

RESEARCH NEWSLETTER

Northwestern University Feinberg School of Medicine,
Department of Emergency Medicine

Fall 2019

This quarterly newsletter will feature faculty spotlights, resident research news, media, conference presentations, a publications sections, and other information that may be interesting to faculty and peers.

If you would like to be featured or share information for an upcoming newsletter please email Kate Bruni Katherine.Bruni@nm.org.

Q&A with Dr. Scott Dresden

How did you first become interested in Geriatric Studies?

After I completed my research fellowship I had the opportunity to work with Danielle McCarthy and Kirsten Engel on focus groups for older adults in the ED. We talked to patients who had been discharged from the emergency department. We heard their stories of how they perceived emergency care, what they were most worried about and what they thought we could provide them in the ED. I was struck by the level of anxiety that came from those focus groups. The underlying concern for many patients was, "Is this illness or injury going to be so severe that I will lose my independence?" I really enjoyed that experience and seeing the ED experience from the perspective of a vulnerable group like older adults.

After that experience I had the opportunity to take over as the site PI for the GEDI WISE grant, and jumped at the chance. I've really enjoyed getting to know much more about geriatric emergency medicine, working with amazing colleagues such as GEDI nurses, physical therapists, pharmacists, social workers, occupational therapists, geriatricians, and palliative care specialists. Additionally, there is an amazing community in geriatric emergency medicine through groups such as SAEM's Academy for Geriatric Emergency Medicine, and ACEP's Geriatric Emergency Medicine Section. It's a small dedicated group of emergency physicians working to improve care for older adults across the country and world.



Was there an event or situation that gave you the initial idea for the R01 project?

It has been a gradual progression. After that focus group study I worked on measuring Health-Related Quality of Life (HRQoL) in older adults in the ED, comparing GEDI patients with comparison patients matched by age and Emergency Severity Index. I found it very difficult to do because the GEDI had significantly worse measures of HRQoL at baseline compared to the comparison patients. After discussing with my mentors, we determined that the best approach would be to do a randomized controlled trial.

What is your vision for Geriatric Emergency Medicine?

I think the model that was developed at Northwestern by Drs. Adams, Aldeen, Courtney, and others is the premier model for Geriatric Emergency Care. The GEDI team works to come alongside the ED team, bring their expertise, and spend time that the ED team doesn't have to determine patients' needs and how to safely meet those needs as an outpatient if possible.

My vision is to ensure that it improves patients' lives, and then to disseminate this model nationwide. I'd love to see small community hospitals with GEDI programs or even tele-GEDI programs.

Do you already foresee other studies coming out of your research, if so, can you provide some examples?

Yes, there are so many opportunities, we already have a ton of data and will have even more with the RCT.

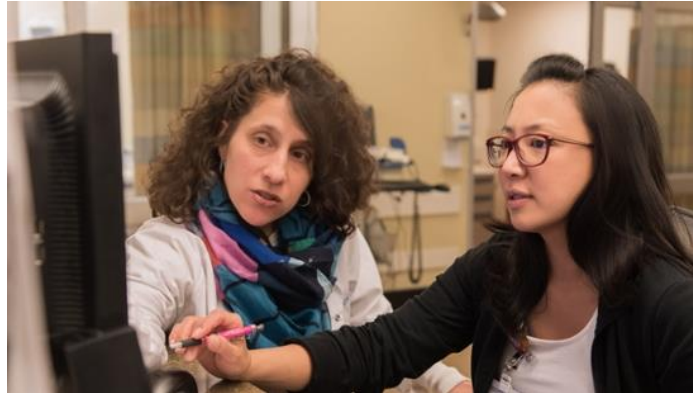
Use of the clinical frailty scale (CFS) by emergency nurses has not been published to my knowledge. Alex Lo is working to evaluate the reliability of the CFS by emergency nurses.

Pete Serina (PGY-2) is working to evaluate CFS as a predictor for hospitalization, repeat ED visits, re-hospitalization, and death.

Logan Wedel (PGY-2) and Pete Serina are working to compare the impact of a full GEDI consult to just a follow up phone call to usual care on use of health services.

Andrew Berg (Fellow) and Gabrielle Bunney (PGY-2) are working on an analysis of the GEDI database to predict patients who will be discharged even without a GEDI consult and who will be admitted even with a GEDI consult. This may help us better target patients who will benefit from GEDI in the future.

I'm looking to study the impact of the "Surprise Question" - when the GEDI nurse asks the physician if they'd be surprised if the patient died in the next 30 days. I'd like to see who already has advanced directives, what interventions the GEDI nurse can do, who ends up getting a palliative care consult, etc.



Above: GEDI nurses at work in the ED

How long did it take you to prepare this grant, did you use any outside research resources?

To write this specific grant it took about 6 months. I used preliminary data from previous GEDI studies and advice from mentors, especially Lee Lindquist, Lori Post, Mark Courtney, and Allen Heinemann. Alex Lo, a statistician Masha Kocherginsky, and health economist Jim Oehmke also helped to write sections of the grant. As you can see, it's a team effort.

What advice would you give to those who apply for an AHRQ or NIH R01?

My first advice would be go for it. I thought it was over my head to write it, but you never know until you write it.

Also, give yourself plenty of time, we decided at the last minute to delay the submission of the grant for 3 months because we weren't quite ready to submit at the deadline.

Finally, build a great team. I am 100% confident that this was funded because of the strengths of the team that we had built. We have complimentary roles that made the project much better than if any one of us would have written it on our own. Use your mentors and get plenty of constructive criticism, especially from people who are not directly connected to the grant or in your field.

Saying Goodbye



Dr. Christopher Richards first joined NUEM in 2008 as a resident and became faculty in 2012. Most recently he has served as the Assistant ED Medical Director for Neurological Emergencies. He was also the Associate EMS Medical Director, Chicago EMS/Illinois Region XI EMS Central System. He is now faculty at the University of Cincinnati.



Dr. Mark Courtney, our previous Director of Research, had been with us since 2001. He has now moved to Texas, where he is the Executive Vice Chair of Academic Affairs and a Professor in the Department of Emergency Medicine at University of Texas Southwestern Medical Center.

A Warm Welcome to Our New Staff



Alejandra Rodas, one of our new Research Project Coordinators, comes to our department from Northwestern University Feinberg School of Medicine with 4+ years of research experience. She just received her Master of Public Health with a focus in Research and Epidemiology, from Benedictine University.



Kayla Muschong also joined our team this summer as a new Research Project Coordinator. She graduated from the University of Michigan in 2019 with a major in Public Health Sciences and minor in Biology. While there she was a Research Assistant for multiple studies as well as a volunteer and peer educator for sexual assault prevention and awareness.

Media Watch

*Click the icon to read the article



Lori Post, PhD, on WGN Radio, discussing mental health and mass shootings



Lori Post, PhD, on CNN discussing her findings on gun violence and domestic terror in relation to recent mass shootings

COSMOPOLITAN

Patrick Lank, MD, MS, featured in an article for Cosmopolitan.com about synthetic marijuana



Scott Dresden, MD, MS, in Today's Geriatric Medicine, about the Emergency Geriatric Department's Level 1 status

Faculty Focus



Dr. Jennifer Chan recently returned from the hurricane Dorian disaster response in the Bahamas, using her research to support the transition to recovery, a crucial turning point for governments and communities affected by disaster. Recovery is helping to stabilize many aspects of a society under stress, including health, water, shelter and information. Once there, she helped coordinate and facilitate information and data for targeted operations.



Congratulations to our in-house influencer, Dr. Seth Trueger! He was previously Social Media Editor at Annals of Emergency Medicine, and has been Digital Media Editor at JAMA Network Open since 2018. He has published on many topics including emergency department crowding and emergency airway management; he focuses on social media use for medical education and distribution of medical journal content.

Resident Research Spotlight



Clockwise from top left: Dr. Demetrios Kyriacou, Justin Seltzer (PGY-3), Sean Watts (PGY-2), and Logan Wedel (PGY-2).

The oncologic emergency research group is working on a long term project studying the effects of the “Code Neutropenic Fever” intervention on emergency department and in-hospital outcomes. The group, headed by principal investigator Demetrios Kyriacou, is comprised of emergency medicine residents Justin Seltzer, Logan Wedel, and Sean Watts. We are currently engaged in a retrospective analysis of outcomes related to the care of neutropenic fever patients in the NMH emergency department over the past two years prior to the code being created, funded by the Northwestern Medicine EDW Pilot Data Program Grant. This analysis will be paired with a post intervention arm that will be evaluated in 1-2 years. Our project’s primary outcome is time-to-antibiotics, with secondary outcomes related to morbidity and mortality. We hypothesize that reducing the time-to-antibiotics will improve these outcomes. Anyone interested in participating in our group can contact justin.seltzer@northwestern.edu.

Selected Recent Publications By Research Faculty

Since June 2019

Chan JL, Constantinou V, Fokas J, Van Deusen Phillips S and Chiampas G. An Overview of Chicago (Illinois USA) Marathon Prehospital Care Demographics, Patient Care Operations, and Injury Patterns. *Prehosp Disaster Med.* 2019 June; 34(3): 308-316. PMID: 31204640

Chan, JL and Purohit H. Challenges to Transforming Unconventional Social Media Data into Actionable Knowledge for Public Health Systems During Disasters. *Disaster Medicine and Public Health Preparedness*, 2019 October; 1-8. PMID: 31610817

Dresden SM, McCarthy DM, Engel KG and **Courtney DM**. Perceptions and expectations of health-related quality of life among geriatric patients seeking emergency care: A qualitative study. *BMC Geriatrics.* 2019 Aug; 19(1). PMID: 31382886

Reuter Q, Marshall A, **Zaidi H, Sista P, Powell ES, McCarthy DM** and **Dresden SM**. Emergency Department-Based Palliative Interventions: A Novel Approach to Palliative Care in the Emergency Department. *Journal of Palliative Medicine.* 2019 Jun; 22(6): 649-655. PMID: 30720375

Kim HS, Kaplan SH, **McCarthy DM**, Pinto D, Strickland KJ, **Courtney DM** and Lambert BL. A comparison of analgesic prescribing among ED back and neck pain visits receiving physical therapy versus usual care. *American Journal of Emergency Medicine.* 2019 Jul; 37(7): 1322-1326. PMID: 30528050

Kyriacou DN. Government Regulation of Sepsis Care. *Journal of the American Medical Association.* 2019 Jul; 322(3): 250-251. PMID: 31310281

Pruitt P, Naidech A, Van Ornam J, Borczuk P and Thompson W. A natural language processing algorithm to extract characteristics of subdural hematoma from head CT reports. *Emergency Radiology.* 2019 Jun; 26(3): 301-306. PMID: 30693414

Post LA, Balsen Z, Spano R and Vaca FE. Bolstering gun injury surveillance accuracy using capture–recapture methods. *Journal of Behavioral Medicine.* 2019 Aug; 42(4): 674-680. PMID: 31367932