

SUMMER 2022

RESEARCH NEWSLETTER

Northwestern University Feinberg School of Medicine



For more info,
please visit our website:

[www.feinberg.northwestern.edu/
sites/emergencymed/research](http://www.feinberg.northwestern.edu/sites/emergencymed/research)

DEPARTMENT OF EMERGENCY MEDICINE

The Department of Emergency Medicine at Northwestern University Feinberg School of Medicine publishes this quarterly research newsletter to highlight department newcomers, Q & A sections from current faculty and alumni, faculty and residency research spotlights, publications updates, and many more features.



CONGRATS!

Congratulations to Amy Kontrick, MD and Patrick Lank, MD on their successful promotion to the rank of Associate Professor at Northwestern University in the Department of Emergency Medicine. This is a highly significant career accomplishment as it denotes significant contributions to the advancement of the field of emergency medicine as well as national recognition for their work. Please congratulate them as this achievement requires many years of sustained, high quality academic effort.

Let's also congratulate Dr. Lank as he will be taking a new position in August with AbbVie to become Associate Medical Director of clinical development in their Specialty Medicine Division.

We are fortunate that Dr. Lank will remain as an Adjunct Associate Professor in the Department of Emergency Medicine and will remain on the medical staff at NMH. He also remains an investigator on research grants in the department.



NEWLY FUNDED PROJECTS



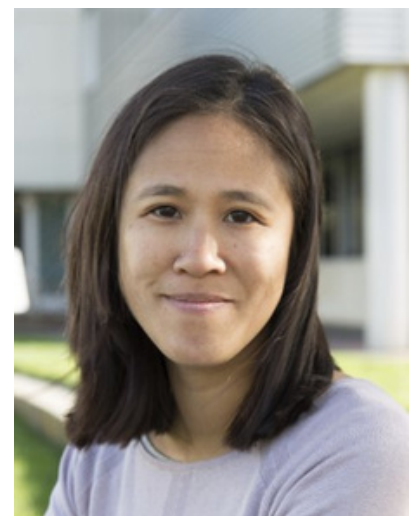
Lindsay Allen, PhD MA
Assistant Professor



Howard S. Kim, MD MS
Assistant Professor

Drs. **Lindsay Allen** and **Howard Kim** received an award from the Peterson Foundation to examine the impact of telehealth on non-urgent emergency department use during the pandemic. The COVID-19 pandemic caused a rapid and widespread acceleration in the use of telemedicine for acute, unscheduled health care visits. The shift could result in substantial cost-savings if telemedicine provides a way to reduce costly non-emergent visits to the emergency department. However, prior work has indicated that telehealth cost-savings are offset by an increase in downstream health care use, and by generating new health care visits that add to spending. The team will analyze downstream utilization and costs among Northwestern Medicine patients who initiated urgent care visits via telehealth to those initiated in-person in the emergency department, during the pandemic. They hope that results from their study will help decision makers design more cost-effective telemedicine approaches, thereby maximizing the technology's value in the future.

Dr. **George Chiampas**, Dr. **Jennifer Chan**, and the Disaster Management and Community Emergency Preparedness Initiative (DMCEPI) team were awarded support in May for their 'Defusing Disasters' proposal through the Buffett Institute for Global Affairs Idea Incubation Process. The 'Defusing Disasters' interdisciplinary research project aims to strengthen community resilience and Chicago disaster preparedness to heat waves. The interdisciplinary project with faculty from across the university and local public health partners will focus on creating locally informed Heat Vulnerability Indices along with developing community-centered approaches to implementing these indices across the Chicagoland areas using participatory design methods and translational practices. The ultimate goal of the research project is to produce globally applicable but locally informed Hazardous Weather Vulnerability Indices to help mitigate the human impact of heat related disasters around the world. Selected as a Northwestern Buffett Global Working Group, 'Defusing Disasters' will receive support up to a total contribution of \$300k over the next two years.



Jennifer Chan, MD, MPH
Director of Global Emergency Medicine



Scott Dresden, MD, MS, FACEP

Director, Geriatric Emergency
Department Innovations (GEDI)

The "Identifying Older Adults with Delirium in the Emergency Department: Risk Factors and Phenotypes" study has been funded by the Geriatric Emergency care Applied Research (GEAR) network. Because of difficulty identifying delirium in the ED and delirium's high morbidity and mortality, it is important to better identify patients who are at high risk of having undiagnosed delirium or developing delirium in the ED. Additionally, it is unknown if different phenotypes of delirium exist in the ED which might be more or less responsive to different prevention and management strategies. The aims of this study are to use data from the GEAR Standardization Study (GEARSS) collected at NMH, Yale, and Grady Hospital to 1) externally validate a delirium risk predication score created by Kennedy et al, and 2) to describe phenotypes of delirium in the ED and the relative frequencies of each phenotype.

Dr. **Amy Kontrick** was awarded the Northwestern Primary Care Practice-based Research Program (NP3) seed grant. The NP3 Seed Grant Program aims to increase primary care-academic partnerships that are prepared to collaborate in the design and conduct of primary care research and foster the development of practice-based proposals for external funding.

Dr. Kontrick's proposal, entitled, "The Steatosis Identification, Risk stratification, and Referral pathway in the ED (STIRRED)." Is focused on gaining understanding of the follow-up pathways for incidental findings discovered in the ED for patients who do not have established primary care or are followed by a Federally Qualified Health Center. Ultimately, this grant seeks to lay the foundation for a research partnership with one of the local FQHCs for a future federal grant submission.



Amy V. Kontrick, MD

NEWLY FUNDED PROJECTS

NEWLY FUNDED PROJECTS



Alexander Lo, MD
Associate Professor

Our study, Improving Emergency Department Care and Care Transitions: Perspectives of Persons Living with Dementia and their Care Partners, is a pilot study funded under a National Institute on Aging R33 Geriatric Emergency Care Applied Research Network 2.0 Advancing Dementia Care (GEAR-ADC) project. The substantial U.S. population living with dementia (5.8 million in 2020; projected 8.4 million by 2030) experiences a high burden of inadequate access to optimal care and an increased rate of avoidable ED visits and hospitalization, which are thought to be driven by failed care transitions and poor access to community care. Our study intends to address these impediments by examining the unmet ED and post-ED care needs for older persons with confirmed and undiagnosed dementia. In particular, we hope to identify opportunities to improve care transitions and access to community care after their ED visit.



Megan McHugh, PhD
Associate Professor

Dr. **Maryann Mason** recently received support from an anonymous donor. This award supports the work of the Illinois Violent Death Reporting System (IVDRS) and the Illinois Statewide Drug Overdose Reporting System (SUDORS) to disseminate data to local communities for use in preventing violent and drug overdose deaths. Our team works with a variety of partners to share information from these public health surveillance systems which we operate on behalf of IDPH. We employ a communications coordinator (Nia Andrews) who maintains our webpages, social medial and dissemination network and helps to brand and style dissemination products and two Community Outreach Coordinators who travel the state to meet with organizations to share data. Some of our recent and ongoing partners include the Illinois Association of Public Health Administrators, the Illinois Court System, Chestnut Health, NIRCO, NICASA and many more. In addition, the funding supports innovative research to inform prevention. In this capacity we work with Alexander Lundberg, Associate Professor of Emergency Medicine at the Buehler Center for Health Policy and Economics. Our current project in this area is examining profiles of older adult drug overdose decedents to identify latent factors through LDA methods.



Maryann Mason, PhD
Associate Professor



Q & A WITH DR. MARYANN MASON

DR. MASON IS INTERESTED IN HEALTH AND WELL-BEING AS FOSTERED BY COMMUNITY CONDITIONS. AS A SOCIOLOGIST, SHE WORKS TO UNDERSTAND ENVIRONMENTAL, CULTURAL, INSTITUTIONAL AND SOCIAL INFLUENCES ON HEALTH AND WELL-BEING ACROSS THE LIFE COURSE ESPECIALLY IN LOW RESOURCED AND COMMUNITIES OF COLOR. SHE HAS EXPERIENCE AND INTEREST IN COMMUNITY ENGAGED SCHOLARSHIP. SHE CURRENTLY LEADS VIOLENCE AND INJURY RESEARCH IN THE BUEHLER CENTER FOR HEALTH POLICY AND ECONOMICS.

SHE HAS WORKED IN THE AREAS OF INJURY AND OBESITY PREVENTION WITH A FOCUS ON COMMUNITY PROGRAMMING AND ENVIRONMENTAL INTERVENTIONS. HER FOCUS IS ON COLLABORATIVE RESEARCH AND EVALUATION TO IMPROVE THE HEALTH AND WELL-BEING OF CHILDREN AND THEIR COMMUNITIES WITH EMPHASIS ON SOCIO-ECOLOGICAL APPROACHES TO HEALTH.



Maryann Mason, PhD
Associate Professor

Congratulations on your newly funded award! Before talking about the award itself, can you tell us about your path to research. When did you first become interested in being a researcher as part of your career?

I often say that I am an “accidental” academic, meaning that I became an academic to solve a problem I encountered in a community setting. In my job at a large social service and policy agency, I noticed that community programming did not rely on what was known from studies or even evaluation of the programs being implemented and started to work to push programming to at least acknowledge the evidence base. At that point I found out that communities generally were not research savvy or even research exposed. And voila, I found my mission, to pursue high quality research skills on issues important to communities and bring that information back to communities and contribute to the science of problem-solving.

The recent award’s purpose is to provide a conduit between the data surveillance systems we operate and communities who need the data to inform intervention development and evaluation of their efforts.



Q & A CONTINUED...

How did you ultimately land upon your current areas of research focus (disease surveillance and community-based interventions for substance use disorders and violence)

It has been an evolution. When I moved to academia, I started looking at problems that were identified in clinical settings and started to think about them in community contexts –how did the community environment or the lived life contribute to the issue? As I moved between worlds, I began to see that while the clinically identified problems were real and significant, the community had more immediate issues to resolve before they could address optimal health. That led me to focus on violence and drug overdoses which are the urgent public health problems that drive concerns in many communities today.

You have recently published several high papers in high impact journals related to COVID and substance use disorders. What were the major findings from those studies? and how did those findings inform your future studies?

I've recently started publishing on drug overdose death and in particular how the overdose epidemic varies by sub populations and over time.

One of what I think our team's more interesting studies appeared in MMWR and examined opioid overdose trends in Cook County, IL before, during and after the March-May 2020 COVID 19 stay at home order in Illinois. We found a spike in these deaths during the stay at home order and then a quick decline after the stay at home order was lifted. While this was pronounced, we also found that Cook County was experiencing elevated overdose deaths beginning in late 2019, signaling that increases seen in 2020 were an extension of a proceeding trend. This helps to put into context COVID 19's contribution to increases of opioid overdose deaths.

Tell us about the work you are leading in collaboration with the Illinois Department of Public Health on the Block to Block initiative.

We are fortunate to have the opportunity to operate Block by Block as a pilot program that was developed from an idea by one of our team's community outreach coordinators (Ed Boone) based on his work in community contexts. IDPH has funded our team to partner with community organizations to implement this outreach program to train residents of blocks highly impacted by opioid overdose deaths in naloxone administration and fentanyl test strip usage, distribute these supplies and provide resources to connect residents to an array of social services. The pilot sites are located in Lake County, Peoria and one more to be determined based on overdose death data we collect through our Statewide Drug Overdose Reporting System (SUDORS). Our Lake County site will start operations this summer.

You were recently awarded a grant entitled "Connecting the Dots: Helping Communities Access Data for Prevention of Violent and Drug Overdose Deaths." What will that project entail?

That project enables our team to develop dissemination materials and outreach to communities that are highly impacted by the problems of violent and drug overdose deaths. It supports three team members for communication and outreach as well as innovative research efforts based on feedback we receive from communities regarding information needed as well as our efforts to address gaps in the literature in these areas.



PUBLICATIONS SPOTLIGHT

faculty in bold, residents italicized, alumni with *

Klein MR, Schmitz ZP*, **Adler MD**, **Salzman DH** Development of a Rigorously Designed Procedural Checklist for Assessment of Emergency Medicine Resident Performance of Temporary Transvenous Cardiac Pacing. *AEM Educ Train* 2021 Jul;5(3):e10566. doi:10.1002/aet2.10566

Leibowitz MK, Scudder MR, McCabe M, **Chan JL**, **Klein MR**, **Trueger NS**, **McCarthy DM** Emergency Medicine Influencers' Twitter Use During the COVID-19 Pandemic: A Mixed-methods Analysis. *West J Emerg Med* 2021 Mar 22;22(3):710-718. doi:10.5811/westjem.2020.12.49213

Rising KL, **McCarthy DM** In Reply to Chou et al. *Acad Med* 2021 07 01;96(7):931-932. doi:10.1097/ACM.0000000000004099

Seltzer JA*, Frankfurt O, **Kyriacou DN** Association of an emergency department febrile neutropenia intervention protocol with time to initial antibiotic treatment. *Acad Emerg Med* 2022 01;29(1):73-82. doi:10.1111/acem.14335

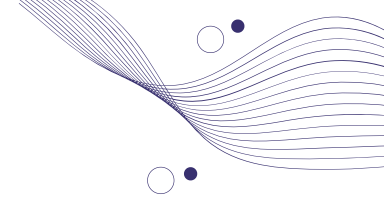
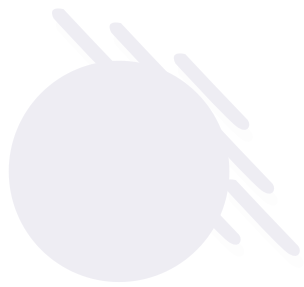
Papanagnou D, **Klein MR**, Zhang XC, Cameron KA, Doty A, **McCarthy DM**, Rising KL, **Salzman DH** Developing standardized patient-based cases for communication training: lessons learned from training residents to communicate diagnostic uncertainty. *Adv Simul (Lond)* 2021 Jul 22;6(1):26. doi:10.1186/s41077-021-00176-y

Mason M, Soliman R, **Kim HS**, **Post LA** Disparities by Sex and Race and Ethnicity in Death Rates Due to Opioid Overdose Among Adults 55 Years or Older, 1999 to 2019. *JAMA Netw Open* 2022 01 04;5(1):e2142982. doi:10.1001/jamanetworkopen.2021.42982

Trueger NS The Best Bad News. *JAMA Neurol* 2022 03 01;79(3):223-224. doi:10.1001/jamaneurol.2021.5113

Lo AX, Wedel LK*, Liu SW, Wongtangman T, Thatphet P, Santangelo I, Chary AN, Biddinger PD, Grudzen CR, Kennedy M COVID-19 hospital and emergency department visitor policies in the United States: Impact on persons with cognitive or physical impairment or receiving end-of-life care. *J Am Coll Emerg Physicians Open* 2022 Feb;3(1):e12622. doi:10.1002/emp2.12622

Lo AX, Kennedy M Do we really need another risk prediction rule? Yes, we do. *Acad Emerg Med* 2022 May;29(5):678-680. doi:10.1111/acem.14458



Poluch M, Feingold-Link J, Ankam N, Kilpatrick J, Cameron K, Chandra S, Doty A, **Klein M, McCarthy D**, Rising K et al. I Don't Have a Diagnosis for You: Preparing Medical Students to Communicate Diagnostic Uncertainty in the Emergency Department. *MedEdPORTAL* 2022;18:11218. doi:10.15766/mep_2374-8265.11218

Michelson KN, **Adams JG**, Faber JMM Navigating Clinical and Business Ethics While Sharing Patient Data. *JAMA* 2022 Mar 15;327(11):1025-1026. doi:10.1001/jama.2022.1942

Richards CT*, **McCarthy DM**, Markul E, Rottman DR, Lindeman P, Prabhakaran S, Klabjan D, Holl JL, Cameron KA A mixed methods analysis of caller-emergency medical dispatcher communication during 9-1-1 calls for out-of-hospital cardiac arrest. *Patient Educ Couns* 2022 07;105(7):2130-2136. pii:S0738-3991(22)00097-0

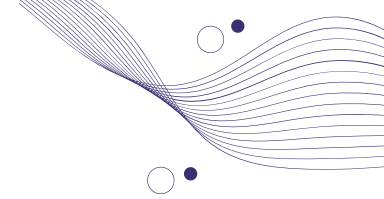
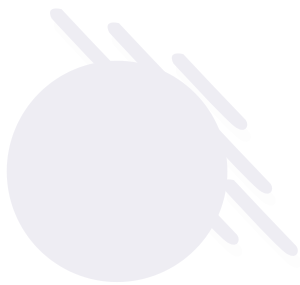
Kim HS, Muschong KM, Fishman IL, Schauer JM, Seitz AL, Strickland KJ, Lambert BL, **McCarthy DM**, Vu MH, Ciolino JD Embedded emergency department physical therapy versus usual care for acute low back pain: a protocol for the NEED-PT randomised trial. *BMJ Open* 2022 05 24;12(5):e061283. doi:10.1136/bmjopen-2022-061283

Zakharevich M, **Kippenhan MA**, Lu A, Courtney DM, **McCarthy DM, Kim HS** Antibiotic and antitussive prescribing among urgent care and emergency department visits for respiratory diagnoses in a large health system. *J Am Coll Emerg Physicians Open* 2022 Jun;3(3):e12741. doi:10.1002/emp2.12741

Lo AX, Wedel LK*, Liu SW, Wongtangman T, Thatphet P, Santangelo I, Chary AN, Biddinger PD, Grudzen CR, Kennedy M COVID-19 hospital and emergency department visitor policies in the United States: Impact on persons with cognitive or physical impairment or receiving end-of-life care. *J Am Coll Emerg Physicians Open* 2022 Feb;3(1):e12622. doi:10.1002/emp2.12622

Ramgopal S, Varma S, Victor TW, **McCarthy DM**, Rising KL Pediatric Return Visits to the Emergency Department: The Time to Return Curve. *Pediatr Emerg Care* 2022 Aug 01;38(8):e1454-e1461. doi:10.1097/PEC.0000000000002790

Loftus TM, Wessling EG, Cruz DS, Schmidt MJ, Kim HS, McCarthy DM, Malik S Impact of the COVID pandemic on emergency department CT utilization: where do we go from here? *Emerg Radiol* 2022 Jun 21;. doi:10.1007/s10140-022-02071-z



Garbern SC, Hyuha G, González Marqués C, Baig N, **Chan JL**, Dutta S, Gulamhussein MA, López Terán GP, Manji HK, Mdundo WK et al. Authorship representation in global emergency medicine: a bibliometric analysis from 2016 to 2020. *BMJ Glob Health* 2022 06;7(6). pii:e009538

Royan R, Pendergrast TR, Del Rios M, Rotolo SM, **Trueger NS**, Bloomgarden E, Behrens D, Jain S, Arora VM Use of Twitter Amplifiers by Medical Professionals to Combat Misinformation During the COVID-19 Pandemic. *J Med Internet Res* 2022 07 22;24(7):e38324. doi:10.2196/38324

Carpenter CR, **Dresden SM**, Shah MN, Hwang U Adapting Emergency Care for Persons Living With Dementia: Results of the Geriatric Emergency Care Applied Research Network Scoping Review and Consensus Conference. *J Am Med Dir Assoc* 2022 Aug;23(8):1286-1287. pii:S1525-8610(22)00418-2

Dresden SM, Taylor Z, Serina P*, Kennedy M, Wescott AB, Hogan T, Shah MN, Hwang U, Optimal Emergency Department Care Practices for Persons Living With Dementia: A Scoping Review. *J Am Med Dir Assoc* 2022 Aug;23(8):1314.e1-1314.e29. pii:S1525-8610(22)00426-1

FALL CONFERENCES



October 1-4, 2022
San Francisco, CA

The Department of Emergency Medicine at Northwestern University Feinberg School of Medicine welcomes your questions and feedback.

[Contact Us](#)

N Northwestern Medicine®
Feinberg School of Medicine