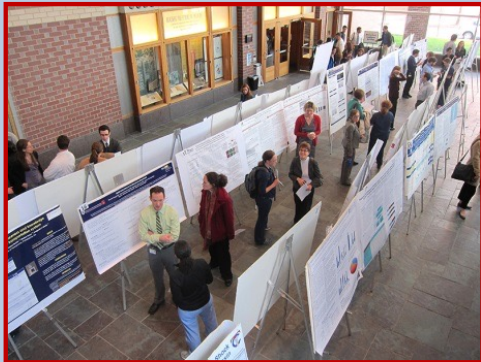


Department of Emergency Medicine Research Program Overview: Annual Update

Benjamin S. Abella, MD MPhil FACEP
Vice Chair for Research



2024 update



The scope of our research

**Laboratory
Research**

**Clinical
Investigation**

**Health
Services/
Population
Science**

**Community
Oriented
Research**

David Jang

Tony Davila

John Greenwood

Kit Delgado

Austin Kilaru

Nova Panebianco

Zack Meisel

Ari Friedman

Raina Merchant

Gina South

Ben Abella

Jeanmarie Perrone

Some examples of faculty in each domain – just as illustrations

Research activity: funding snapshot in context

Ranking of Emergency Medicine Departments: Federal funding, 2022 (most recent available)

From the BLUE RIDGE INSTITUTE for MEDICAL RESEARCH as compiled by
Robert Roskoski Jr. and Tristram G. Parslow

BRIMR.ORG

Rank	Name	Emergency Medicine
1	YALE UNIVERSITY	\$16,841,940
2	UNIVERSITY OF MICHIGAN ANN ARBOR	\$15,890,203
3	MOUNT SINAI ICAHN SCHOOL OF MEDICINE	\$6,886,647
4	COLUMBIA UNIVERSITY HEALTH SCIENCES	\$6,639,792
5	NEW YORK UNIVERSITY SCHOOL OF MEDICINE	\$6,590,526
6	WAYNE STATE UNIVERSITY	\$5,850,885
7	UNIVERSITY OF FLORIDA	\$4,447,667
8	UNIVERSITY OF PENNSYLVANIA	\$2,978,738
9	UNIVERSITY OF NORTH CAROLINA CHAPEL HILL	\$2,781,902
10	UNIVERSITY OF MASSACHUSETTS WORCESTER	\$2,575,990
11	STANFORD UNIVERSITY	\$2,251,830
12	UNIVERSITY OF COLORADO DENVER	\$2,091,165
13	VANDERBILT UNIVERSITY	\$1,906,223
14	THOMAS JEFFERSON UNIVERSITY	\$1,801,128
15	UNIVERSITY OF WISCONSIN MADISON	\$1,765,501

*Our Department is #8 in the nation for NIH funding among EM Departments
Tabulation does not include other federal funding, of which we are major recipient*

Domains of Research

Centers within the Department

Center for Emergency Care Policy and Research

Zack Meisel

Center for Resuscitation Science

Ben Abella

Center for Healthcare Transformation and Innovation

Raina Merchant

Urban Health Lab

Gina South

Nudge Unit

Kit Delgado

Center for Insights to Outcomes

Anish Agarwal

Penn Injury Science Center

Zack Meisel

Center for Addiction Medicine and Policy

Jeanmarie Perrone

Center for Emergency Care Policy and Research (CECPR)

Spans clinical and health services and population science

Topics of interest:

Social media and emergency care

Patient narratives to guide health

Access and transitions of care

Drug and alcohol abuse

Economics of emergency care access



Zachary Meisel, MD, MPH, MSHP
Director, CECPR

Examples of recent publications

> [Ann Emerg Med.](#) 2023 Aug;82(2):131-144. doi: 10.1016/j.annemergmed.2023.03.033.
Epub 2023 Jun 14.

Impact of Universal Screening and Automated Clinical Decision Support for the Treatment of Opioid Use Disorder in Emergency Departments: A Difference-in-Differences Analysis

Margaret Lowenstein¹, Jeanmarie Perrone², Rachel McFadden², Ruiying Aria Xiong³, Zachary F Meisel⁴, Nicole O'Donnell², Dina Abdel-Rahman⁵, Jeffrey Moon⁴, Nandita Mitra⁶, Mucio Kit Delgado⁵

2023

> [Drug Alcohol Depend Rep.](#) 2023 Nov 10:9:100206. doi: 10.1016/j.dadr.2023.100206.
eCollection 2023 Dec.

Receipt and duration of buprenorphine treatment during pregnancy and postpartum periods in a national privately-insured cohort

Xi Wang^{1 2}, Zachary Meisel^{2 3}, Katherine Kellom¹, Jennifer Whitaker¹, Douglas Strane^{1 2}, Anyun Chatterjee¹, Rebecka Rosenquist^{1 2}, Meredith Matone^{1 2 4}

2023

Center for Resuscitation Science

Spans from laboratory to community oriented research

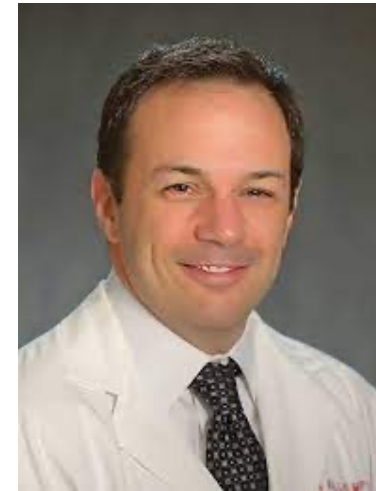
Topics of interest:

Ischemia-reperfusion injury

Post-arrest care and outcomes

Disparities in CPR training

Targeted temperature management



Benjamin Abella MD
Director, CRS

Examples of recent publications

Association of Racial Residential Segregation With Long-Term Outcomes and Readmissions After Out-of-Hospital Cardiac Arrest Among Medicare Beneficiaries

Ethan E Abbott ^{1 2 3}, David G Buckler ¹, Jesse Y Hsu ⁴, Benjamin S Abella ⁵,
Lynne D Richardson ^{1 2 3}, Brendan G Carr ^{1 2}, Alexis M Zebrowski ^{1 2}

2023

Low postoperative perfused vessel density is associated with increased soluble endothelial cell adhesion molecules during circulatory shock after cardiac surgery

John C Greenwood ¹, Fatima M Talebi ², David H Jang ², Audrey E Spelde ³, Emily K Gordon ³,
Jiri Horak ³, Michael A Acker ⁴, Todd J Kilbaugh ⁵, Frances S Shofer ⁶, John G T Augoustides ³,
Jan Bakker ⁷, Jacob S Brenner ⁸, Vladimir R Muzykantov ⁹, Benjamin S Abella ²

2023

Center for Healthcare Transformation and Innovation

Focus on community health and social emergency medicine

Topics of interest:

Green space impacts on health outcomes
Social determinants of health
Community response to opioid epidemic



Raina Merchant
Director, CHTI

Examples of recent publications

Review > [Lancet Planet Health](#). 2023 Sep;7(9):e777-e783.

doi: 10.1016/S2542-5196(23)00173-0.

Philadelphia Towards Racial and Environmental Equity (Philly TREEs): how a medical school can advance health equity through urban forestry in Philadelphia, PA, USA

Jeremy W Gotschall ¹, Megan Zhao ², Chidinma Wilson ³, Zonia Moore ³, Victor Ayeni ³, Misha Rosenbach ⁴, Eugenia South ⁵

2023

Randomized Controlled Trial > [JAMA Intern Med](#). 2023 Jan 1;183(1):31-39.

doi: 10.1001/jamainternmed.2022.5460.

Effect of Abandoned Housing Interventions on Gun Violence, Perceptions of Safety, and Substance Use in Black Neighborhoods: A Citywide Cluster Randomized Trial

Eugenia C South ¹, John M MacDonald ², Vicky W Tam ³, Greg Ridgeway ⁴ ⁵, Charles C Branas ⁶

2023

Urban Health Lab

Leverage research and action to dismantle structural racism and catalyze healthier, safer, and greener neighborhoods.

Topics of interest:

Urban Nature

Violence Prevention

Place-Based Interventions



Gina South MD, MS
Faculty Director, UHL

Examples of recent publications

> [Am J Perinatol](#). 2023 Aug;40(11):1185-1192. doi: 10.1055/s-0041-1733786. Epub 2021 Aug 27.

Association between Low Urban Neighborhood Greenness and Hypertensive Disorders of Pregnancy

Max Jordan Nguemeni Tiako ^{1 2 3}, Clare McCarthy ⁴, Zachary F Meisel ^{1 5}, Michal A Elovitz ⁴, Heather H Burris ^{4 6}, Eugenia South ^{1 2 5}

2023

> [Sleep Health](#). 2023 Jun;9(3):331-338. doi: 10.1016/j.sleh.2023.01.014. Epub 2023 Feb 11.

Feasibility and acceptability of mobile methods to assess home and neighborhood environments related to adolescent sleep

Stephanie L Mayne ¹, Gabrielle DiFiore ², Chloe Hannan ², Uchenna Nwokeji ², Vicky Tam ³, Corinne Filograna ², Tyler Martin ⁴, Eugenia South ⁵, Jonathan A Mitchell ⁶, Karen Glanz ⁷, Alexander G Fiks ⁸

2023

Nudge Unit

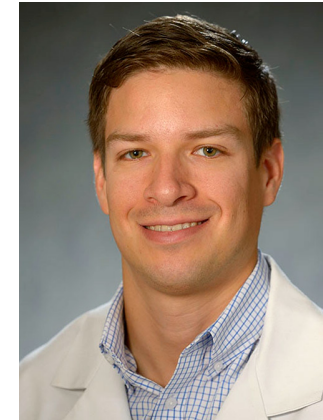
Focus on personal choices and their role in healthy decision to avoid harm

Topics of interest:

Texting and driving

Health system management of opioids

Gun violence



Mucio K. Delgado, MD MS
Director, Nudge Unit

Examples of recent publications

Cluster Randomized Pragmatic Clinical Trial Testing Behavioral Economic Implementation Strategies to Improve Tobacco Treatment for Patients With Cancer Who Smoke

Authors: Brian P. Jenssen, MD, MSHP , Robert Schnoll, PhD , Rinad S. Beidas, PhD, Justin Bekelman, MD , Anna-Marika Bauer, MRA , Sarah Evers-Casey, MPH, CTTS-M, Tierney Fisher, DNP, CRNP, ... [SHOW ALL](#) ..., and Frank T. Leone, MD, MS | [AUTHORS INFO & AFFILIATIONS](#)

Publication: Journal of Clinical Oncology • Volume 41, Number 28 • <https://doi.org/10.1200/JCO.23.00355>

2023

Considering the Whole Person in Hospital Admission Decisions for Older Adults in the Emergency Department

Austin S. Kilaru, MD, MSHP^{1,2}; Ari B. Friedman, MD, PhD^{1,2}; Mucio Kit Delgado, MD, MS^{1,2}

[» Author Affiliations](#) | [Article Information](#)

JAMA Intern Med. 2023;183(8):793-794. doi:10.1001/jamainternmed.2023.2155

2023

Center for Insights to Outcomes

Focus on design thinking, technology, and data science to solve complex

Topics of interest:

When/how care is delivered

Sustaining workforce well-being

Enabling automation and effort reduction



Anish Agarwal, MD MPH MS
Deputy Director, I2O

Examples of recent publications



The American Journal of Emergency Medicine






Volume 77, March 2024, Pages 169-176

Association between patient-reported onset-to-door time and mortality in patients hospitalized with COVID-19 disease

Kuldeep N. Yadav MS^a  , Jessica Hemmons MS^b  , Christopher K. Snider MPH^c  
Arjun Patel BA^b  , Maya Childs BS^b  , M. Kit Delgado MD, MS^b  

2023

Pilot Study of a Mobile Phone Chatbot for Medication Adherence and Toxicity Management Among Patients With GI Cancers on Capecitabine

Authors: Kelsey S. Lau-Min, MD, MSCE  , Jessica Marini, PharmD, Nishant K. Shah, MD , Donna Pucci, MHK , Abigail N. Blauch, MPH, Christine Cambareri, PharmD, BCOP, CSP, Bethany Mooney, CRNP, MSN, ... [SHOW ALL](#) ..., and Lawrence N. Shulman, MD  | [AUTHORS INFO &](#)

[AFFILIATIONS](#)

Publication: JCO Oncology Practice • Newest Articles • <https://doi.org/10.1200/OP.23.00365>

2024

Penn Injury Science Center

Performs equity-centered, action-oriented research, training, and outreach to reduce injuries, violence, and their impact

Topics of interest:

Concussion & TBI

Equity & Policy

Road Traffic Injury

Opioid and Overdose



Zachary Meisel, MD, MPH, MSHP
Co-Director & Outreach Core Director, PISC

Examples of recent publications

Disparities in emergency department and urgent care opioid prescribing before and after randomized clinician feedback interventions.

Crowley AP¹, Sun C¹, Yan XS², Navathe A^{1,3}, Liao JM³, Patel MS⁴, Pagnotti D¹, Shen Z², Delgado MK³

[Author information](#) ▶

Academic Emergency Medicine : Official Journal of the Society for Academic Emergency Medicine, 09 Apr 2023, 30(8):809-818
<https://doi.org/10.1111/acem.14717> PMID: 36876410

2023

[Crit Care Clin.](#) 2023 Apr; 39(2): 357–371.

Published online 2022 Nov 14. doi: [10.1016/j.ccc.2022.09.010](https://doi.org/10.1016/j.ccc.2022.09.010)

PMCID: PMC9662754

PMID: [36898779](https://pubmed.ncbi.nlm.nih.gov/36898779/)

Youth Firearm Injury

A Review for Pediatric Critical Care Clinicians

[Elinore J. Kaufman](#), MD, MSHP,^a [Therese S. Richmond](#), PhD, RN,^{b,*} and [Katelin Hoskins](#), PhD, MBE, CRNP^c

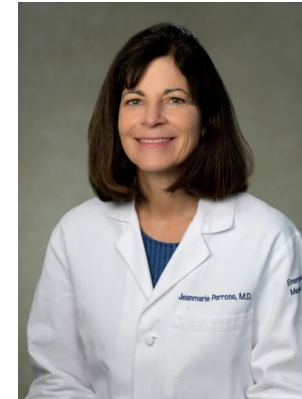
2023

Center for Addiction Medicine and Policy

Works to improve evidence-based and stigma free care for patients with substance use disorder

Topics of interest:

Medications for OUD
Xylazine Withdrawal
Harm Reduction



Jeanmarie Perrone, MD
Director, CAMP

Examples of recent publications

Self-reported Xylazine Experiences: A Mixed-methods Study of Reddit Subscribers

Spadaro, Anthony MD, MPH; O'Connor, Karen MS; Lakamana, Sahithi MS; Sarker, Abeed PhD; Wightman, Rachel MD; Love, Jennifer S. MD; Perrone, Jeanmarie MD

[Author Information](#)

Journal of Addiction Medicine 17(6):p 691-694, 11/12 2023. | DOI: 10.1097/ADM.0000000000001216

2023

Association of Urine Fentanyl Concentration With Severity of Opioid Withdrawal Among Patients Presenting to the Emergency Department

Thakrar, Ashish P. MD; Faude, Sophia MD; Perrone, Jeanmarie MD; Milone, Michael C. MD, PhD; Lowenstein, Margaret MD, MPhil, MSHP; Snider, Christopher K. MPH; Spadaro, Anthony MD, MPH; Delgado, M. Kit MD, MS; Nelson, Lewis S. MD; Kilaru, Austin S. MD, MSHP

[Author Information](#)

Journal of Addiction Medicine 17(4):p 447-453, 7/8 2023. | DOI: 10.1097/ADM.0000000000001155

2023

Research program activities

Annual Research Day symposium

Research in Progress seminar series

Academic Associates program

Journal Club series

Annual Research Day symposium – April 19, 2023

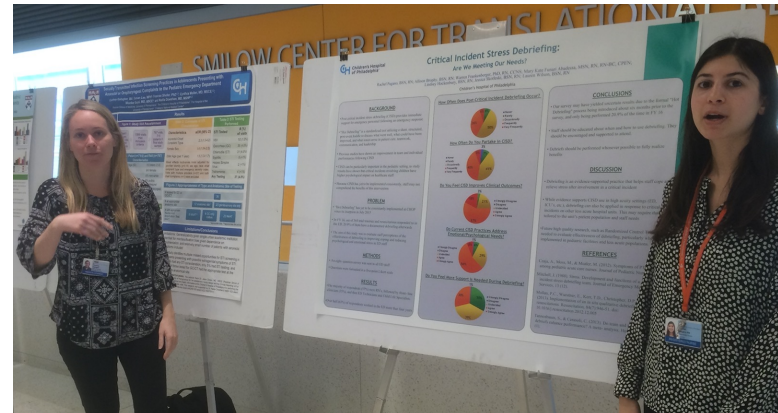
One day symposium each Spring

Oral presentations and posters from ED family (faculty, residents, nurses, medical students)

Guest keynote speaker from national Emergency medicine domain

Wonderful opportunity to showcase Our work and share within the Department and the Penn SOM community

Next research day April 10, 2024!



Annual Research Day symposium

Research Day activities include:

Guest speaker breakfast with residents – mentorship discussions, career advice, networking

Oral and poster science presentations from faculty, nurses, residents, fellows

Networking for our growing department: residents, nurses, faculty, staff

Prior Keynote Speakers

2022

Karin Verlaine Rhodes MD MS
Chief Implementation Officer,
Office of the Director Agency for
Healthcare Research and Quality



2023

Ula Hwang, MD, MPH
Professor of EM
Yale School of Medicine



2024 Keynote Speaker

Bernard Chang, MD, PHD
Vice-Chair of Research
Associate Professor of EM,
Columbia University



Research in Progress (RIP) seminar series

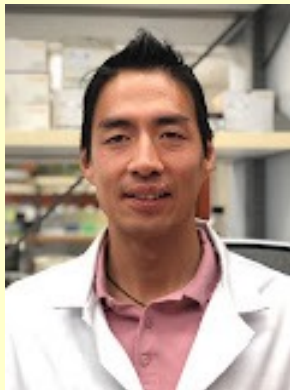
Wednesdays at noon – lunch provided

Informal presentations on research at any stage: prepping for proposals, early data, prepping for manuscript submissions

Great chance to get advice and feedback

Speakers from EM but also guest speakers with relevant collaborations:

Some of our guest speakers:



David Jang
Medical Toxicology



Catherine C. McDonald
Nursing & Injury Science



Emily Seeburger
Health Justice

Academic Associates (AA) program

Resource for clinical research screening
And enrollment in the ED

AAs are pre-health students
(mostly Penn post-bac program)

Program led by full time Research
Coordinator Natasha Balogh

All new projects are welcome –
contact us if you want to start collecting
data for your project



Natasha Balogh
AAP Coordinator



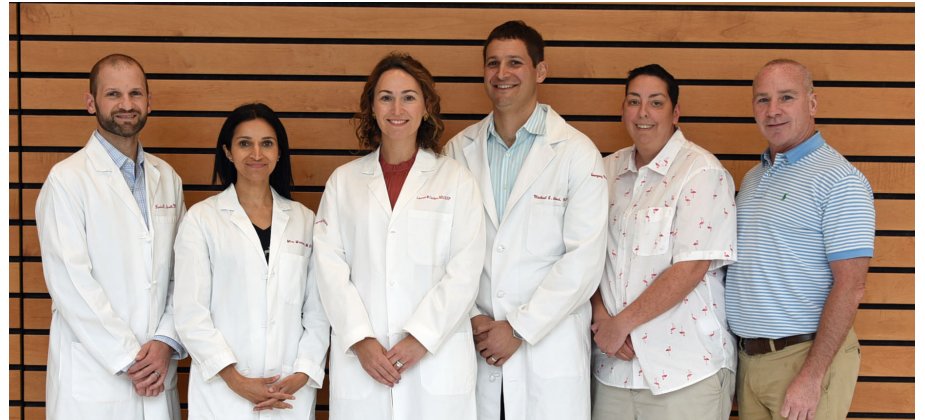
Journal Club series

Collaboration between research and residency domains of our department

For residents, fellows and faculty

Hosted at faculty homes – discussion led by residents with faculty support

Dinner provided



Residency Leadership



Lauren Conlon
Program Director



Michael Abboud
APD



Mira Mamtani
APD



Residency Program Coordinator:
Jim Cain (EMCOORDINATOR@penmedicine.upenn.edu)

Key people to help you with research within EM



Natasha Balogh
AA Program Coordinator



Ben Abella
Vice Chair for Research



Libby Moore
Grants Administrator



Zack Meisel
Director, CECPR



Fran Shofer
Director of Research
Design & Biostatistics



Eileen McDonnell
Research
administrative
coordinator