

RESEARCH NEWSLETTER

Northwestern University Feinberg School of Medicine
Department of Emergency Medicine

Spring 2021

2021 SAEM Young Investigator Award

Congratulations to Howard Kim, MD, on being awarded the 2021 SAEM Young Investigator Award for his work to advance academic EM!



“Dr. Kim’s research agenda is dedicated to improving the effectiveness of acute pain management and reducing harms opioid use disorder. Dr. Kim has been continuously funded by the Healthcare Research and Quality (AHRQ) and the National Institute on Abuse (NIDA) for the last six years, including early career research through AHRQ T32 and K12 awards. Currently, he is the PI of an award evaluating ED physical therapy for acute low back pain the Site PI for a multisite NIDA clinical trial evaluating ED-buprenorphine for opioid withdrawal (UG1DA015831, PI: D’Onofrio), PI for an early phase pain investigation clinical network (Aufderheide). Over the last few years, Dr. Kim has published extensively on topics of opioid prescribing, marijuana legalization, ED physical therapy, and opioid harm reduction in journals such as Academic Emergency Medicine, the New England Journal of Medicine, Network Open, and Physical Therapy.”¹

Welcome To Our New Research Coordinator



Zack Taylor is the newest addition to the Northwestern Research Team as a Clinical Research Coordinator, all the way from Raleigh, NC. He recently graduated with his Master of Public Health with a focus in Epidemiology from East Carolina University and is excited to continue working in clinical research. Outside of work, he loves playing volleyball, baking, and traveling, with his favorite destinations currently being Italy and Kenya. He is also a self-proclaimed pizza enthusiast and is excited to check out all the pizza and food that Chicago has to offer. Recommendations on the best food and things to do in Chicago are always welcomed by Zack.

Q&A with Demetrios Kyriacou, MD, PhD



Dr. Kyriacou is Professor of Emergency Medicine and Preventive Medicine (Epidemiology) at the Northwestern University Feinberg School of Medicine. His medical degree is from the University of Michigan Medical School and he completed residency training in emergency medicine at the Los Angeles County/University of Southern California Medical Center. He additionally earned an MPH at the University of Michigan and completed a PhD in Epidemiology at UCLA.

Dr. Kyriacou's research interests include injury prevention, clinical infectious diseases, oncologic emergencies, and health services research. In addition to numerous original research publications and methodology reviews, Dr. Kyriacou has served as senior editor and associate editor for the Journal of the American Medical Association since 2016.

How did you first become interested in emergency medicine research?

I completed my MPH Field Project in epidemiology by conducting a case-control study of pediatric submersion injured children looking at the association of immediate resuscitation on outcomes. We found that children who received immediate resuscitation (mouth-to mouth or CPR) versus those who had to wait for paramedics had a five-times greater odds of a good outcome that was defined as survival with normal neurologic status. After that project, I conducted several injury prevention studies ranging from domestic violence to gang-related homicides. Subsequently, I conducted several clinical studies.

How did you decide to pursue advanced research methodology training with your MPH and PhD and how has having this training influenced your career path?

After my study on pediatric submersion injury, I was asked by my mentor at UCLA to join his research team and to pursue a PhD in epidemiology. My dissertation was an assessment of risks factors for domestic violence injury against women. My PhD training was very rigorous in terms of understanding and applying epidemiologic and statistical methods. This advanced training allowed me to teach epidemiology and to conduct most (not all) the statistical analyses of my research projects. I always felt that conducting your own statistical analyses allows you to better understand your findings in terms validity and the potential for biases. It also helps with understanding the potential for causal inference.

You have held many roles related to research in the past (lead investigator, collaborator, mentor, epidemiology coursework instructor). Which roles have you most enjoyed and why?

I have really enjoyed all the roles. As a researcher, you can create new knowledge that can impact lives. As a mentor and instructor, your goal is to get your students to conduct the very best research that they can in terms of validity and clinical impact.

I taught Intermediate Epidemiology to Northwestern MPH and MSCI students for nine years. I also taught four research methodology seminars in Nigeria. Several of my Nigerian students have come to the United States for master and doctoral level training. They are now conducting clinical and epidemiologic research in Nigeria. One of my students is now working for the CDC in Atlanta, GA.

Q&A Continued

In recent years, you have spent significant time in your role as an editor at JAMA. Please tell us about your role and what you enjoy most about it.

Essentially, I evaluate research manuscripts to determine if they are valid and if they would have sufficient clinical or public health impact. Of the hundreds of manuscripts that I evaluate, only about 25% get sent out for peer-review. If the reviews are positive, I present the paper to an editorial staff meeting that includes several JAMA editors and statistical reviewers for possible publication. The process is quite rigorous. Of those that I present to the editors only a few get published every year. My favorite part of the job is when I send the email telling the investigators that their paper was accepted for publication.

Do you have a “favorite” recent research publication or editorial that you authored and why is it your favorite?

I have several recent editorials and viewpoints in JAMA that I wrote as part of my editor position. However, my favorite project and publication is “Risk Factors for Injury to Women from Domestic Violence” (NEJM December 1999). This was my PhD dissertation. It was a multicenter case-control study that include over 900 subjects and was funded by the Emergency Medicine Foundation. We completed the study with just \$25,000.

What are your future research and career plans?

I hope to continue working for JAMA and conducting research projects in the area of oncological emergencies. I specifically enjoy learning new methodologies and statistical analyses. Over the course of my career, I have taken several short courses on statistical methods including survival analyses, propensity scoring, and causal mediation analyses. I particularly enjoy learning to apply these new methods. For example, I have recently conducted causal mediation analyses for a few projects that will hopefully be published soon.

Newly Funded Projects



Northern Illinois Recovery Community Organization (NIRCO), the Evaluation Program at the Buehler Center for Health Policy and Economics, and Emergency Medicine, Feinberg School of Medicine, Northwestern University are pleased to announce funding (\$225,000) from the Illinois Criminal Justice Information Authority for NIRCO's Recovery Support Services for Returning Citizens program. This program provides holistic support for returning citizens in Lake County, IL including recovery, healthcare, housing, and employment support and referrals. The Evaluation Program will serve as the evaluator of this effort. The grant is part of Illinois' Restore, Reinvest, and Renew Program (R3) which uses tax revenue from cannabis sales to support communities disproportionately impacted by the war on drugs and economic disinvestment. Maryann Mason (right) and Sarah Welch (left) will serve as evaluators of this project.



Dr. Megan McHugh, PhD, recently received a gift from the Patricia Ralph Fowler & Gordon Fowler Charitable Trust to describe implementation of an innovative primary care clinic program aimed at improving health care and health outcomes for manufacturing workers and the value of health spending for their employer.

She has also been awarded a Robert Wood Johnson Foundation grant. Many large manufactures are establishing vaccine clinics for their employees, and undertaking education campaigns to promote uptake of the vaccine. The study will examine whether uptake of the COVID-19 vaccine is higher in manufacturing anchor communities (small communities with a manufacturing plant that employs 1,000 or more workers) than other communities. Her research team will also explore whether and how the presence of an anchor business might affect vaccination rates in communities with a large proportion of racial and ethnic minorities.

Publication Spotlight



Congratulations to lead author Maryann Mason, PhD and the rest of the research team including Dr. Lori Post and Sarah Welch on their recently published paper in the MMWR: Morbidity & Mortality Weekly Report. *Notes from the Field: Opioid Overdose Deaths Before, During, and After an 11-Week COVID-19 Stay-at-Home Order — Cook County, Illinois, January 1, 2018–October 6, 2020.* Dr. Mason's report shows the increase of fata opioid overdose deaths during the first COVID-19 stay-at-home order.

MMWR is considered the voice of the Center for Disease Control & Prevention and "is the agency's primary vehicle for scientific publication of timely, reliable, authoritative, accurate, objective, and useful public health information and recommendations."²

Spring Conferences



NUEM Faculty, Residents and Alumni @ CORD

Kelly Williamson, MD NUEM '11 - "So You Want to Start a Wellness Curriculum?: Guide to Creating Your Individualized Wellness Curriculum", "Remediation Bedtime Stories"

Nahzine Shakeri, MD - "So You Want to Talk About Burnout at PEC?"

Natasha Wheaton, MD, NUEM '13 – "Making Lemonade: Virtual EM Clerkships in the Time of COVID"

Kristen Grabow-Moore, MD, Med NUEM '15 & **Natasha Wheaton**, MD, NUEM '13 – "How to Motivate and Lead a Team"

Benjamin Schnapp, MD, NUEM '16 – "There is No Such Thing as a "Millennial"", "Defining "Success" In Residency", "Teaching So That Faculty Will Listen"

Simiao Li-Sauerwine, MD, MS, NUEM '18 - Wellness Workshop, "Becoming the Supervisor: Pearls and Pitfalls in Managing New Faces in The Emergency Department", "How to be a Rock star Resident Researcher"

Mike Gisondi, MD, NUEM Former PD & **Danielle Miller**, MD, NUEM '19 – "Leadership Education in Advancing Diversity: The Imposter Syndrome, Microaggressions and Implicit Bias"

Abra Fant, MD, MS & **Simiao Li-Sauerwine**, MD, MS, NUEM '18 – "Recruitment for Diversity and Inclusion: Building a Residency with Representation"



Congratulations to those presenting research at SAEM! Presenters and first authors listed below.

Justin Seltzer, PGY-4, abstract, "Association of an Emergency Department Febrile Neutropenia Protocol With Time to Initial Antibiotic Treatment"

Pete Serina, PGY-4, "Development of the Admission for Geriatric Patients in the Emergency Department (AGED) Score"

Amy Kontrick, MD, "Did You Like My Talk? Yes, No, Maybe: Survey For Medical Educators"

Peter Pruitt, MD, "External Validation Tool to Identify Low-Risk Patients with Isolated Subdural Hematoma"

Scott Dresden, MD, MS, "Impact of Geriatric Emergency Fellowship Training on Emergency Medicine Physicians"

Patrick Lank, MD, MS, "Substance Use History is Associated with Lower Opioid Use for Emergency Department Pain Management", "Complicated Alcohol Withdrawal in Psych Admissions from the Emergency Department: Evaluating Low Risk Patients"

Aaron Quarles, MD, MPH, "Querying and Electronic Health Record to Identify Patients Experience Homelessness and/or Housing Insecurity"

NUEM is pleased to recognize NUEM alumnus Frederick Korley, MD, PhD, for winning the mid-career investigator award and former NUEM faculty (from 2003-2017) Michael Gisondi, MD, for winning the Hal Jayne Excellence in Education award.

Dr. Frederick Korley is currently an Associate Professor of Emergency Medicine at the University of Michigan. His work focused on the development of diagnostics and therapeutics for TBI and is a co-investigator of the largest observational study of TBI in the US (the Transforming Research and Clinical Knowledge in TBI, TRACK-TBI). He is also a co-investigator in the clinical coordinating center of the NIH funded Strategies to Innovate Emergency Clinical Care Trials (SIREN) network and is a principal investigator of two federally funded research studies run by the SIREN network.

Dr. Gisondi is an Associate Professor and the inaugural Vice Chair of Education in the Department of Emergency Medicine at Stanford University. He is the Principal and Founder of the Precision Education and Assessment Research Lab (The PEARL), Co-Director of the Scholarly Concentration in Medical Education, and the faculty advisor for LGBTQ+ Meds at Stanford School of Medicine. He previously served on the Board of Directors for the Council of Residency Directors in Emergency Medicine and was awarded the ACEP National Faculty Teaching Award and was named Alumnus of the Year by Loyola University Chicago Stritch School of Medicine.

New studies starting recruitment this summer

Study Title: NEED-PT: A Cluster-Randomized Trial of the Northwestern Embedded Emergency Department Physical Therapy (NEED-PT) Protocol for Acute Low Back Pain

PI: Howard Kim, MD MS

Study goal: Testing an innovative model of an "embedded" ED physical therapist to treat patients with low back pain and tracking patient-reported outcomes and operational outcomes over a one year period.

Recruitment start date: Target June 2021

FYI: Contact the research pager if you have a patient with low back pain

Study Title: GEAR 1.0: Geriatric Emergency care Applied Research Network

PI: Scott Dresden, MD MS

Study goal: Pilot study aims to evaluate ED measures of cognitive impairment, medication safety, elder abuse, falls, and care transitions and their association with health services use and patient-centered outcomes up to 90 days after an ED visit.

Recruitment start date: Target June 2021

FYI: RAs will screen for eligible patients, but feel free to contact us as well. You may be asked if it is safe for the patient to stand and walk. If any concerns for elder abuse are uncovered or if a social work consult is recommended the care team will be contacted.

Study Title: IMPACT—Pathways to Detection of Dementia in the Emergency Department

PI: Scott Dresden, MD MS

Study Goal: To connect older adults in the ED with possible undiagnosed dementia to outpatient services for evaluation.

Recruitment start date: March 30, 2021

FYI: The process will operate like other ED pathways with bedside nursing screening. If a patient screens positive a banner will appear in the discharge navigator recommending use of the ED Cognitive Impairment/Dementia Discharge order Set. Complete the order set to assist with the referral.