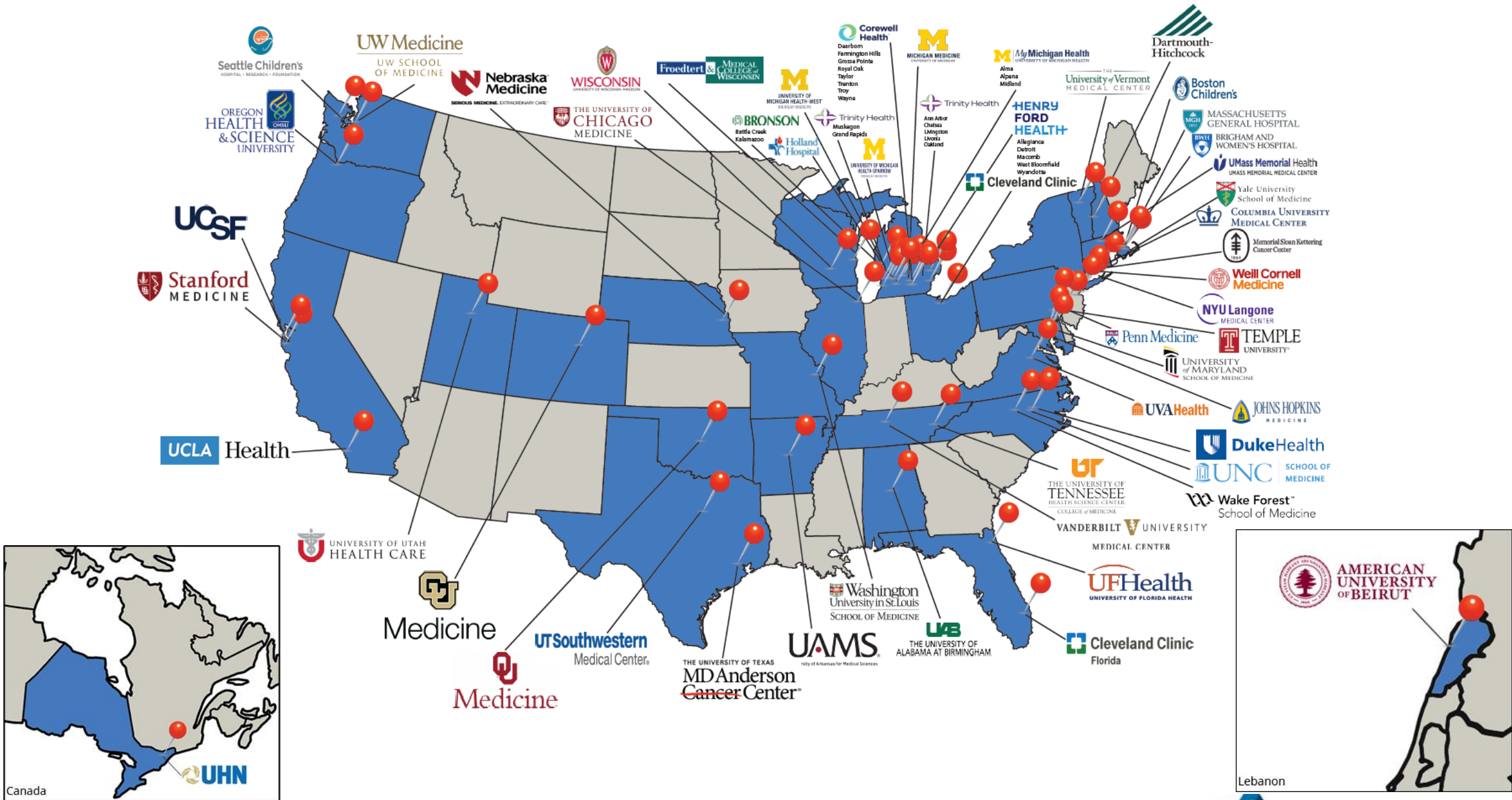
New health systems
Additional hospitals and sites within health systems
International reach



Coordinating center technical team integration
“In praise of maintenance”
Robust processes and policies to address new use cases
Passionate QI subcommittees



Education mission exploration
Technology “skunkworks” evolving
Broad research funding allows funded innovation



Evolving with our members and the healthcare industry



Healthcare consolidation, acquisition, and construction
QI dashboards scale up or down to meet leadership needs
Welcome: UNebraska, UHN Toronto, Mass Eye & Ear
> 280,000 cases added to registry each month



EHR, Performance, & Quality are international opportunities



Expanding data request scenarios, pace, variety
Easier data access & analysis



Support urgent clinical & QA needs

In praise of maintenance



Technology & process modernization & maintenance – MPOG 2.0



Prepared for modern cybersecurity attacks
Tightening onboarding/offboarding processes



Transitioning to Azure cloud hosted databases and processing
“Burst” resources consistent with data uploads & user needs
MPOG computing enclave resource expansion



Upgrading home-grown productivity tools to Microsoft 365 suite
MPOG website & CC tools evolving
Accessing broader UM IT resources

Passionate QI subcommittees



ABX-01-OB: Antibiotic Timing for Cesarean Delivery
BP-04-OB: SBP < 90 in Cesarean Deliveries
GA-01-OB: General Anesthesia During Cesarean Deliveries
GA-02-OB: General Anesthesia after Neuraxial in Cesarean Deliveries
GA-03-OB: General Anesthesia Administered after Epidural for Cesareans
TEMP-05-OB: Hypothermia in Cesarean Deliveries



FLUID-02-Peds-C: Minimizing Colloid Use, Pediatrics (Cardiac)
NMB-03-Peds: NMB Dosing, Pediatrics
PAIN-01-Peds: Multimodal Analgesia, Pediatrics
PONV-04-Peds: PONV Prophylaxis: Pediatrics

SUS-05-Peds: Nitrous Avoided, Induction
SUS-06-Peds: Low Fresh Gas Flow, Pediatric Induction
TEMP-04-Peds: Intraoperative Normothermia, Pediatrics
TRAN-03-Peds: Transfusion Vigilance, Pediatrics
TRAN-04-Peds: Overtransfusion, Pediatrics



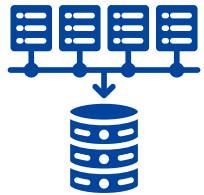
ABX-02-C: Antibiotic Timing, Open Cardiac
ABX-03-C: Antibiotic Re-dosing, Open Cardiac
ABX-04-C: Antibiotic Selection, Open Cardiac
ABX-05-C: Antibiotic Prophylaxis Compliance (Composite)
AKI-02-C: Acute Kidney Injury, Cardiac

GLU-06-C: Hyperglycemia Management, Open Cardiac (>180 r
GLU-07-C: Hypoglycemia Management, Open Cardiac (<70mg)
GLU-08-C: Hyperglycemia Treatment, Open Cardiac (>180mg/c
TEMP-06-C: Hypothermia Avoidance, Cardiac
TEMP-07-C: Hyperthermia Avoidance, Cardiac

Strategic investments in MPOG 3.0



Impact learners and the process of teaching
Create a culture of data driven lifelong learning



Decrease EPIC extract dependence
Modern data extraction informatics & technology
Near-real time feedback and guidance
Unstructured data -> meaningful clinical outcome inferences



Data beyond the OR to floor, ICU, and outpatient

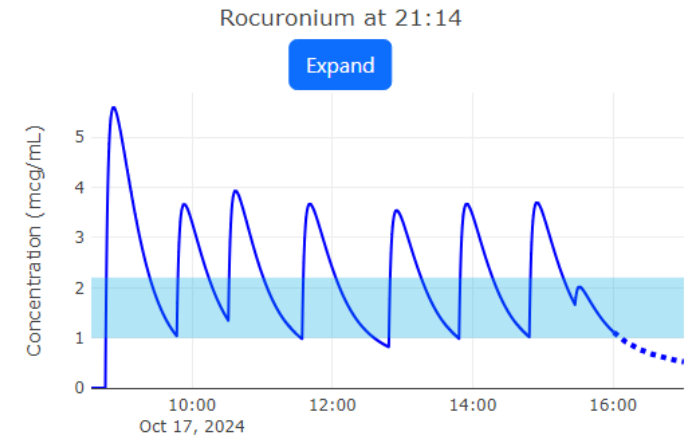
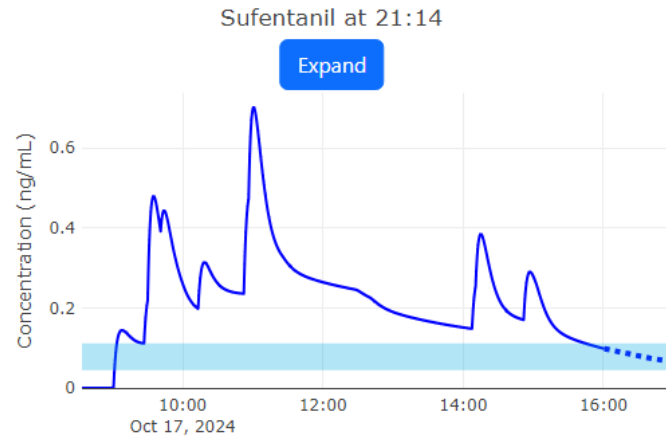
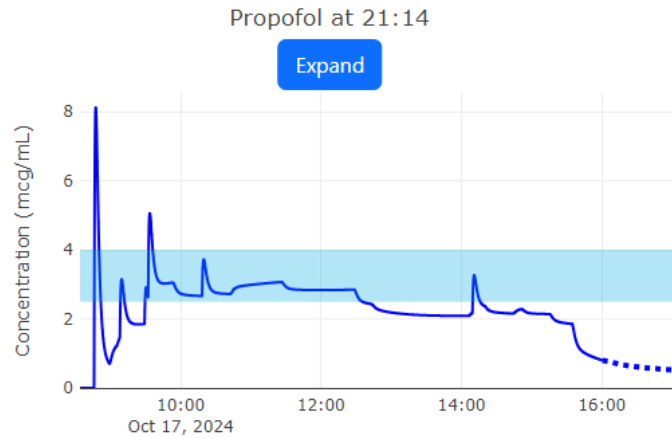


Continued financial stability & value
Resource for surgeons, anesthesiologists, and all clinicians

Technology & process “skunkworks” example

- Leverage UMichigan Anesthesiology Informatics and Systems Engineering Team (MAISE)
- THRIVE demonstrated need for reliable, easy to use PK/PD models to teach TIVA concepts
- Duplicate data entry from EHR challenging
- Build upon national expertise in PK/PD modelling (Utah, Stanford, Partners, etc)
- Integrate publicly available modeling with MAISE expertise in real-time EHR medication admin extraction: “EHR-integrated” TIVA Model (limited release)
- Robust, reliable “non EHR-integrated” tiva-model.org publicly available
- Effect site concentrations for common anesthesiology meds

“TIVA Model” (EHR-integrated)



Dose Table

Reference Time: 8:34 AM

Propofol Sufentanil **Fentanyl** Rocuronium

Model: propofol, Schnider (standard model)

Med Event	Time Recorded	Dose	Units	Delete
Bolus	8:46 AM	150	mg	
Start Infusion	8:59 AM	50	mcg/kg/min	

Graph Options

Effect Site Concentration
 Show Time (min) Into Future to Generate
 60

Plasma Concentration
 Hide

Show Graph

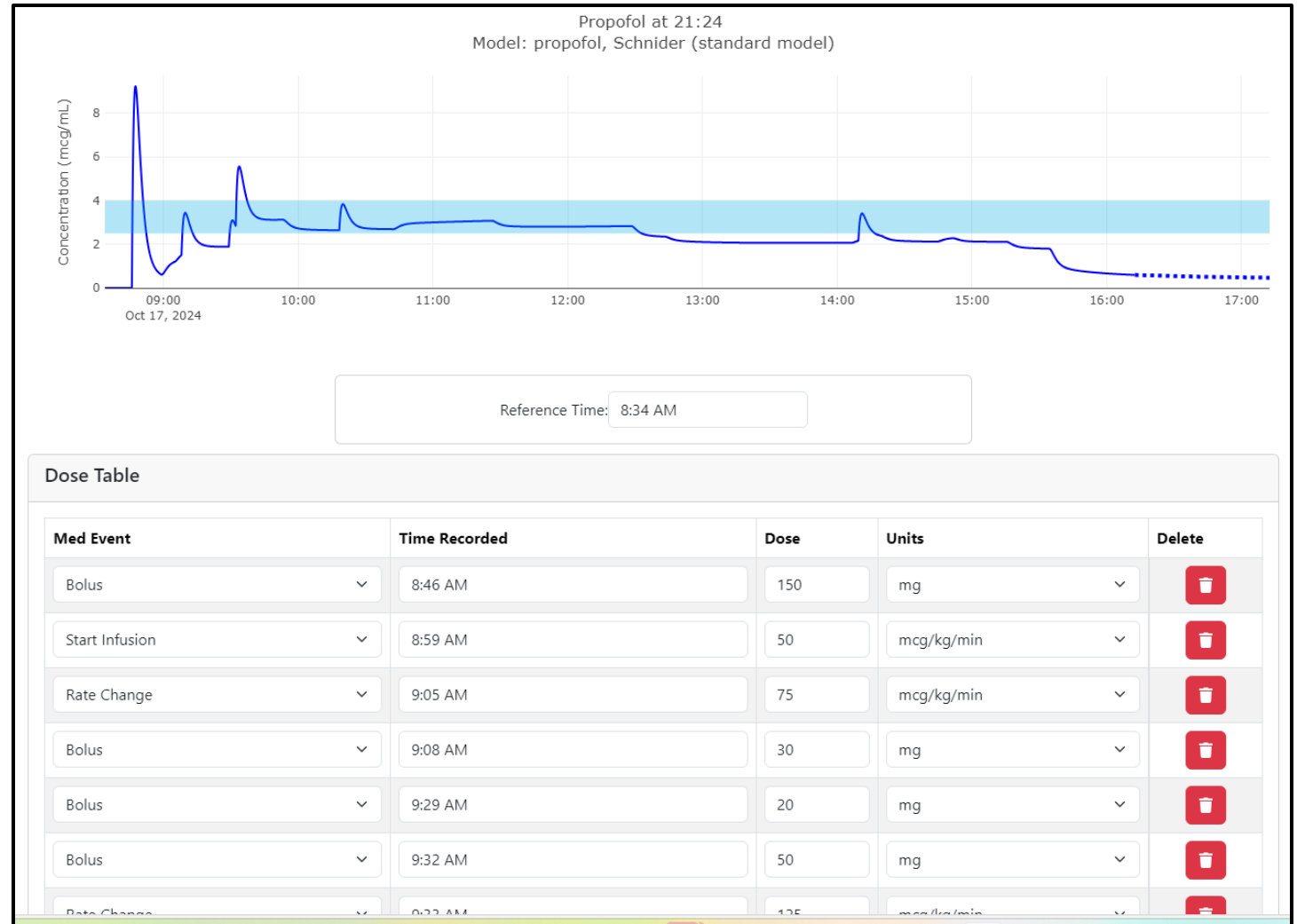
Generate Graph

Medications

Propofol

TIVA Model (EHR-integrated)

- Beta-testing at Michigan across dozens of users
- Next site: Utah
- All meds extracted from EPIC
- Refresh q5 minutes
- Can “try out” different doses, start & stop times to see future effect site concentration



Pure TIVA Model

Tiva-model.org

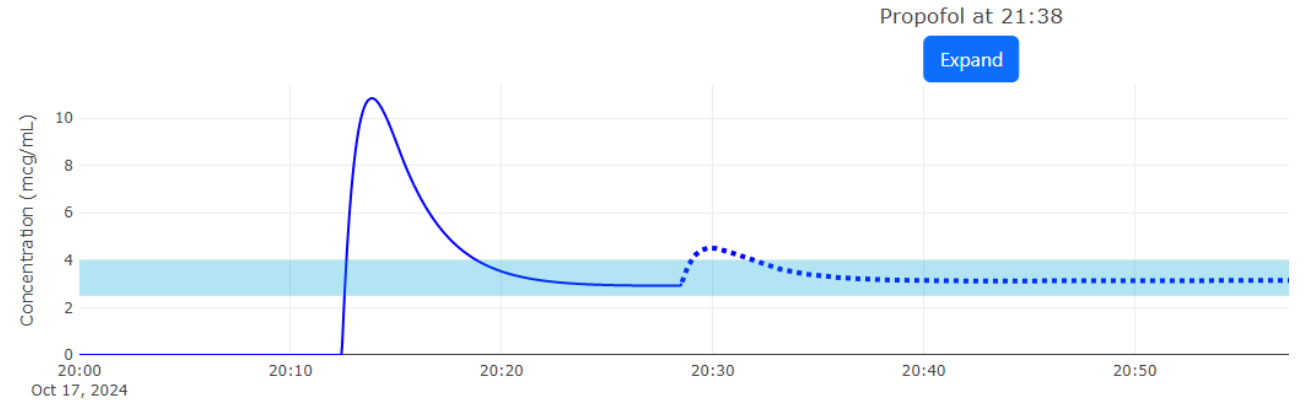
Freely available, ready now

Manual medication data entry

Builds upon stanpumpr.org
experience



Patient Info Age Years Months Weight kg lb Height



Dose Table

Reference Time: [Add Med](#)

Propofol

Model: propofol, Schnider (standard model)

Med Event	Time Recorded	Dose	Units	Delete
<input type="text" value="Bolus"/>	<input type="text" value="8:12 PM"/>	<input type="text" value="200"/>	<input type="text" value="mg"/>	<input type="button" value="Delete"/>
<input type="text" value="Start Infusion"/>	<input type="text" value="8:15 PM"/>	<input type="text" value="100"/>	<input type="text" value="mcg/kg/min"/>	<input type="button" value="Delete"/>
<input type="text" value="Bolus"/>	<input type="text" value="8:28 PM"/>	<input type="text" value="30"/>	<input type="text" value="mg"/>	<input type="button" value="Delete"/>
<input type="text" value="-- Choose Event --"/>	<input type="text" value="9:39 PM"/>	<input type="text" value="0"/>	<input type="text" value=""/>	<input type="button" value="Delete"/>

Clinical trial innovations

- Learning health systems synthesize, evaluate, create and implement evidence
- Observational causal inference has its limits
- MPOG offers a unique prospective, randomized interventional opportunity
- Innovations in



Prospective data collection & preliminary data

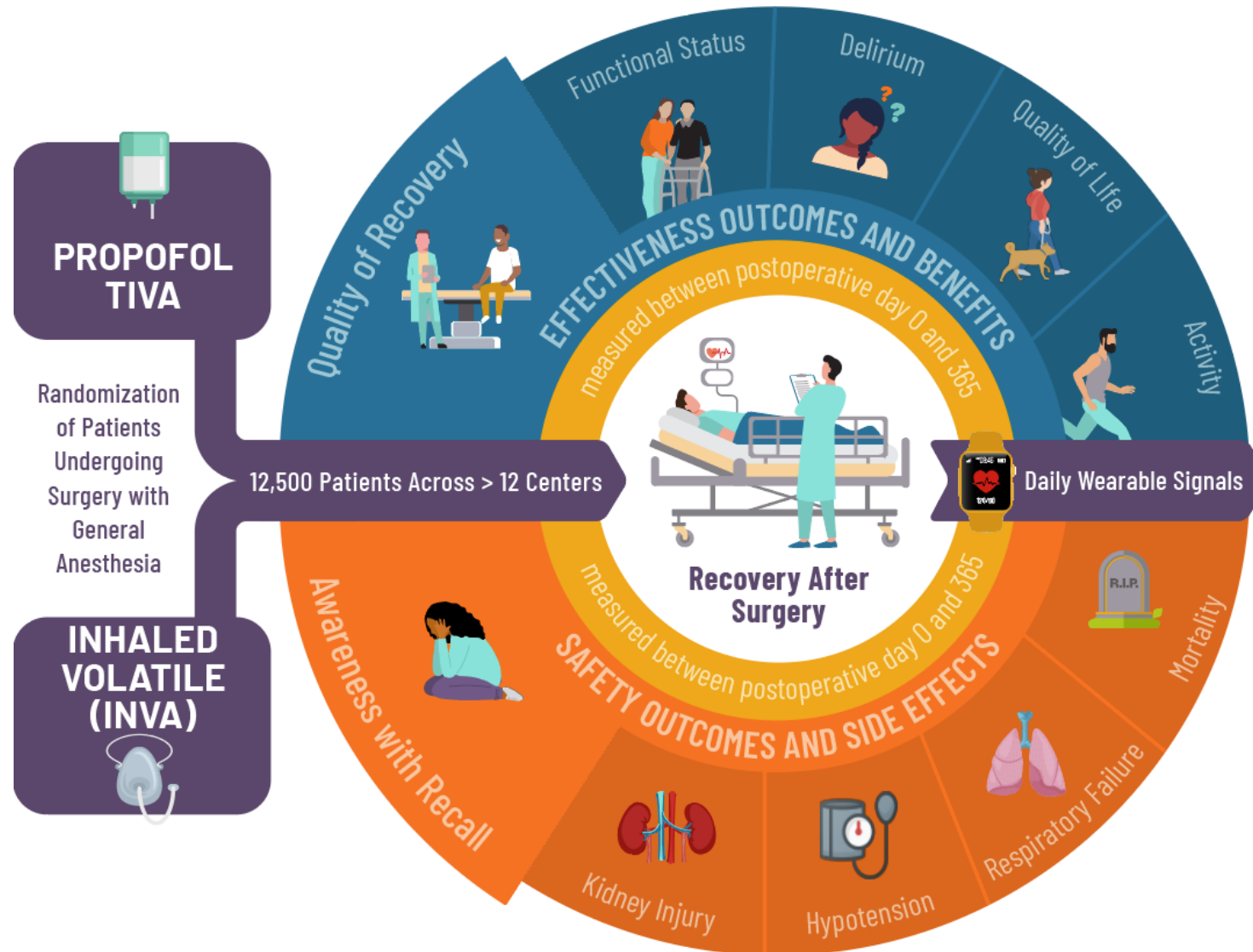


Collaboration

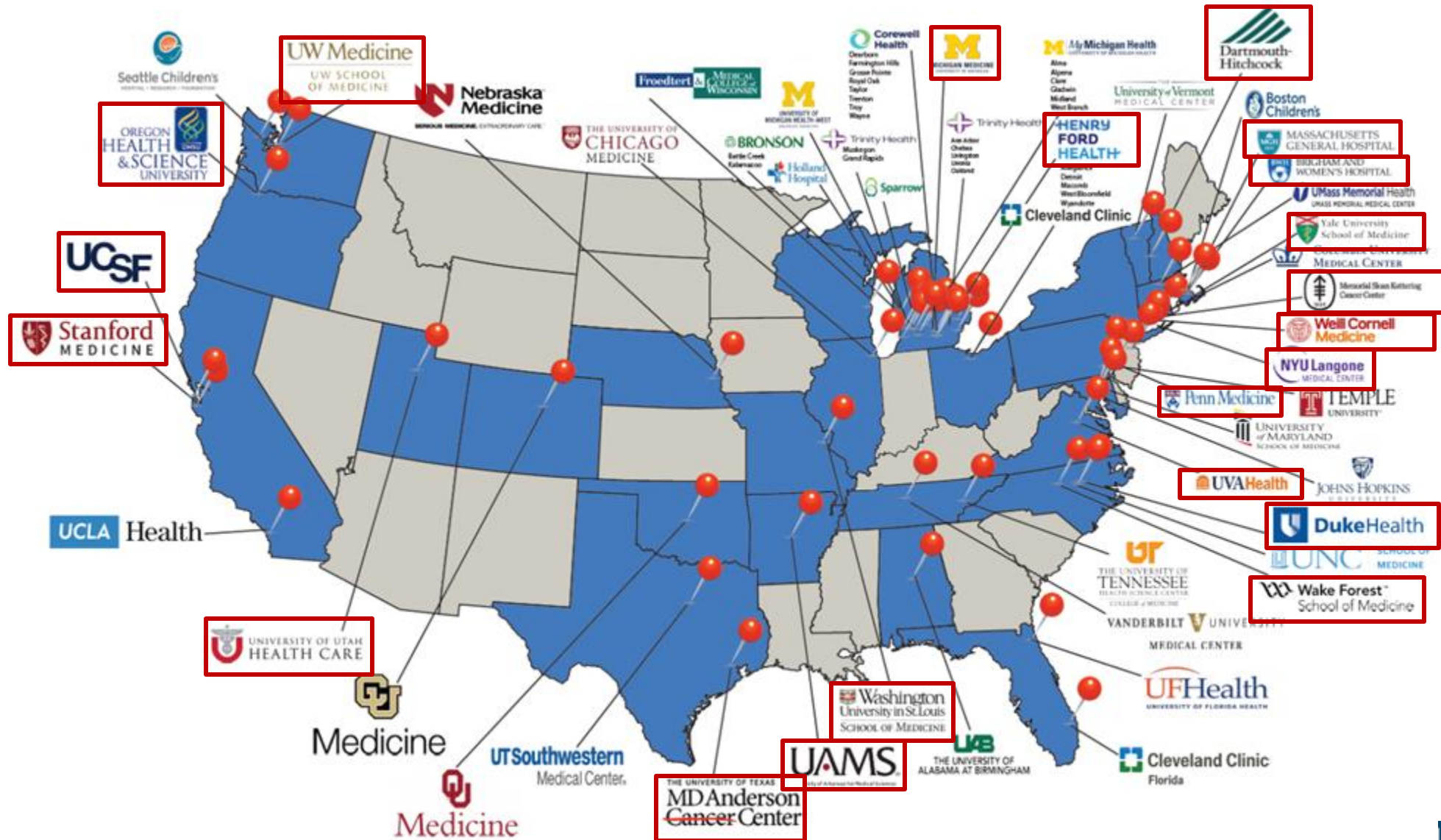


Point of care Implementation

Trajectories of Recovery after Intravenous propofol versus inhaled Volatile anesthesia



THRIVE-ing around the country – 2,940 / 12,500 patients randomized!



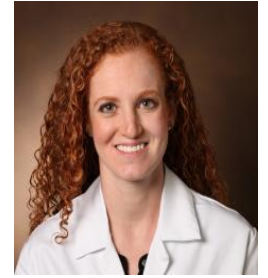
THRIVE site PIs



Other clinical trials funded with MPOG as the platform

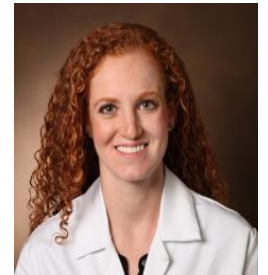
Precision Feedback

- Customized provider feedback emails within MPOG
- Primary Outcome: Clinician Performance Improvement
- PI: Zach Landis-Lewis (UM), Allison Janda; Funding: NIH



VEGA-2

- Phenylephrine vs Norepinephrine in Non-Cardiac Surgery
- Primary Outcome: Acute Kidney Injury
- PI: Matthieu Legrand (UCSF); Funding: NIDDK



Intraop-Ox

- Oxygen Supplementation Levels for GA in Non-Cardiac Surgery
- Primary Outcome: Composite of morbidity, mortality
- PI: Josh Billings (Vanderbilt); Funding: MPOG & AUA & UM



MPOG “marketing”

- Limited marketing efforts or budget
- Tokens of appreciation to thank you for your efforts
- MPOG jackets
- Website / link pending
 - Pro bono to local site representatives (no MPOG or site \$ required)
 - Per unit cost for additional team members
 - Please see samples for sizing hanging on rack



Congratulations to Michael Avidan, MBBCh, Getting inducted to NAM !!



October 19th, 2024: Induction Ceremony to the National Academy of Medicine (formerly “Institute of Medicine”)

One of only 40 new physician members chosen each year

“For his international leadership in clinical anesthesiology research. He has designed and led large-scale, pragmatic clinical trials that have elucidated the role of clinical monitoring in the prevention of intraoperative awareness and delirium as well as the relationship of general anesthesia to neurocognitive outcomes of surgery.”

Dr. Seymour and Rose T. Brown Professor of Anesthesiology

Head of the Department of Anesthesiology at Washington University,
St. Louis

Thanks

- Henrietta Addo
- Mike Burns
- Robert Coleman
- Nick Douville
- Chris Heiden
- Jay Jeong
- George Mashour
- Rebecca Pantis
- Sandy Rozek
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