Where Are We Now?: Opportunities and Barriers for Advancing Perioperative Medicine at the National and Institutional Level

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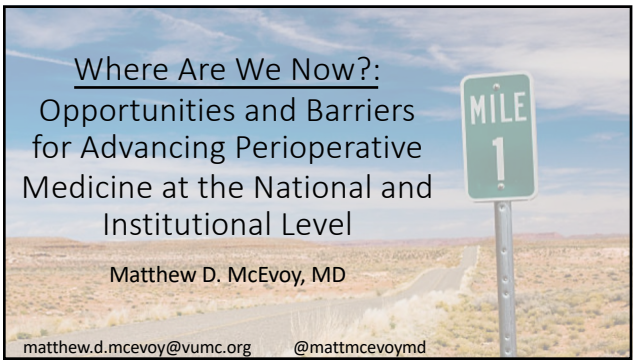

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Disclosures

- Royaltiess from ASRA apps
- PeRLS (Perioperative Resuscitation and Life Support) Editorial Board for ASA
- President of ASER Perioperative Medicine
- I deeply believe Perioperative Medicine is one major part of the future of our specialty… but we have to actually practice it to teach it to practice it

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Learning Objectives

By the end of this presentation, the learner should be able to:

- Describe the current state of Perioperative Medicine in the United States
- Discuss next steps for extending the impact of Anesthesiology within the subspecialty of Perioperative Medicine
- Describe how they could be a part of expanding the scope of Anesthesiologists to be Perioperative Physicians in the future

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Who am I to talk about this?

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My profile…

Professor of Anesthesiology and Surgery…	Practice anesthesia in the OR
Vice-Chair of Perioperative Medicine…	Oversee this area in our dept
Medical Director, VUMC Enhanced Recovery Programs…	Collaborate with teams/systems
Program Director, Perioperative Medicine Fellowship…	Teach this to residents/fellows
Medical Director, Hi-RiSE Preoperative Optimization Clinic…	Practice the medicine in clinic
Director, Perioperative Consult Service…	Practice the medicine in-hospital
Department of Anesthesiology…	I am on the same team as you!

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What is Perioperative Medicine?

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PERIOPERATIVE MEDICINE
THE PATHWAY TO BETTER SURGICAL CARE

Perioperative medicine is a multidisciplinary subspeciality composed of practitioners who can effectively identify and meet the *complex medical needs of patients at particular risk from the adverse effects of surgical treatment*… from decision to post-discharge

Grocott MPW and Pearse RM, BJA;108: 723–6

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Where are we now?

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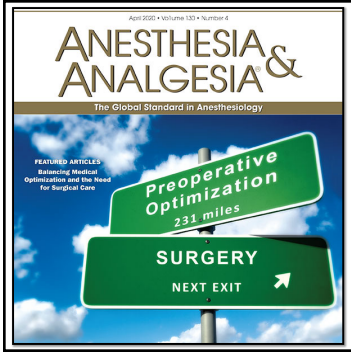

- Lots of editorials
- A number of name changes
  - SAAA → SAAAPM
- Dying of the Surgical Home
- Reduced training time in perioperative medicine
- Ambiguity over what 'perioperative medicine' actually means

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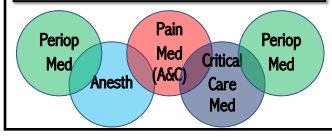
Thirty-six months of education must be in peri-operative medicine. (Core)

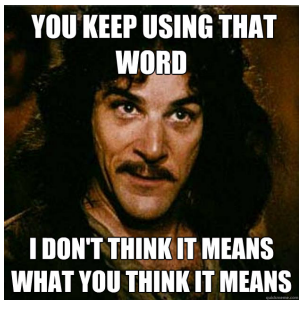
This must include experience with a wide spectrum of disease processes and surgical procedures available within the CA-1 through CA-3 years to provide each resident with broad exposure to different types of anesthetic management. (Core)

The program must ensure that the rotations for residents beginning the peri-operative medicine component of the residency be in surgical anesthesia, critical care medicine, and pain medicine. (Core)

Residents must receive training in the complex technology and equipment associated with the practice of anesthesiology. (Core)

Clinical experience in surgical anesthesia, pain medicine, and critical care medicine must be distributed throughout the curriculum in order to provide progressive responsibility in the later stages of the program. (Core)





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Change Your Institutional Discussion to Change the National Discussion

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Perioperative Physician/Leader: 2 Features

Improve Sick Systems of Care

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Capacity Pillar: ERAS

Updated On 10/26/22

OBJECTIVE

KEY ACCOMPLISHMENTS/NEXT STEPS/BARRIERS

KEY OUTCOME MEASURE

VUMC ERP Score Card with Quarterly Reporting to Hospital Leadership

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Capacity Pillar: CMI Adj. RLOS ERAS and No ERAS

FY23TD

		Case Counts	Avg. Discharge Orders in by 9:30AM	Avg. Discharged Before 11AM	CMI Adj. RLOS
FY 2022	ERAS	2,967	43.6%	21.9%	1.74
	SURGICAL	15,389	24.8%	14.8%	2.02
	MEDICAL	25,119	20.6%	13.6%	3.98
FY 2023	ERAS	924	44.9%	23.5%	1.71
	SURGICAL	4,689	25.2%	16.3%	2.02
	MEDICAL	7,557	22.7%	15.6%	4.10

ERAS Service Lines include Bariatrics, C-Section, Colorectal, Gynecology, Hernia, Hip Fracture, Soft Tissue Sarcoma, Total Joint Replacement, Urology (Cystectomy)

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Capacity Pillar: FY 22 Readmission Rates ERAS vs No ERAS

Overall VUH Unplanned Readmit Rates - 30 day lag on data

Inpatient Surgical patients only

Avg 30d Readm: 6.2%

Avg 30d Readm: 9.4%

Avg 30d Readm: 10.8%

ERAS
Total # inpatients= 2,967
Avg Readmission RLOS = 4.51
Median Readmission RLOS = 3
Service Lines include Bariatrics, C-Section, Colorectal, Gynecology, Hernia, Hip Fracture, Soft Tissue Sarcoma, Total Joint Replacement, Urology (Cystectomy)

Non-ERAS (Surgical)
Total # inpatients= 15,389
Avg Readmission RLOS = 6.09
Median Readmission RLOS = 4

Non-ERAS (Medical)
Total # inpatients= 25,119
Avg Readmission RLOS = 6.96
Median Readmission RLOS = 4

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Capacity Pillar: RLOS for Live ERAS Populations

	Prior Fiscal Year (7-1-2021 - 6-30-2022)	Fiscal Year to Date (7-1-2022 - 10-13-2022)	Prior Fiscal Quarter (7-1-2022 - 9-30-2022)	Fiscal Quarter to Date (10-1-2022 - 10-13-2022)
Distinct Encounters	3,595	1,043	966	77
CMI Adj. RLOS	1.73	1.71	1.73	1.41
Median RLOS (RLOS / Post-Op LOS; Average / Median)	2.20	2.18	2.20	1.68
Average RLOS (RLOS / Post-Op LOS; Average / Median)	2.75	2.73	2.79	2.05

ERAS Service Lines include Bariatrics, C-Section, Colorectal, Gynecology, Hernia, Hip Fracture, Soft Tissue Sarcoma, Total Joint Replacement, Urology (Cystectomy)

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Capacity Pillar: RLOS & ERAS Pathway Compliance for Live ERAS Populations

Overall compliance continues to improve across service lines, allowing incremental LOS gains.

Monthly Avg RLOS & Overall Compliance Trend

Compliance with a formal ERAS pathway is inversely correlated with rLOS, as seen in our own data and in published evidence (with greatest gains in LOS associated with Compliance > 80-90%)

ERAS Service Lines include Bariatrics, C-Section, Colorectal, Gynecology, Hernia, Hip Fracture, Soft Tissue Sarcoma, Total Joint Replacement, Urology (Cystectomy)

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Perioperative Physician/Leader: 2 Features

Improve Sick Systems of Care

Care for the Sickest Patients

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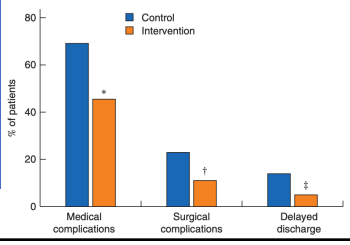
Randomized clinical trial of comprehensive geriatric assessment and optimization in vascular surgery

J. S. L. Partridge[1,3], D. Harari[1,3], F. C. Martin[1,3], J. L. Peacock[3], R. Bell[2], A. Mohammed[1] and J. K. Dhesi[1,3]

Some Level 1 Data *already* exists



40% reduction in complications *and* LOS (~2 days)

Partridge JSL, et al, *BJS*, 2017; 104: 679–687

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Hi-RiSE Financials: *>55y* Downstream Impact

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Hi-RiSE Financials: *Anemia*

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Hi-RiSE Financials: *Transfused*

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Hi-RiSE Financials: *Diabetes*

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Hi-RiSE Financials: *Malnutrition*

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What is next?

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Better data…

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THE OPEN MIND

Preoperative Optimization: A Continued Call to Action

Solomon Aronson, MD, MBA, FASA, FACC, FCCP, FAHA, FASE,* Gavin Martin, MB ChB, MMCi,†
Padma Gulur, MD,* Mike E. Lipkin, MD, MBA,‡ Sandhya A. Lagoo-Deenadayalan, MD, PhD,‡
Christopher R. Mantyh, MD,‡ David E. Attarian, MD, FACS, FAOA,§
Joseph P. Mathew, MD, MSc, MBA, FASE,† and Allan D. Kirk, MD, PhD, FACS‡

"The issue of whether preoperative optimization of comorbid medical conditions should be achieved before surgery ***is not debatable.*** The importance of preoperative risk mitigation toward achieving enhanced postoperative value ***is not in question.*** However, what ***the best model*** for ensuring preoperative optimization and achieving value remains untested…"

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Anesth & Analg, April 2020

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Caveat: Association, but what about causation?
Planning RCT launch for early 2023 (N ~950 pts)

Colorectal, Urology, and Hepatobiliary Surgical Patients

Randomize

Hi-RISE
High-Risk Surgical Encounter Clinic
Elevating Personalized Perioperative Care

Vanderbilt
Preoperative
Evaluation
Center

Hypothesis: Optimization of high-risk surgical candidates will result in improved outcomes versus standard
Primary Outcome: DAH30 (days alive and at home in 30 days after surgery); Secondary: $$$; complications

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What is (urgently) needed (from the leaders in our specialty)?

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A Paradigm Shift

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Are you okay with the status quo?

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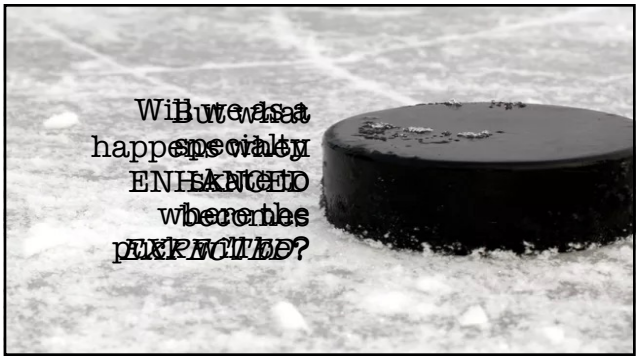

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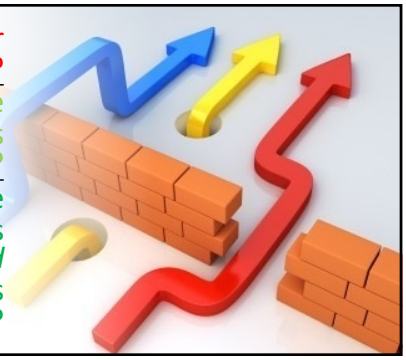
Are you a barrier enforcer?

Are you one who removes barriers?

Are you one who removes barriers *and* facilitates change?



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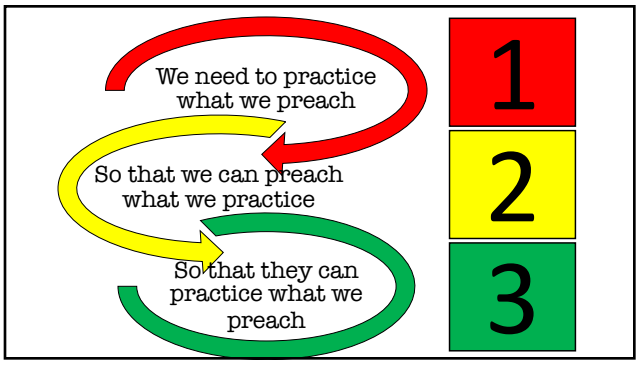

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Encourage Learning Now…

- For faculty and trainees

American Society of Anesthesiologists · IARS International Anesthesia Research Society · ASER · Vanderbilt Perioperative Medicine Seminar · SPAQI · Perioperative Medicine Summit: Evidence Based Perioperative Medical Care

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Encourage Learning Now…

- For faculty and trainees
- For future perioperative physicians

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FAMILY FEUD

Topic: ACGME Training Requirements for Anesthesiology

- Cardiac anesthesia → 2 months
- OB anesthesia → 2 months
- Pediatric anesthesia → 2 months
- Neuroanesthesia →
- Pain Medicine →
- Critical Care Medicine →

You can do a fellowship in all of these… and it is needed to practice this domain in any specialized manner

- Preoperative Medical Optimization (climbing the mountain) → …and is more likely if you aren't prepared here
- Postoperative Inhospital Care (summiting the peak) →
- Post-acute Medical Care (descending the mountain) → Most injury, disability, and death occurs here

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In-Person Clinical Perioperative Medicine, Quality, and Safety Fellowships in the US

Vanderbilt University Medical Center · UW Medicine University of Washington Medical Center · UCI Irvine University of California · Irvine · Washington University in St. Louis School of Medicine · Brigham Health Brigham and Women's Hospital · Wake Forest Baptist Medical Center · Duke Health · Beth Israel Lahey Health Beth Israel Deaconess Medical Center · UC San Diego Health System · Tulane Health System Tulane Medical Center Tulane Lakeside Hospital Lakeview Regional Medical Center · UCLA Health · Stanford Medicine · Michigan Medicine University of Michigan

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You don't have to ask permission to take responsibility.

EDWIN CATMULL

We should be collaborative with other specialties and invite them in, but we do not need to ask them for permission. Period.

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Thank you!

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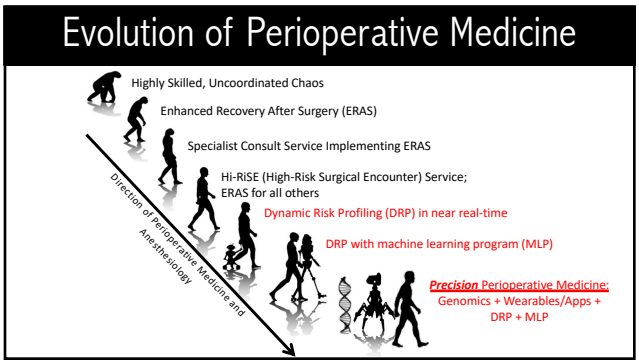
Evolution of Perioperative Medicine
Highly Skilled, Uncoordinated Chaos
Enhanced Recovery After Surgery (ERAS)
Specialist Consult Service Implementing ERAS
Hi-RiSE (High-Risk Surgical Encounter) Service;
ERAS for all others
Dynamic Risk Profiling (DRP) in near real-time
DRP with machine learning program (MLP)
Precision Perioperative Medicine:
Genomics + Wearables/Apps +
DRP + MLP
Direction of Perioperative Medicine and Anesthesiology

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