

Department of Medicine
2020 Annual Report

OUR MISSION The mission of the Department of Medicine is to deliver outstanding and compassionate clinical services to all populations, especially the underserved, provide superior education for providers in training, and advance medical knowledge through research.



OUR VISION We are a thriving department of fulfilled, compassionate, and diverse caregivers committed to patient care, teaching, discovery, and each other. We are unwavering in our dedication to empowering our diverse community to achieve wellness throughout the continuum of care while serving as national leaders in exploring innovative and outstanding models of healthcare.

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Introduction & Overview

Disruptive Innovation

The theme “Disruptive Innovation” reflects the acute and complex challenges the Department of Medicine, and healthcare in general, encountered during 2020 and beyond due to the COVID-19 pandemic and other notable events that took place locally, nationally and globally.

Early in 2020, healthcare was thrust into the unknown and uncertainty due to COVID-19 creating a powerful reminder of our multifaceted and changing world. The pandemic had a direct and significant impact on our Department’s healthcare delivery in nearly every imaginable way—our patient capacity both ambulatory and inpatient required immediate patient care restructuring and redesign to handle the inpatient surge as well as the down turn of clinic visits and elective procedures, our need to adjust to a change in the workforce, the sudden and untimely loss and death of patients and colleagues, the awareness of adequate and inadequate PPE, the fear and concern of our safety and that of our families, the financial losses, the short and potentially long-term effect of our providers’ wellbeing which was being tested and compromised day after day, just to name a few.

As Chair of the largest Department in Hennepin Healthcare, having a strong, well-structured and supportive leadership was invaluable in responding to the many complex operational challenges. I want to recognize and thank our five Vice Chairs, fourteen

Division Directors (see page 8), residency program directors, and our department leaders in their system-wide operational roles who innovated during disruption. This department could not have succeeded without the tremendous hard work of our general faculty and advanced practice providers. It became immediately apparent at the start of the pandemic the importance of extensive and timely communication, collaboration, and innovation within the Department of Medicine and throughout the organization at all levels to support our healthcare providers, our trainees, our staff, and our community, to sustain the best healthcare of our patients during this unprecedented time. Many of the HHS leaders are from the Department of Medicine and provided outstanding leadership throughout 2020. These leaders include Dr. Daniel Hoody, Hospital Medicine Division, as interim Chief Medical Officer; Dr. David Hilden, Hospital Medicine Division, as Vice President of Medical Affairs; Dr. Deepti Pandita, General Internal Medicine Division, as Chief Health Information Officer; and Dr. Ajay Israni, Nephrology Division, as President of the Hennepin Healthcare Research Institute. In addition, active members of the HHS Board of Directors and/or HHS Board Committees including Dr. Daniel Hoody, Hospital Medicine Division, on the Audit/Compliance Committee, Finance Committee and Quality Committee; Dr. Gautam Shroff, Cardiology Division, on the Quality Committee; and Drs. Ajay Israni, Nephrology Division, Danielle Robertshaw, General Internal Medicine Division, and Dr. Rachel Silva, General Internal Medicine Division, who served on the Mission

Effectiveness Committee, and I also served on the HHS Board of Directors.

Throughout this report are compelling stories of first-hand experiences as to the impact the pandemic and the civil unrest following the killing of George Floyd had on many at Hennepin Healthcare.

Although the Department encountered numerous challenges and obstacles, we continued to strive to fulfill our mission and vision working diligently to sustain some normalcy, maintain what we had built, and continuing to accomplish so much.

Notably, in 2020, we continued to be successful in our recruitment and hiring of many dedicated physicians and advanced practice providers, we continued to recruit amazing internal medicine resident and fellow trainees. We were successful with the promotion of Dr. Charles Reznikoff to Associate Professor of Medicine as the first faculty on the Master Clinician Track, and the submission of five dossiers for faculty promotions in the Department of Medicine at the University of Minnesota

Medical School. We initiated the Department's Innovation Seed Grant Program to support junior faculty with limited research experience to pursue scholarly activity. We reformatted our Medicine Grand Rounds and Education and Scholarly Forums dedicated to addressing health disparities and health equity, and in an effort to keep education and research in the forefront, we developed the Department's Research Scientist Track for Hennepin Healthcare Research Institute researchers to formally collaborate and integrate within the department. We obtained substantial grant and contract funding, we continued to publish articles at a high rate, and all the while worked to acknowledge, recognize and support our front-line healthcare providers, staff, and trainees.

The Faculty section of the Annual Report starting on Page 9, outlines the Department's new physicians and advanced practice providers. I'd like to acknowledge the appointment of Dr. Gautam Shroff as permanent Director of the Cardiology Division, Dr. Mark LeSage as permanent Director of the Clinical Pharmacology Division, Dr. Michael Rhodes as permanent Director of



Arti Prasad, M.D.

Chair and Scott F. Davies
Endowed Chair

Photo by Tracy Walsh



Mark Linzer, M.D.

M. Thomas Stillman
Endowed Chair and
Vice Chair of Education,
Mentorship, and
Scholarship



**Roberta Meyers, M.D.,
M.P.H.**

Vice Chair of Clinical
Affairs



Ronald Schut, M.D.

Vice Chair of Fiscal
Affairs

the Hospital Medicine Division, and Dr. Jason Baker as permanent Director for Infectious Diseases Division. In addition, I'd like to acknowledge Dr. Paul Johnson, General Internal Medicine Division, Dr. Shirlee Xie, Hospital Medicine Division, and Dr. Matthew Young, Hospital Medicine Division for their service as Interim Division Directors. The Faculty section includes the retirement of Dr. Richard Asinger from the Cardiology Division following 45 years at Hennepin, Dr. Jeffrey Rubins from the Geriatric and Palliative Medicine Division after 9 years, and Dr. Margaret Simpson from Infectious Diseases Division after 38 years. We thank them for their long-standing service and contributions and wish them the best in their retirement.

The Department of Medicine is fortunate to have a group of 83 outstanding advanced practice providers providing care in each of our fourteen specialty divisions. These providers, which include seven Leads, continue to be essential to providing ambulatory and inpatient clinical care and are instrumental to our health care teams. Our advanced practice providers are listed on page 33.



Martin J. Stillman, M.D., J.D.

Vice Chair of Department and Faculty Development



Rosemary Quirk, M.D., D.T.M.H.

Vice Chair of GME

Clinical

The effects of the COVID pandemic and civil unrest which began the first half of 2020 had material impacts on service utilization which continued through the remainder of the year. Non emergent ambulatory services were paused late first quarter across many specialties and phased reopening of services did not occur until mid-summer or later. Ambulatory services focused on emergent patient care and viral screening while hospital census increased dramatically.

Overall Department of Medicine campus based provider ambulatory encounter volumes were flat compared to 2019, but it is worth noting that this is due to 18,419 viral screening visits performed by Department of Medicine providers. Without the addition of these new screening visits, campus based providers volumes saw a decrease in “traditional ambulatory services” of 15.0%. Specialty outreach provider encounters in community clinic settings saw an equal decrease in “traditional ambulatory services” of approximately 11.2%, compared to prior year. (Aggregate ambulatory encounters decreased by 2.6% when compared to prior year, as shown in Figure 1.) Inpatient encounters increased by 4.9% (as shown in Figure 1). There was also a material increase in average length of stay (from 3.80 to 5.13 / 35.0%). Total gross billings from the Department decreased by 3.1%, going from \$89,969,340 in 2019 to \$87,221,459 in 2020 (as shown in Figure 2). This decrease is driven predominantly by the effects of the COVID pandemic and civil unrest on ambulatory based services paused, partially offset by the increase in hospital census and services. In addition, actual aggregate collections saw a decline of almost 3 percentage points / 8.1% when compared to prior year.

In 2020, 82% of the Department’s cash revenues came from clinical activities, 10% from service contracts, and

FIG. 1. Provider-Patient Encounters

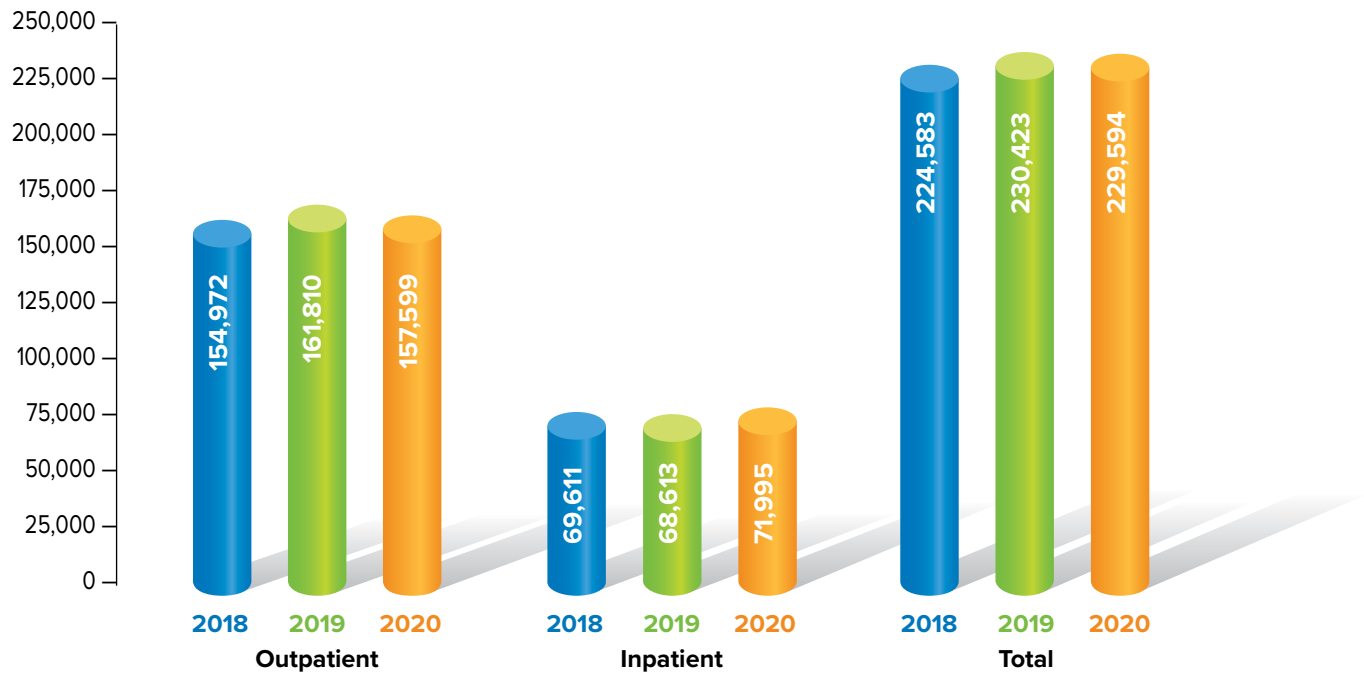


FIG. 2. Trends in Key Funding Sources

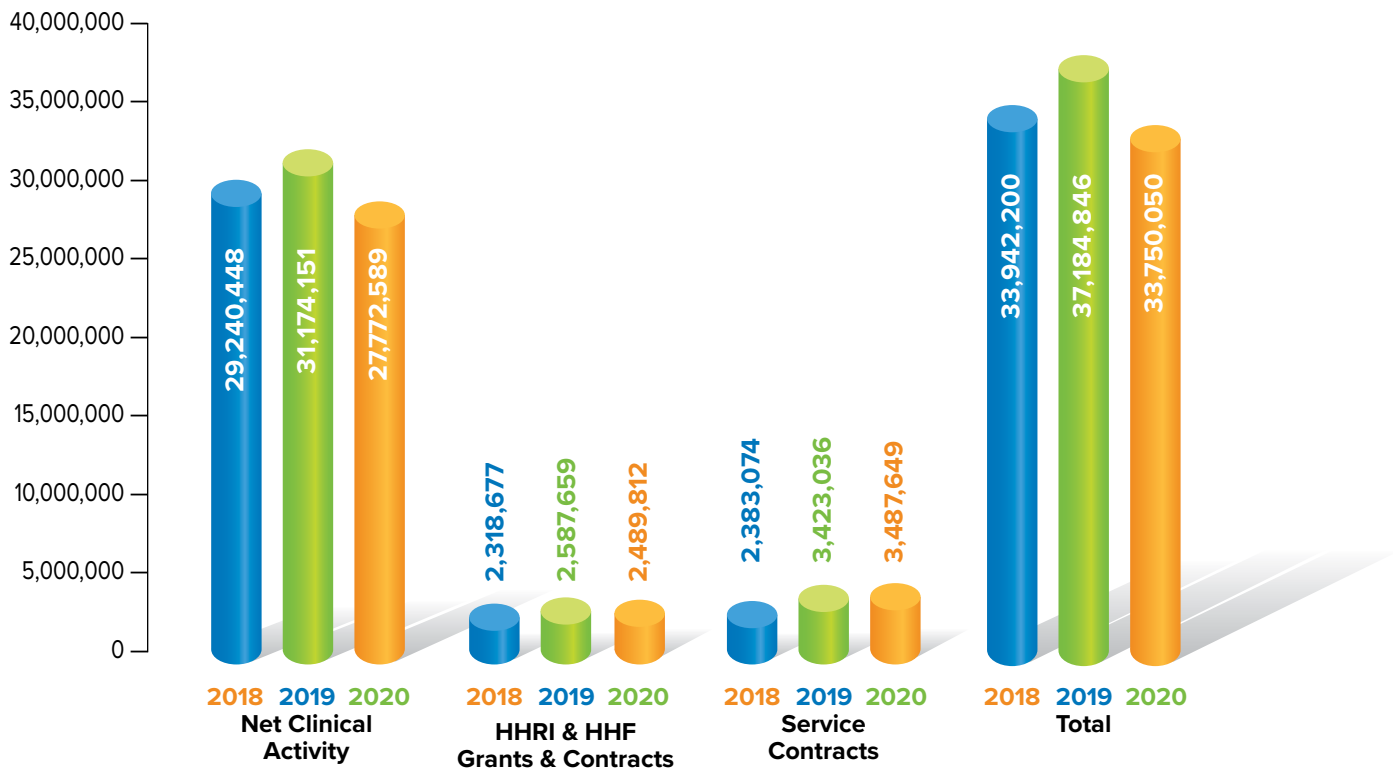
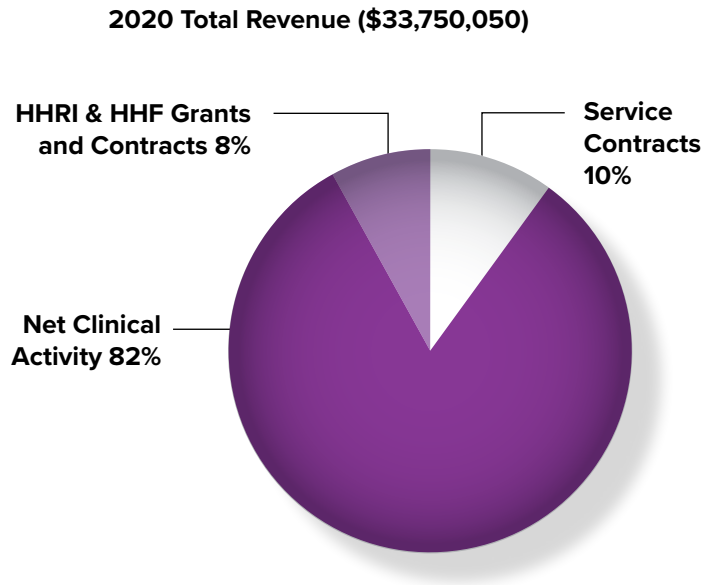


FIG. 3 Funding Profile



8% from research grants and contracts (as shown in Figure 3). Research grant and contract revenue has been restated from prior years to include revenue transferred into the department to support clinician costs. Total costs awarded for Department of Medicine Research Grants and Contracts was \$29,548,118, which is a 17.1% decrease over prior year, primarily due to material decreases in governmental and industry funded awards in Infectious Disease and Nephrology, partially offset by an increase in governmental funded awards in Addiction Medicine.

The Department's peer-reviewed publications were at record number at 239 and 5 book chapters. The Research and Scholarship section listing the publications begins on page 43 of this report.

Under the directorship of Dr. Rosemary Quirk, the Medical Education Program remained strong during the pandemic and civil unrest in 2020. Our residency and fellowship programs continue to be in high demand. For details of 2020, please refer to the program update and summary starting on page 63.

2020 was not a typical year but one that will be remembered for its "disruptive innovation." I trust that you will find this annual report reflective, interesting and one that demonstrates a department that is strong, committed, and resilient to our mission of clinical care, education and research even during a pandemic.

Arti Prasad, M.D., F.A.C.P.

Department Chair and Scott F. Davies Endowed Chair
Department of Medicine
Hennepin Healthcare System
Professor and Vice Chair of Medicine
University of Minnesota Medical School

Department of Medicine

ADMINISTRATIVE OFFICERS

Chair

Arti Prasad, M.D.

Vice Chair of Clinical Affairs

Roberta M. Meyers, M.D., M.P.H.

Vice Chair of Department and Faculty Affairs

Martin J. Stillman, M.D., J.D.

Vice Chair of Education, Mentorship, and Scholarship

Mark Linzer, M.D.

Vice Chair of Fiscal Affairs

Ronald L. Schut, M.D.

Vice Chair of Graduate Medical Education

Rosemary A. Quirk, M.D., D.T.M.H.

Administrative Operations Manager

Belinda J. Rogers

Practice Managers

Chad W. Hood

Jill E. Kennedy

Director of Graduate Medical Education

Rosemary A. Quirk, M.D., D.T.M.H.

Director of Undergraduate Medical Education

Samuel T. Ives, M.D.

Associate Program Director

Michael J. Lawson, M.D.

Associate Program Director

Rawad Nasr, M.D.

Associate Program Director

Brian Yablon, M.D.

Faculty Development for Medical Education Director

Anne L. Becker, M.D.

Director of Performance Improvement

Daniel G. Hoody, M.D.

DIVISION DIRECTORS

Addiction Medicine

Gavin B. Bart, M.D., Ph.D.

Cardiology

Gautam R. Shroff, M.D.

Clinical Pharmacology

Mark G. LeSage, Ph.D.

Endocrinology, Metabolism, and Diabetes

Lisa H. Fish, M.D.

Gastroenterology

Robert J. Matlock, M.D.

General Internal Medicine (Interim)

Paul E. Johnson, M.D.

Geriatric and Palliative Medicine

Thomas J. Klemond, M.D.

Hematology and Medical Oncology

Douglas J. Rausch, M.D.

Hospital Medicine

Michael T. Rhodes, M.D.

Infectious Diseases

Jason V. Baker, M.D., M.S.

Integrative Health and Wellness

Richard Printon, D.C.

Nephrology

Kirsten L. Johansen, M.D.

Pulmonary, Allergy and Critical Care

Mark D. Sprenkle, M.D.

Rheumatology

Rawad Nasr, M.D.



Faculty

Incident Command

It was January 23, 2020 and Incident Command was pulled together to discuss what was going on in Wuhan, China. It was initially a smaller group with the Infection Prevention and Emergency Preparedness teams, amongst others. It was still unclear whether or not this was going to be something that we had to be concerned about, but a global pandemic was looking to be more and more likely. We knew that what was making people ill looked like a respiratory virus but didn't know much yet about exactly how it spread and how contagious it would be.

On January 24, 2020, I sent out a communication to the medical staff with an up-to-date guide for providers about the virus and what to do if they suspected a case. A week later, I boarded a plane to Mexico for my annual escape from the winter cold and some R&R. I felt guilty to be leaving for a week with everything going on, but in hindsight I am so glad I did as upon return I was immersed in Incident Command managing the pandemic and have been doing COVID-19 work since.

As Medical Director of both Infection Prevention and Employee Occupational Health and Wellness, I felt this immense internal duty and responsibility to protect both our patients and our staff. I was working around the clock and began reading everything possible in the news and updates from the CDC to always stay one step ahead. Suddenly, I was doing television and news interviews, as well as radio shows with local experts to educate the public and share information. Incident Command rapidly expanded for fast action

and coordinated decision making to include nearly every department in the hospital. I received the title of 'Medical-Technical Specialist' and I became the go-to person for "all things pandemic." The work included guideline and policy writing, operational planning, assisting in developing a Viral Screening Clinic, making decisions about Personal Protective Equipment (PPE) and employee quarantine and travel, collaborating with the laboratory on testing, assisting informatics to build technical tools, answering clinical questions, and more.

While all of that was hard work, one of the most difficult jobs was hearing the frequent anxiety and fear from my colleagues and patients and wanting to ease people's minds while still being straightforward about everything we didn't know in a fast-paced ever-changing landscape.

In hindsight, I realize I somehow had an immense amount of authority that I didn't really know if I was positioned to have, but in a crisis, I think we all just



Caitlin Eccles-Radtke, M.D., Infectious Diseases Division

focus and try to do what is right and worry about the details later. Thankfully, I have a team of incredible and dedicated partners in the Infectious Disease Division who took over my clinic patients and my hospital call weeks for a few months so I could focus all my efforts on the pandemic.

Over the next number of months, we rode the emotional waves which coincided with the viral pandemic waves, as well as tried to make sense of the killing of George Floyd and the violence and trauma to our communities that ensued. These events amplified the pandemic of racism, violence, and the health disparities that exist in minority groups. Our dedicated and incredible staff at Hennepin Healthcare has worked to bridge these gaps with partnerships in the community.

2020 has been both exhilarating and exhausting at the same time, but my ongoing motivation has always been to ensure the safety and wellbeing of my colleagues and our underserved patients. I felt that if we could walk out on the other side of the pandemic and say we didn't lose any of our colleagues, it would be worth every ounce of lost sleep, tears, stress, and hard work. Hennepin Healthcare has been at the forefront in managing the pandemic since the start and I can't begin to say how proud I am to work at an organization that has weathered this global pandemic and cared for our underserved patient population with class, grace, grit, and heart.

Caitlin Eccles-Radtke, M.D.
Infectious Diseases Division

Clinic and Specialty Center

Monday, March 16, 2020. We all have days that will forever be imprinted on our lives, and I am sure this will be one of mine (plus, it's just more pleasant to recall than Friday the 13th, our first day-long, full court press of planning the clinic). March 16th is the day we opened Hennepin Healthcare's Downtown Viral Screening Clinic. The Viral Screening Clinic (VSC) created a space to safely care for patients coming downtown with symptoms of or exposure to COVID-19 while still being able to continue safe care for everyone else across the main campus too.

I am a primary care doctor and general internist with a strong public health perspective, and I just happened to also be the Medical Director of Hennepin Healthcare's Clinic and Specialty Center (CSC) Internal Medicine Clinic when the COVID-19 pandemic took hold. Working with Infection Prevention, it first seemed that maybe a separated waiting area and partnership with the Internal Medicine Clinic team would be our course for providing care to symptomatic or exposed patients. In short order, however, it became clear that we would need something bigger (ultimately, much bigger). Megan Jorgenson, my leadership dyad as the Practice Manager for Internal Medicine Clinic, and I worked with a team of leaders who represented every part of Hennepin Healthcare on the front lines and behind the scenes. In a matter of days, we designed, put together, and opened the Viral Screening Clinic to fit into the old same-day surgery space that had been unused and empty for the preceding two years.

Day 1 was our first foray into rapid-scale changes with demand quickly exceeding our anticipation, calling on colleagues and friends to help get everyone seen and plan for Day 2. Little did I know, at the end of that 16-hour day, that 73 patients would be a fraction of what we would come to expect and be able to manage while still having a pretty good day! As Minneapolis continued to reel from the impacts of COVID-19 as well as the trauma and distress following the murder of George Floyd, the VSC team rallied for one another and for our community.

The team saw as many as 260 patients on our busiest summer days with visits spilling into the Blue Building courtyard. Rapid-scale changes and "pivoting" became our default as we designed and re-designed workflows, spaces, and teams through the end 2020 (and beyond).



Left to right: Megan Jorganson and A. Katherine Hust, M.D., M.P.H., General Internal Medicine Division

We managed days when the line of patients snaked all the way down the block. We passed out masks and advice and work notes. We gave medications and food bags, arranged rides and isolation hotel stays. We tried to keep people out of the hospital but sometimes had to send them in. We built a “clinic within a clinic” first to do monoclonal antibody infusions and then to kick off COVID-19 vaccinations. We smiled (actually we beamed!) through masks at patients who were still smiling after a two-hour wait. We laughed because something was funny and sometimes just because we were tired. We exchanged gratitude for patience and grace, for listening and caring, and for just being there.

In some ways, with the pandemic ongoing, it’s hard to fully reflect on all of the moving pieces, mixed emotions, and other ups-and-downs of 2020. The ultimate “we did it” celebrations are still somewhere

in the future. What I do know now, though, is that while I would never wish for the tragedy the pandemic has been, I’m so thankful for the experience of working with the incredible team that did and supported the work of the VSC and COVID-19 care at Hennepin Healthcare.

A. Katherine Hust, M.D., M.P.H.

General Internal Medicine Division

Faculty 2020

Office of the Chair

Mark Linzer, M.D. *Professor*
Roberta M. Meyers, M.D., M.P.H. *Assistant Professor*
Arti Prasad, M.D. *Professor*
Rosemary A. Quirk, M.D., D.T.M.H. *Assistant Professor*
Ronald L. Schut, M.D. *Assistant Professor*
Martin J. Stillman, M.D., J.D. *Associate Professor*

Addiction Medicine

Gavin B. Bart, M.D., Ph.D. *Professor*
Brian J. H. Grahan, M.D., Ph.D. *Assistant Professor*
Kathleen Heaney, M.D. *Assistant Professor*
JoAn R. Laes, M.D. *Assistant Professor*
Charles P. Reznikoff, M.D. *Associate Professor*

Cardiology

Richard W. Asinger, M.D. *Professor**
Woubeshet Ayenew, M.D. *Assistant Professor*
Fouad A. Bachour, M.D. *Assistant Professor*
Michelle D. Carlson, M.D. *Assistant Professor*
David G. Fine, M.D. *Assistant Professor*
Steven R. Goldsmith, M.D. *Professor*
Charles A. Herzog, M.D. *Professor*
Omer J. Iqbal, M.D. *Assistant Professor*
Rehan M. Karim, M.D. *Assistant Professor*
Louis P. Kohl, M.D. *Assistant Professor*
Appesh N. Mohandas, M.D. *Assistant Professor*
Gautam R. Shroff, M.D. *Associate Professor*
Mengistu A. Simegn, M.D. *Assistant Professor*

Clinical Pharmacology

Andrew M. Busch, Ph.D., L.P. *Associate Professor*
Andrew C. Harris, Ph.D. *Associate Professor*
Sandra Japuntich, Ph.D., L.P. *Associate Professor*
Mark G. LeSage, Ph.D. *Professor*
Paul R. Pentel, M.D. *Professor*

Endocrinology, Metabolism, and Diabetes

Sarah Bou Malham, M.D. *Assistant Professor*
Allison J. Estrada, M.D. *Assistant Professor*
Lisa H. Fish, M.D. *Assistant Professor*
Sarah E. Kempainen, M.D. *Assistant Professor*
Laura T. LaFave, M.D. *Assistant Professor*

Gastroenterology

Aaron F. Brosam, M.D. *Assistant Professor*
Khalil Farah, M.D. *Assistant Professor*
Hernando Gonzalez, M.D. *Assistant Professor*
Ahmad H. Malli, M.D. *Assistant Professor*
Robert J. Matlock, M.D. *Assistant Professor*
Maria E. Moscandrew, M.D. *Assistant Professor*
Craig J. Peine, M.D. *Associate Professor**

General Internal Medicine

Teresa I. Barrera-Anderson, M.D. *Assistant Professor*
Heather W. Baxter, M.D. *Assistant Professor*
Sara Champlin, M.D. *Assistant Professor*
Ellen M. Coffey, M.D. *Assistant Professor*
Carmen N. Divertie, M.D. *Assistant Professor*
Mary E. Erickson, M.D. *Assistant Professor*
Isha A. Galloway-Gilliam, M.D. *Assistant Professor*
Elizabeth C. Goelz, M.D. *Assistant Professor*
Haeshik S. Gorr, M.D. *Assistant Professor*
A. Katherine Hust, M.D., M.P.H. *Assistant Professor*
Samuel T. Ives, M.D. *Assistant Professor*
Paul E. Johnson, M.D. *Assistant Professor*
Spencer Kinzie, M.D. *Assistant Professor*
Joshua Lackner, M.D. *Assistant Professor*
Kacia M. Lee, M.D. *Assistant Professor*
Hannah S. Lichtsinn, M.D. *Assistant Professor*
Mark Linzer, M.D. *Professor*
Wendy Miller, M.D. *Assistant Professor**
Manji Osifeso, M.D. *Assistant Professor*
Deepti Pandita, M.D. *Assistant Professor*
Maarya Pasha, M.D. *Assistant Professor*
Anne G. Pereira, M.D., M.P.H. *Associate Professor**
Douglas J. Pryce, M.D. *Associate Professor*

Faculty 2020

General Internal Medicine (Cont.)

Danielle C. Robertshaw, M.D. *Assistant Professor*
Aaron D. Rutzick, M.D. *Assistant Professor*
Suzanne H. Schermerhorn, M.D. *Assistant Professor**
Carla M. Schultz, M.D. *Assistant Professor*
Rachel Sandler Silva, M.D., M.P.H. *Assistant Professor*
Katherine G. Shafto, M.D. *Assistant Professor*
William Sinnett, M.D. *Assistant Professor*
Martin J. Stillman, M.D., J.D. *Associate Professor*
Haylee Veazey, M.D. *Assistant Professor*
Katherine D. Vickery, M.D., M.Sc. *Assistant Professor*
Meghan M. Walsh, M.D., M.P.H. *Associate Professor*
Isaac Weeks, M.D. *Assistant Professor*
Erica J. Weiss, M.D. *Assistant Professor*
Allison S. Wert, M.D. *Assistant Professor*
Tyler NA Winkelman, M.D., M.Sc. *Assistant Professor*

Geriatric and Palliative Medicine

Mariam Anwar, M.D. *Assistant Professor*
Ryan Jozwiak, M.D. *Assistant Professor*
Lawrence J. Kerzner, M.D. *Assistant Professor*
Thomas J. Klemond, M.D. *Assistant Professor*
Samuel Maiser, M.D. *Assistant Professor*
Martha L. McCusker, M.D. *Assistant Professor*
Roberta M. Meyers, M.D., M.P.H. *Assistant Professor*
Anne M. Murray, M.D., M.Sc. *Professor*
Jeffrey B. Rubins, M.D. *Professor**
Kerry M. Sheets, M.D. *Assistant Professor*
Ruth Szajner, M.D. *No appointment**

Hematology and Medical Oncology

Satya V. Bommakanti, M.D. *Assistant Professor*
Nicole Jacobi, M.D. *Assistant Professor*
Rachel Koreth, M.D. *Assistant Professor*
Richard J. Lee, M.D. *Assistant Professor*
Vicki A. Morrison, M.D. *Professor*
Daniel F. Pease, M.D. *Assistant Professor*
Natarajan V. Raman, M.B.B.S., M.D. *Assistant Professor*
Douglas J. Rausch, M.D. *Assistant Professor*
Karim R. Saab, M.D. *Assistant Professor*

Hospital Medicine

William S. Allen, M.D. *Assistant Professor*
Anne L. Becker, M.D. *Assistant Professor*
Anushree Bora, M.D. *Assistant Professor*
Nicholas S. Briese, M.D. *Assistant Professor**
Max Fraden, M.D. *Assistant Professor*
Selome G. Gezahegn, M.D. *Assistant Professor (pending)*
Brita M. Hansen, M.D. *Assistant Professor*
Eric J. Hazen, M.D. *Assistant Professor*
David R. Hilden, M.D., M.P.H. *Associate Professor*
Awil W. Hirsi, M.D. *Assistant Professor*
Daniel G. Hoody, M.D. *Assistant Professor*
Ann Isaksen, M.D. *Assistant Professor*
Matthew Kalina, M.D. *Assistant Professor*
Matthew D. Klein, M.D. *Assistant Professor*
Adam G. Kolb, M.D. *Assistant Professor*
Michael J. Lawson, M.D. *Assistant Professor*
Matthew S. Lehnert, M.D. *Assistant Professor*
Melanie W. Lo, M.D. *Assistant Professor*
Kayla Lundeen, D.O. *Assistant Professor*
Abdirahman Madar, M.D. *Assistant Professor*
David Melling, M.D. *Assistant Professor*
Robert K. Mittet, M.D. *Assistant Professor*
Elizabeth M. Moorhead, M.D. *Assistant Professor**
Bishara A. Nassir, M.D. *Assistant Professor*
Patrick O'Connor, M.D. *Assistant Professor*
Vignesh Williams Palaniappan, M.D. *Assistant Professor*
Justine M. Pidcock, M.D. *Assistant Professor*
Rosemary A. Quirk, M.D., D.T.M.H. *Assistant Professor*
Michael T. Rhodes, M.D. *Assistant Professor*
Steven Richmond, D.O. *Assistant Professor*
Aaron D. Rutzick, M.D. *Assistant Professor*
Christine Schwab, M.D. *Assistant Professor*
Wendy A. Stansbury-O'Donnell, M.D. *Assistant Professor*
David B. Van Schyndel, M.D. *Assistant Professor*
Aman Verma, D.O. *Assistant Professor**
Shirlee X. Xie, M.D. *Assistant Professor*
Brian Yablon, M.D. *Assistant Professor*
Matthew Young, M.D. *Assistant Professor*
Maja Zioncheck, M.D. *Assistant Professor*

* Left Division in 2020.

Faculty 2020

Infectious Diseases

Jason V. Baker, M.D., M.S. *Associate Professor*
Jessica L. Boettcher, D.O. *Assistant Professor*
Caitlin Eccles-Radtke, M.D. *Assistant Professor*
Anne E.P. Frosch, M.D., M.P.H. *Assistant Professor*
W. Keith Henry, M.D. *Professor and Clinical Assistant Professor, School of Public Health*
R. Bryan Rock, M.D. *Associate Professor*
Ronald L. Schut, M.D. *Assistant Professor*
Kay E. Schwebke, M.D., M.P.H. *Assistant Professor**
Megan K. Shaughnessy, M.D. *Assistant Professor*
Margaret L. Simpson, M.D. *Assistant Professor**
Nicholas S. Vogenthaler, M.D. *Assistant Professor*
Rebecca J. Zadroga, M.D. *Assistant Professor*

Nephrology

David C. Dahl, M.D. *Assistant Professor*
Keith E. Eidman, D.O. *Assistant Professor*
David T. Gilbertson, Ph.D. *Associate Professor*
Allyson Hart, M.D., M.S. *Assistant Professor*
Danielle G. Haselby, D.O. *Assistant Professor*
Ajay K. Israni, M.D., M.S. *Professor*
Kirsten L. Johansen, M.D. *Professor*
Bertram L. Kasiske, M.D. *Professor*
Saugar Maripuri, M.D., M.P.H. *Assistant Professor*
Eileen A. O'Shaughnessy, M.D. *Assistant Professor*
Meena Sahadevan, M.D. *Assistant Professor*
John R. Silkensen, M.D. *Assistant Professor*
Connie Wang, M.D. *Associate Professor*
Jeffrey H. Wang, M.D. *Assistant Professor*
James B. Wetmore, M.D., M.S. *Professor*
Jennifer F. Wu, D.O. *Assistant Professor*

Pulmonary, Allergy and Critical Care

Scott F. Davies, M.D. *Professor*
Kenneth W. Dodd, M.D. *Assistant Professor*
Joshua M. Dorn, M.D. *Assistant Professor*
Heidi L. Erickson, M.D. *Assistant Professor*
Robert Kempainen, M.D. *Associate Professor*

James W. Leatherman, M.D. *Professor*
Michele M. LeClaire, M.D. *Assistant Professor*
William A. Marinelli, M.D. *Associate Professor*
Matthew E. Prekker, M.D., M.P.H. *Associate Professor*
Robert S. Shapiro, M.D. *Assistant Professor*
Mark D. Sprenkle, M.D. *Assistant Professor*
John B. Sweet, M.D. *Assistant Professor*

Rheumatology

Ronald R. Molony, M.D. *Assistant Professor*
Rawad Nasr, M.D. *Assistant Professor*
Linh Ngo, D.O. *Assistant Professor*
Peter A. Schlesinger, M.D. *Assistant Professor*
Zaki Abou Zahr, M.D. *Assistant Professor*

Medical Education Program

Anne L. Becker, M.D. *Assistant Professor*
Hospital Medicine
Samuel T. Ives, M.D. *Assistant Professor*
General Internal Medicine
Michael J. Lawson, M.D. *Assistant Professor*
Hospital Medicine
Rawad Nasr, M.D. *Assistant Professor*
Rheumatology
Rosemary A. Quirk, M.D., D.T.M.H. *Assistant Professor*
Hospital Medicine
Brian Yablon, M.D. *Assistant Professor*
Hospital Medicine

Medicine Chief Residents (2019-2020)

Melissa Eelkema, M.D. *Instructor**
Benjamin A. Sudolcan, M.D. *Instructor**
Jessalyn A. Weaver, M.D. *Instructor**

Medicine Chief Residents (2020-2021)

Jeffrey Larson, M.D. *Instructor*
Joseph Steffens, M.D. *Instructor*
Kathleen Wilcox, M.D. *Instructor*

FACULTY TRANSITIONS 2020

DIVISION	NAME	FORMER ACADEMIC POSITION	CURRENT POSITION <i>Departure Date</i>
Cardiology	Richard W. Asinger, M.D.	Professor	Retirement <i>November 2020</i>
Gastroenterology	Craig J. Peine, M.D.	Associate Professor	Hennepin Healthcare Institutional Review Board <i>May 2020</i>
General Internal Medicine	Wendy Miller, M.D.	Assistant Professor	Fellow, General Internal Medicine Veterans Administration Medical Center Minneapolis, Minnesota <i>August 2020</i>
	Anne G. Pereira, M.D., M.P.H.	Associate Professor	Fellow, Hospice and Palliative Medicine University of Minnesota Minneapolis, Minnesota <i>May 2020</i>
	Suzanne H. Schermerhorn, M.D.	Assistant Professor	In transition <i>July 2020</i>
Geriatric and Palliative Medicine	Jeffrey B. Rubins, M.D.	Professor	Retirement <i>March 2020</i>
	Ruth Szajner, M.D.	N/A	In transition <i>July 2020</i>
Hospital Medicine	Nicholas S. Briese, M.D.	Assistant Professor	On Leave <i>January 2020</i>
	Elizabeth M. Moorhead, M.D.	Assistant Professor	Internist Veterans Administration Medical Center Minneapolis, Minnesota <i>October 2020</i>
	Aman Verma, D.O.	Assistant Professor	Hospitalist Mayo Clinic and Hospital Phoenix, Arizona <i>October 2020</i>
Infectious Diseases	Kay E. Schwebke, M.D.	Assistant Professor	Medical Director, Optum Eden Prairie, Minnesota <i>September 2020</i>
	Margaret L. Simpson, M.D.	Assistant Professor	Retirement <i>March 2020</i>

Continued next page

FACULTY TRANSITIONS 2020 (CONT.)

DIVISION	NAME	FORMER ACADEMIC POSITION	CURRENT POSITION <i>Departure Date</i>
Medical Education Program	Melissa Eelkema, M.D.	Instructor	Internist Alameda Health System Oakland, California <i>June 2020</i>
Medicine Chief Residents	Benjamin A. Sudolcan, M.D.	Instructor	Fellow, Pulmonary–Critical Care University of South Florida Morsani College of Medicine Tampa, Florida <i>June 2020</i>
	Jessalyn A. Weaver, M.D.	Instructor	Internist Fairview Southdale Hospital Minneapolis, Minnesota <i>June 2020</i>

NEW FACULTY 2020

DIVISION	NAME	FORMER POSITION	CURRENT ACADEMIC POSITION <i>Hire Date</i>
Cardiology	Appesh N. Mohandas, M.D.	Cardiovascular Diseases Fellow Emory University Atlanta, Georgia	Assistant Professor <i>August 2020</i>
General Internal Medicine	Hannah S. Lichtsinn, M.D.	Medical Director Camp Butwin Medicine Eagan, Minnesota; Children's Hospital and Clinics Division of Hematology and Oncology Minneapolis, Minnesota	Assistant Professor <i>November 2020</i>
	Maarya Pasha, M.D.	Fellow, General Internal Medicine/ Quality Improvement Track The Mayo Clinic Rochester, Minnesota	Assistant Professor <i>September 2020</i>
Geriatric and Palliative Medicine	Ryan Jozwiak, M.D.	Hospice and Palliative Medicine Fellow Medical College of Wisconsin Milwaukee, Wisconsin	Assistant Professor <i>August 2020</i>
	Kerry M. Sheets, M.D.	Advanced Fellowship in Clinical and Health Services Research, Center for Care Delivery and Outcomes Research Minneapolis Veterans Medical Center Minneapolis, Minnesota	Assistant Professor <i>November 2020</i>
Hospital Medicine	Matthew Kalina, M.D.	Internal Medicine Resident Hennepin Healthcare Minneapolis, Minnesota	Assistant Professor <i>August 2020</i>
	Kayla Lundeen, D.O.	Internal Medicine Resident Hennepin Healthcare Minneapolis, Minnesota	Assistant Professor <i>October 2020</i>
	Patrick O'Connor, M.D.	Internal Medicine Resident Hennepin Healthcare Minneapolis, Minnesota	Assistant Professor <i>September 2020</i>
	Vignesh W. Palaniappan, M.D.	Internal Medicine Resident University of Minnesota Minneapolis, Minnesota	Assistant Professor <i>September 2020</i>
	Michael T. Rhodes, M.D.	Lead Hospitalist, General Internal Medicine Division University of Minnesota Minneapolis, Minnesota	Assistant Professor <i>February 2020</i>

Continued next page

NEW FACULTY 2020 (CONT.)

DIVISION	NAME	FORMER POSITION	CURRENT ACADEMIC POSITION <i>Hire Date</i>
Pulmonary, Allergy and Critical Care	Kenneth W. Dodd, M.D.	Intensivist and Director of Research, Emergency Medicine Advocate for Christ Medical Center Chicago, Illinois	Assistant Professor <i>November 2020</i>
	Joshua M. Dorn, M.D.	Allergist/Immunologist Midwest Allergy and Asthma St. Paul, Minnesota	Assistant Professor <i>September 2020</i>
Medical Education Program: Medicine Chief Residents	Jeffrey J. Larson, M.D.	Internal Medicine Resident Hennepin Healthcare Minneapolis, Minnesota	Instructor <i>July 2020</i>
	Joseph D. Steffens, M.D.	Internal Medicine Resident Hennepin Healthcare Minneapolis, Minnesota	Instructor <i>July 2020</i>
	Kathleen A. Wilcox, M.D.	Internal Medicine Resident Hennepin Healthcare Minneapolis, Minnesota	Instructor <i>July 2020</i>

2020 Honors and Recognition of Faculty

OFFICE OF THE CHAIR

Arti Prasad, M.D.

Department Chair

Advisory Committee, FORESIGHT, The Rippel Foundation

Board of Directors, Pathways

Consortium of Academic Health Centers for Integrative Medicine:

- Clinical Working Work Member
- Steering Committee

Founding Board of Directors, American Board of Integrative Medicine

Nomination Committee, Association of Chiefs and Leaders in General Internal Medicine

Mark Linzer, M.D., M.A.C.P.

Vice Chair of Education, Mentorship, and Scholarship

100 Most Influential Health Care Leaders, *Minnesota Physician*

Wellness Infrastructure Committee, American College of Physicians

Best Doctors of America

Robert J. Glaser Award, Society of General Internal Medicine

Roberta M. Meyers, M.D. M.P.H.

Vice Chair of Clinical Affairs

Agency for Healthcare Research and Quality, ECHO National Nursing Home COVID-19 Action Network, Project Lead for the Hennepin Healthcare System Training Center

Minnesota Association of Geriatrics Inspired Clinicians:

- Board of Directors
- Editor, *TOPICS e-newsletter*
- Immediate Past President

Minnesota Gerontological Society:

- Board of Directors
- Education Committee
- President-Elect

Best Doctors of America

Medical Staff Honors Award, Outstanding Achievement in Community Engagement, Hennepin Healthcare

Top Doctors Award, *Minnesota Monthly Magazine*

Rosemary Quirk, M.D.

Vice Chair of Graduate Medical Education

Medical Staff Honors Award, Outstanding Achievement in Academics, Hennepin Healthcare

Ronald L. Schut, M.D.

Vice Chair of Fiscal Affairs

Top Doctors Award, *Minnesota Monthly Magazine*

Top Doctors Award, *Mpls.St.Paul Magazine*

Martin J. Stillman, M.D., J.D.

Vice Chair of Department and Faculty Affairs

Advisory Board, Health Law Institute, Hamline University School of Law

Advisory Committee, *Minnesota Medicine*

Council Member, American Arbitration Association, Health Care Dispute Resolution Advisory Council

Minnesota COVID-19 Ethics Collaborative Committee, Minnesota Department of Health, State Health Care Coordination Center, Minnesota Hospital Association, and the University of Minnesota

Best Doctors of America

ADDICTION MEDICINE

Gavin B. Bart, M.D., Ph.D.

Advisory Board, US Substance Abuse and Mental Health Services Administration, South East Asia HIV Addiction Technology Transfer Center

National Institute on Drug Abuse, Center for the Clinical Trials Network:

- Research Development Committee
- Review Committee, Development of Medications to Prevent and Treat Opioid Use Disorders and Overdose Vice Chair, Steering Committee

Region VI Director, American Society of Addiction Medicine

Scientific Advisory Board, DRIVE (Drug use and blood-borne infections in Vietnam)

Top Doctors Award, *Minnesota Monthly Magazine*

Associate Editor, *Addiction Science and Clinical Practice*

2020 Honors and Recognition of Faculty

ADDICTION MEDICINE (CONT.)

Brian J. H. Grahan, M.D., Ph.D.

Medication Assisted Treatment Work Group, Institute for Clinical Systems Improvement

Top Doctors Award, *Minnesota Monthly Magazine*

Top Doctors: Rising Star, *Mpls.St.Paul Magazine*

JoAn R. Laes, M.D.

American College of Medical Toxicology:

- Annual Scientific Meeting Organizing Committee
- Co-Chair, Addiction Medicine Committee
- Education Committee
- Leader, Practice Management Sub-section, Practice Development Specialty Interest Section

American Society of Addiction Medicine:

- Chair, Medical Toxicology Workgroup
- President, Minnesota Chapter

Top Doctors Award, *Minnesota Monthly Magazine*

Top Doctors: Rising Star, *Mpls.St.Paul Magazine*

Charles P. Reznikoff, M.D.

American College of Physicians:

- Council
- Pain Management Advisory Committee
- Quality Improvement Champion, Inpatient Opioid Prescribing
- Scientific Planning Committee

Governor's Task Force for Medical Cannabis

Medical Advisory Committee, Steven Rummler Memorial Foundation

Minnesota Health Collaborative, Institute for Clinical Systems Improvement:

- Opioid Oversight Working Group Leader
- Representative to the Minnesota Health Collaborative

Minnesota Medical Association:

- Advisory Committee, Minnesota CME Mandate – Best Practices in Prescribing Opioids and Controlled Substances
- Continuing Medical Education Activity Director, Pain Opioids and Addiction Lecture Series
- Continuing Medical Education Mandate Advisory Group

Minnesota Society of Addiction Medicine:

- Co-Chair of the Public Advocacy Committee

Pain Care Task Force, American Medical Association

Best Doctors of America

Top Doctors Award, *Minnesota Monthly Magazine*

CARDIOLOGY

Woubeshet Ayenew, M.D.

Board of Directors, American Heart Association

Founder and Chairman, Ethiopian Community Health Board

Top Doctors Award, *Minnesota Monthly Magazine*

Top Doctors Award, *Mpls.St.Paul Magazine*

Michelle D. Carlson, M.D.

Distinguished Teacher Award, Fellowship Training Program in Cardiovascular Fellows, Hennepin Healthcare/Abbott Northwestern Hospital

Best Staff Teacher Award, Department of Medicine, Hennepin Healthcare

Top Doctors Award, *Minnesota Monthly Magazine*

Top Doctors: Rising Star, *Mpls.St.Paul Magazine*

Steven R. Goldsmith, M.D.

Director, Minnesota Heart Failure Consortium

Charles A. Herzog, M.D.

Chair, Critical Event Committee, Canadian-Australasian Randomized Trial of Screening Kidney Transplant Candidates for Coronary Artery Disease (CARSK)

Co-Chair, Kidney Health Initiative Workgroup, Understanding and Overcoming the Exclusion of Patients with Kidney Disease from Cardiovascular Trials

Co-Chair, Planning Committee, Kidney Disease: Improving Global Outcomes (KDIGO) Chronic Kidney Disease, Heart, and Vasculature Conference Series

Data Monitoring Committee, A Study in Children With Hyperkalaemia Between Birth and <18 Years of Age to Evaluate Doses of Sodium Zirconium Cyclosilicate (SZC) for Correction of Hyperkalaemia and Effectiveness of Same Dose to Maintain Normokalaemia.

Data Monitoring Committee, The Study of Heart and Kidney Protection with Empagliflozin (EMPA-KIDNEY) Trial

2020 Honors and Recognition of Faculty

CARDIOLOGY (CONT.)

Charles A. Herzog, M.D. (cont.)

Executive Committee, DIALIZE-OUTCOMES Trial (Effect of Sodium Zirconium Cyclosilicate on Arrhythmia-related Cardiovascular Outcomes in Participants on Chronic Hemodialysis With Recurrent Hyperkalemia)

Steering Committee, Canadian-Australasian Randomized Trial of Screening Kidney Transplant Candidates for Coronary Artery Disease (CARSK)

Editorial Board, *American Heart Journal*

Rehan M. Karim, M.D.

Audit Committee, Heart Rhythm Society

Top Doctors Award, *Minnesota Monthly Magazine*

Louis P. Kohl, M.D.

Interventional Cardiology Item Writing Task Force, American Board of Internal Medicine

Top Doctors Award, *Minnesota Monthly Magazine*

Top Doctors: Rising Star, *Mpls.St.Paul Magazine*

Gautam R. Shroff, M.D.

Best Doctors of America

Top Doctors Award, *Minnesota Monthly Magazine*

Mengistu A. Simegn, M.D.

Adjudication Member, Clinical End Point Committee for the CARSK (Canadian-Australian Randomized Trial of Screening Kidney Transplant Candidates for Coronary Artery Disease)

Top Doctors Award, *Minnesota Monthly Magazine*

CLINICAL PHARMACOLOGY

Andrew M. Busch, Ph.D., MSc

Reviewer, Single Site Clinical Trials and Pilot Studies (SSPT), NHLBI Standing Study Section

Society for Behavioral Medicine:

- Chair, Cardiovascular Disease Special Interest Group
- Chair, Topic Area Cardiovascular Disease, Society for Behavioral Medicine Conference

Editorial Board, *Clinical Psychology Review*

Andrew C. Harris, Ph.D.

Special Emphasis Panel ZRG1 IFCN-E (56), Tobacco Regulatory Science: Understanding Tobacco Product Toxicology and Abuse Liability, National Institutes of Health, Food and Drug Administration

Sandra Japuntich, Ph.D.

Lung Cancer Screening Conference Planning Committee, A Breath of Hope Lung Foundation

Lung Mind Alliance, American Lung Association

Mark G. LeSage, Ph.D.

Consultant, Center for Tobacco Products, Food and Drug Administration

Editorial Board, *Journal of the Experimental Analysis of Behavior*

Paul R. Pentel, M.D.

Board of Directors, Association for Non-Smokers

Commercial Tobacco Cessation Advisory Committee, Minnesota Department of Health

ENDOCRINOLOGY, METABOLISM AND DIABETES

Sarah Bou Malham, M.D.

Top Doctors Award, *Minnesota Monthly Magazine*

Top Doctors: Rising Star, *Mpls.St.Paul Magazine*

Lisa H. Fish, M.D.

Executive Committee, International Society of Endocrinology

Top Doctors Award, *Minnesota Monthly Magazine*

Sarah E. Kempainen, M.D.

Advisory Board, YMCA Diabetes Prevention

Laura T. LaFave, M.D.

Top Doctors Award, *Minnesota Monthly Magazine*

2020 Honors and Recognition of Faculty

GASTROENTEROLOGY

Aaron F. Brosan, M.D.

Top Doctors Award, *Minnesota Monthly Magazine*

Khalil Farah, M.D.

Top Doctors Award, *Minnesota Monthly Magazine*

Top Doctors: Rising Star, *Mpls.St.Paul Magazine*

Hernando Gonzalez, M.D.

American Society for Gastrointestinal Endoscopy:

- Chair, Special Interest Group, Latin America
- International Committee
- Vice Chair, Latin America International Committee

Director of Publications, Inter-American Society of Digestive Endoscopy

Robert J. Matlock, M.D.

Top Doctors Award, *Minnesota Monthly Magazine*

Maria E. Moscandrew, M.D.

Top Doctors Award, *Mpls.St.Paul Magazine*

Craig J. Peine, M.D.

Best Doctors of America

GENERAL INTERNAL MEDICINE

Sara Champlin, M.D.

Staff Excellence Award-Clinical Team, Downtown Viral Screening Clinic, Hennepin Healthcare

Ellen M. Coffey, M.D.

Planning Committee, Chronic Kidney Disease Update for Primary Care, National Kidney Foundation, Minnesota Chapter

Professional Advisory Board, Minnesota Visiting Nursing Agency

Distinguished Alumni Award, Department of Medicine, University of Minnesota Medical School

Top Doctors Award, *Minnesota Monthly Magazine*

Top Doctors Award, *Mpls.St.Paul Magazine*

Elizabeth C. Goelz, M.D.

Distinguished Alumni Award, Department of Medicine, University of Minnesota Medical School

Top Doctors Award, *Minnesota Monthly Magazine*

Top Doctors: Rising Star, *Mpls.St.Paul Magazine*

A. Katherine Hust, M.D., M.P.H.

Hennepin Health Clinical Strategy Committee, Hennepin Health Plan

Staff Excellence Award-Clinical Team, Downtown Viral Screening Clinic, Hennepin Healthcare

Samuel T. Ives, M.D.

Staff Excellence Award-Clinical Team, Downtown Viral Screening Clinic, Hennepin Healthcare

Paul E. Johnson, M.D.

Top Doctors Award, *Minnesota Monthly Magazine*

Spencer Kinzie, M.D.

Staff Excellence Award-Clinical Team, Downtown Viral Screening Clinic, Hennepin Healthcare

Kacia M. Lee, M.D.

Staff Excellence Award-Clinical Team, Downtown Viral Screening Clinic, Hennepin Healthcare

Hannah S. Lichtsinn, M.D.

American Academy of Pediatrics:

- Board Member, Minnesota Chapter
- Co-Chair, Health Policy

Chair, Executive Board, Our Stories. Our Health

Co-Founder, Minnesota Immigrant Health Alliance

Leaders in Health Policy Program, Scholar Society of General Internal Medicine

Right 2 Health Action:

- Core Team
- Policy Team

Mark Linzer, M.D., M.A.C.P.

See *Office of the Chair*

2020 Honors and Recognition of Faculty

GENERAL INTERNAL MEDICINE (CONT.)

Deepti Pandita, M.D.

American Medical Informatics Association:

- Board of Directors, Physicians in Informatics
- National Member, Clinical Decision Support Work Group
- Primary Work Group
- Women in Informatics Task Force

Board of Directors, Minnesota Doctors for Health Equity

Chair, Health Information Technology Committee, Minnesota American College of Physicians

Future Vision Work Group, Agency for Healthcare Research and Quality (AHRQ), AHRQ Evidence-Based Care Transformation Support (ACTS)

Inducted into the Fellows of America Medical Informatics Association (FAMIA) Research and Scholarship

National American College of Physicians:

- Digital Health Committee
- Telehealth Committee
- Vice Chair, Medical Informatics Committee

Staff Excellence Award-Clinical Team, Downtown Viral Screening Clinic, Hennepin Healthcare

Anne G. Pereira, M.D., M.P.H.

Alliance for Academic Internal Medicine:

- Association of Program Director USMLE Scenario Planning Work Group
- Chair, Application Inflation Work Group, Medical Student to Resident Interface Committee
- Governance Committee

Councilor, Clerkship Directors in Internal Medicine

Mock Site Visitor, Accreditation Council for Graduate Medical Education International

Policy Council, Minnesota Medical Association

Best Doctors of America

Douglas J. Pryce, M.D.

Chair, Board of Directors, East African Project

Best Doctors of America

Danielle C. Robertshaw, M.D.

National Health Care for the Homeless Council:

- Board of Directors
- Clinicians' Network
- Policy Committee
- Respite Care Provider's Network

Achievement Award in Health Category, National Association of Counties

2020 Innovator Awards, Healthcare Innovation

Aaron D. Rutzick, M.D.

Staff Excellence Award-Clinical Team, Downtown Viral Screening Clinic, Hennepin Healthcare

Top Doctors: Rising Star, *Mpls.St.Paul Magazine*

Carla M. Schultz, M.D.

Staff Excellence Award-Clinical Team, Downtown Viral Screening Clinic, Hennepin Healthcare

Rachel Sandler Silva, M.D., M.P.H.

Community Volunteerism Award, American College of Physicians, Minnesota Chapter

Employee of the Month, Jail Health Services, Hennepin Healthcare

Super Hero of the Year, Jail Health Services, Hennepin Healthcare

Top Doctors: Rising Star, *Mpls.St.Paul Magazine*

Katherine G. Shafto, M.D.

Staff Excellence Award-Clinical Team, Downtown Viral Screening Clinic, Hennepin Healthcare

Martin J. Stillman, M.D., J.D.

See Office of the Chair

Haylee Veazey, M.D.

Staff Excellence Award-Clinical Team, Downtown Viral Screening Clinic, Hennepin Healthcare

Staff Excellence Award, Adult Gender and Sexual Health Clinic Medical Director, Hennepin Healthcare

2020 Honors and Recognition of Faculty

GENERAL INTERNAL MEDICINE (CONT.)

Katherine D. Vickery, M.D., M.Sc.

Co-Director, Homelessness Special Interest Group,
North American Primary Care Research Group

Invited Scholar, Institute for Implementation Science
Scholars (IS-2), Washington University, St. Louis,
Missouri

National Health Care for the Homeless Council:

- Board Member
- Chair, Research Committee

Department of Medicine Research Award, Special
Mention Scholarship, Hennepin Healthcare

Top Doctors: Rising Star, *Mpls.St.Paul Magazine*

Meghan M. Walsh, M.D., M.P.H.

Chair, Board of Directors, Metro Minnesota Council on
Graduate Medical Education

Site Surveyor, Clinical Learning Environment Review,
Accreditation Council for Graduate Medical
Education

Top Doctors Award, *Mpls.St.Paul Magazine*

Isaac Weeks, M.D.

Staff Excellence Award-Clinical Team, Downtown Viral
Screening Clinic, Hennepin Healthcare

Allison S. Wert, M.D.

Staff Excellence Award-Clinical Team, Downtown Viral
Screening Clinic, Hennepin Healthcare

Tyler N.A. Winkelman, M.D., M.Sc.

Advisory Board, Measurement Framework Steering
Committee, Minnesota Department of Health

Board of Directors, Academic Consortium on Criminal
Justice Health

Board of Directors, Twin Cities Medical Society

GERIATRIC AND PALLIATIVE MEDICINE

Mariam Anwar, M.D.

Top Doctors: Rising Star, *Mpls.St.Paul Magazine*

Lawrence J. Kerzner, M.D.

Board of Directors, Minnesota Elder Justice Center
Consultant, State of Minnesota Attorney General's
Office for Criminal Elder Mistreatment

Best Doctors of America

Top Doctors Award, *Minnesota Monthly Magazine*

Thomas J. Klemond, M.D.

Top Doctors Award, *Minnesota Monthly Magazine*

Samuel Maiser, M.D.

Keynote Speaker, HealthPartners Neurology Update
symposium, Park Nicollet Clinic and Specialty Center

Top Doctors Award, *Minnesota Monthly Magazine*

Top Doctors: Rising Star, *Mpls.St.Paul Magazine*

Martha L. McCusker, M.D.

Best Doctors of America

Top Doctors Award, *Minnesota Monthly Magazine*

Roberta M. Meyers, M.D. M.P.H.

See Office of the Chair

Anne M. Murray, M.D., M.Sc.

Review Panel Member, Data Safety and Monitoring
Board NIA FIT- AD

Kerry M. Sheets, M.D.

Education Committee, Minnesota Association of
Geriatrics Inspired Clinicians Annual Conference

HEMATOLOGY AND MEDICAL ONCOLOGY

Satya V. Bommakanti, M.D.

Top Doctors Award, *Minnesota Monthly Magazine*

Rachel Koreth, M.D.

Top Doctors Award, *Minnesota Monthly Magazine*

2020 Honors and Recognition of Faculty

HEMATOLOGY AND MEDICAL ONCOLOGY (CONT.)

Vicki A. Morrison, M.D.

Advisory Committee on Immunization Practices, Herpes Zoster Working Group, Centers for Disease Control

Alliance for Clinical Trials in Oncology:

- Cancer in the Older Adult Committee
- Lymphoma Core Committee

American Society of Clinical Oncology:

- Appropriate Chemotherapy Dosing for Obese Adult Patients with Cancer, Clinical Practice Guideline Update
- Daily News Writing/Podcast Sources Committee
- In-Training Exam Task Force

Executive Council, Immunocompromised Host Society

International Society of Geriatric Oncology:

- Board of Directors
- Chair, Hematology Case Discussion Group
- Chair, Publications Committee
- Membership and National Representative Committee, Midwest Region
- National Representative, Steering Committee, North America

Scientific Committee on Lymphoid Neoplasia, American Society of Hematology

Editorial Board, *Journal of Geriatric Oncology*

Daniel F. Pease, M.D.

Board of Directors, Minnesota Society of Clinical Oncology

Top Doctors Award, *Minnesota Monthly Magazine*

Top Doctors: Rising Star, *Mpls.St.Paul Magazine*

Douglas J. Rausch, M.D.

Best Doctors of America

Top Doctors Award, *Minnesota Monthly Magazine*

Top Doctors Award, *Mpls.St.Paul Magazine*

Karim R. Saab, M.D.

American Society of Clinical Oncology:

- Board of Directors
- Item Writing Committee

HOSPITAL MEDICINE

William S. Allen, M.D.

Top Doctors: Rising Star, *Mpls.St.Paul Magazine*

Anne Becker, M.D.

Recognize You Award for Problem Solver, Hennepin Healthcare

Wellness Champion, Minnesota Chapter of American College of Physicians

David R. Hilden, M.D., M.P.H.

American College of Physicians:

- Health and Public Policy Committee
- Vice Chair

Governor, Minnesota Chapter of the American College of Physicians

Minnesota's 100 Most Influential Health Care Leaders, *Minnesota Physician*

Top Doctors Award, *Minnesota Monthly Magazine*

Top Doctors Award, *Mpls.St.Paul Magazine*

Ann Isaksen, M.D.

Top Doctors: Rising Star, *Mpls.St.Paul Magazine*

Matthew D. Klein, M.D.

Minnesota State:

- Capital Investment
- Health and Human Services Finance and Policy
- Health Services Reform Finance and Policy
- Senator

Adam G. Kolb, M.D.

Top Doctors: Rising Star, *Mpls.St.Paul Magazine*

Michael J. Lawson, M.D.

Top Doctors: Rising Star, *Mpls.St.Paul Magazine*

Melanie W. Lo, M.D.

Clinical Excellence Award, Department of Medicine, Hennepin Healthcare

Top Doctors Award, *Minnesota Monthly Magazine*

Top Doctors: Rising Star, *Mpls.St.Paul Magazine*

2020 Honors and Recognition of Faculty

HOSPITAL MEDICINE (CONT.)

Kayla Lundeen, D.O.

Craig Garrett Excellence in Practice of Primary Care Medicine Award, Hennepin Healthcare

Abdirahman Madar, M.D.

Board of Directors, Horn Development Center

Robert K. Mittet, M.D.

Top Doctors: Rising Star, *Mpls.St.Paul Magazine*

Elizabeth M. Moorhead, M.D.

Top Doctors: Rising Star, *Mpls.St.Paul Magazine*

Rosemary Quirk, M.D.

See Office of the Chair

Steven Richmond, D.O.

Top Doctors: Rising Star, *Mpls.St.Paul Magazine*

Shirlee X. Xie, M.D.

Top Doctors Award, *Minnesota Monthly Magazine*

Top Doctors: Rising Star, *Mpls.St.Paul Magazine*

Brian Yablon, M.D.

Minnesota Steering Committee, Physicians for a National Health Program

Top Doctors: Rising Star, *Mpls.St.Paul Magazine*

Matthew Young, M.D.

Exceptional Affiliate Faculty Teaching Award, University of Minnesota Medical School

Top Doctors: Rising Star, *Mpls.St.Paul Magazine*

Maya Zioncheck, M.D.

Craig Garrett Excellence in Practice of Primary Care Medicine Award, Hennepin Healthcare

INFECTIOUS DISEASES

Jason V. Baker, M.D., M.S., F.I.D.S.A.

Data and Safety Monitoring Board, HIV/Canakinumab Trial: Effect of IL-1 Inhibition on Inflammation and Cardiovascular Risk, funded by United States National Institutes of Health

Letter of Recognition for work on COVID-19 treatment protocols from Dr. Anthony Fauci, Director of the National Institute of Allergy and Infectious Diseases

National Institutes of Health Study Section (invited reviewer), HIV Comorbidities and Clinical Studies Study Section

Protocol Development Team, NIH ACTIV-3 Trial (Accelerating COVID-19 Therapeutic Interventions and Vaccines): A multicenter, adaptive, randomized blinded controlled trial of the safety and efficacy of investigational therapeutics for hospitalized patients with COVID-19

Protocol Team, Strategic Timing of Anti-Retroviral Treatment (START) Trial

Remdesivir Allocation Framework Group, Minnesota COVID Ethics Collaborative (MCEC)

Scientific Steering Committee, ACTIV-3 network (Accelerating COVID-10 Therapeutic Interventions and Vaccines), NIH and Operation Warp Speed (WOS)

Scientific Steering Committee, International Network for Strategic Initiatives in Global HIV Trials

Trial of Adding Maraviroc and/or Metformin for Hepatic Steatosis in HIV-1-infected adults on Combination Antiretroviral Therapy

Trial Steering Committee, MAVMET Trial, A multicenter, 48 Week Randomized Controlled Factorial

United States Department of Health and Human Services Panel on Antiretroviral Guidelines for Adults and Adolescents with HIV

United States National Institutes of Health Panel on Coronavirus Disease 2019 (COVID-19) Treatment Guidelines

Department of Medicine Research Excellence Award, Hennepin Healthcare

Top Doctors Award, *Minnesota Monthly Magazine*

Editorial Panel, *HIV Medicine*

2020 Honors and Recognition of Faculty

INFECTIOUS DISEASES (CONT.)

Jessica L. Boettcher, D.O.

Top Doctors: Rising Star, *Mpls.St.Paul Magazine*

Caitlin Eccles-Radtke, M.D.

Staff Excellence Award, Hennepin Healthcare
Top Doctors Award, *Minnesota Monthly Magazine*
Top Doctors: Rising Star, *Mpls.St.Paul Magazine*

Anne E.P. Frosch, M.D., M.P.H.

National Institute of Allergy and Infectious Diseases,
National Institutes of Health Study Section (invited
reviewer)
Rapid Investigation of Severe Acute Respiratory
Syndrome Coronavirus 2 (SARS-CoV-2) and
Coronavirus Disease 2019 (COVID-19) Study Section

W. Keith Henry, M.D.

Executive Committee, Study to Understand the Natural
History of HIV/AIDS in the Era of Effective Therapy
(SUN Study), Center for Disease Control
Planning Council, Minnesota Ryan White
Editorial Boards:

- *AIDS Clinical Care*
- *Journal of AIDS*

Ronald L. Schut, M.D.

See Office of the Chair

Megan K. Shaughnessy, M.D.

Medical Monitor, National Institute of Allergy and
Infectious Diseases (NIAID), Inpatient Treatment with
anti-Coronavirus Immunoglobulin (ITAC), University
of Minnesota
Top Doctors Award, *Minnesota Monthly Magazine* and
featured on magazine cover
Top Doctors: Rising Star, *Mpls.St.Paul Magazine*

Nicholas S. Vogenthaler, M.D.

Top Doctors Award, *Minnesota Monthly Magazine*

Rebecca J. Zadroga, M.D.

Top Doctors Award, *Minnesota Monthly Magazine*

NEPHROLOGY

Keith E. Eidman, D.O.

Top Doctors Award, *Minnesota Monthly Magazine*
Top Doctors Award, *Mpls.St.Paul Magazine*

David T. Gilbertson, Ph.D.

External Expert Panel for the Chronic Renal
Insufficiency Cohort (CRIC) Studies, National Institute
of Diabetes and Digestive and Kidney Disease,
National Institutes of Health

Allyson Hart, M.D., M.S.

Event Adjudication Committee, Canadian-Australasian
Randomised Trial of Screening Kidney Transplant
Recipients for Coronary Artery Disease (CARSK Trial)
Safety Officer, Data and Safety Monitoring Board:
Mindful Movement for Physical Activity and
Wellbeing in Older Adults: A Community Based
Randomized Hybrid Effectiveness-Implementation
Study
American Journal of Transplantation Award: Clinical
Research, *American Society of Transplantation*
Top Doctors Award, *Minnesota Monthly Magazine*

Danielle G. Haselby, D.O.

Top Doctors: Rising Star, *Mpls.St.Paul Magazine*

Ajay K. Israni, M.D., M.S.

Kidney Precision Medicine Project COVID-19 Data
Safety Monitoring Board, NIDDK, NIH
Scientific Registry of Transplant Recipients:

- Deputy Project Director
- Medical Director

2020 Honors and Recognition of Faculty

NEPHROLOGY

Kirsten L. Johansen, M.D.

Conference Co-Chair, Central and Peripheral Vascular Disease in Chronic Kidney Disease, Dublin, Ireland, Kidney Disease: Improving Global Outcomes

Observational Study Monitoring Board, Study of Physical Resilience and Aging, National Institute of Aging

Steering Committee, Glaxo Smith Kline Anaemia Studies in CKD: Erythropoiesis via a Novel PHI Daprodustat (ASCEND) Study

United States Renal Data System, Director

Associate Editor, *Journal of the American Society of Nephrology*

Editorial Board:

- *American Journal of Kidney Diseases*
- *Clinical Journal of the American Society of Nephrology*
- *Journal of the American Society of Nephrology*
- *Journal of Renal Nutrition*
- *Kidney International*

Theme Editor, Hemodialysis, *Nephrology, Dialysis, Transplantation*

Bertram L. Kasiske, M.D.

Chair, Publications Committee, International Society of Nephrology

Medical Director for Living Donation, Scientific Registry of Transplant Recipients (SRTR), Health Resources and Services Administration.

Methods Committee, Kidney Disease: Improving Global Outcomes (KDIGO)

Outstanding Research Accomplishment Award, Department of Medicine, University of Minnesota Medical School

Saugar Maripuri, M.D., M.P.H.

Bertram Kasiske Nephrology Teaching Award, Nephrology Fellowship, Hennepin Healthcare

Top Doctors Award, *Minnesota Monthly Magazine*

Top Doctors: Rising Star, *Mpls.St.Paul Magazine*

Eileen A. O'Shaughnessy, M.D.

Top Doctors Award, *Minnesota Monthly Magazine*

James B. Wetmore, M.D., M.S.

Event Adjudication Committee, Canadian-Australasian Randomised Trial of Screening Kidney Transplant Recipients for Coronary Artery Disease (CARSK Trial)

United States Renal Data System, Deputy Director

American Journal of Kidney Diseases Reviewer Hall of Fame

Editorial Board, *Clinical Journal of the American Society of Nephrology*

Jennifer F. Wu, D.O.

Top Doctors Award, *Minnesota Monthly Magazine*

PULMONARY, ALLERGY AND CRITICAL CARE

Scott F. Davies, M.D.

Best Doctors of America

Top Doctors Award, *Mpls.St.Paul Magazine*

Kenneth W. Dodd, M.D.

Institutional Award for Research and Academics, Advocate Christ Medical Center

Heidi L. Erickson, M.D.

Top Doctors Award, *Minnesota Monthly Magazine*

Top Doctors: Rising Star, *Mpls.St.Paul Magazine*

Robert Kempainen, M.D.

Best Doctors of America

Top Doctors Award, *Minnesota Monthly Magazine*

Top Doctors Award, *Mpls.St.Paul Magazine*

2020 Honors and Recognition of Faculty

PULMONARY, ALLERGY AND CRITICAL CARE (CONT.)

James W. Leatherman, M.D.

Best Doctors of America

Top Doctors Award, *Minnesota Monthly Magazine*

Top Doctors Award, *Mpls.St.Paul Magazine*

Michele M. LeClaire, M.D.

Top Doctors Award, *Minnesota Monthly Magazine*

Top Doctors Award, *Mpls.St.Paul Magazine*

William A. Marinelli, M.D.

Best Doctors of America

Top Doctors Award, *Minnesota Monthly Magazine*

Top Doctors Award, *Mpls.St.Paul Magazine*

Matthew E. Prekker, M.D., M.P.H.

Co-Founder and Member, Organizing Committee,
Twin Cities ECMO Consortium

Education Committee, American Thoracic Society

Top Doctors Award, *Minnesota Monthly Magazine*

Section Editor, Critical Care, *Western Journal of
Emergency Medicine*

Robert S. Shapiro, M.D.

Top Doctors Award, *Minnesota Monthly Magazine*

Top Doctors Award, *Mpls.St.Paul Magazine*

Mark D. Sprenkle, M.D.

Top Doctors Award, *Minnesota Monthly Magazine*

Top Doctors Award, *Mpls.St.Paul Magazine*

John B. Sweet, M.D.

Top Doctors Award, *Minnesota Monthly Magazine*

RHEUMATOLOGY

Rawad Nasr, M.D.

Board of Directors, Minnesota Chapter, Arthritis
Foundation

Top Doctors Award, *Minnesota Monthly Magazine*

Linh Ngo, D.O.

Top Doctors Award, *Minnesota Monthly Magazine*

Peter A. Schlesinger, M.D.

Best Doctors of America

Top Doctors Award, *Minnesota Monthly Magazine*

Top Doctors Award, *Mpls.St.Paul Magazine*

Zaki Abou Zahr, M.D.

Top Doctors: Rising Star, *Mpls.St.Paul Magazine*

MEDICAL EDUCATION PROGRAM

Anne L. Becker, M.D.

See *Hospital Medicine*

Samuel T. Ives, M.D.

See *General Internal Medicine*

Michael J. Lawson, M.D.

See *Hospital Medicine*

Rawad Nasr, M.D.

See *Rheumatology*

Rosemary A. Quirk, M.D., D.T.M.H.

See *Office of the Chair*

Brian Yablon, M.D.

See *Hospital Medicine*



Advanced Practice Providers

Advanced Practice Providers 2020

Addiction Medicine

Brenda R. Bauch, N.P.
Catherine C. Earl-Torniainen, P.A.
Amy L. Skroch, N.P.

Cardiology

Vivian M. Igwacho, N.P.
Jill Jordan, P.A.
Michael N. Konstantinides, P.A.
Melissa M. LaBrosse, P.A.
Kay L. Tyberg, N.P.

Endocrinology, Metabolism, and Diabetes

Megan McGovern, N.P.
Cathy O'Brien, N.P.

Gastroenterology

Brittany Bjornstad, P.A.
Jesse Powell, P.A.

General Internal Medicine

Bethany Allen, N.P.
Kelsie Byrd, N.P.
Sareedo A. Hashi, N.P.
Kathryn Hoffman, N.P.
Brian H. Imdieke, N.P.
Kaylin Kolb, N.P.
Sarah J. Lexcen, P.A.
Ashley Lundberg, N.P.
Emily J. Mercil, N.P.
Judy Nelson, N.P.
Debora Nugent, N.P.
Samuel Obeng-Amoako, N.P.
Xin Piao, N.P.
Lindsey L. Pogemiller, N.P.
Elspeth K. Ronnander, N.P.
Gay M. Varecka, N.P.
Nicole M. Weaver, N.P.
Elsie Woodward, N.P.
Padla Yang, N.P.

Geriatric and Palliative Medicine

Michelle Aldrich-Goldstein, N.P.
Koleena J. Harrison, N.P.
Kathleen S. Holets, N.P.
Sheila A. Howes, N.P.
Felicia C. Ikebude, N.P.
Gregory J. Leierwood, N.P.
Sharon J. Momanyi, N.P.
Edward Newton, N.P.
James Orton, P.A.
Monica Palmquist-Tess, N.P.*
Elizabeth Purdy, N.P.
Maria I. Santos, N.P.
Comfort T. Seibure, N.P.
Shakilah M. Shalita, N.P.

Hematology/Medical Oncology

Louann Bosmans, N.P.
Jennifer A. Drazkowski, N.P.
Mary Katharine Johnson, N.P.
Mary E. Johnston, N.P.
Syndal Ortman, N.P.

Hospital Medicine

Erica DeVries, P.A.
Gelane C. Dinega, N.P.*
Bray E. Johnson, N.P.
Haley L. Johnson, P.A.
Molly Maass, N.P.*
Erica Monroe, P.A.
Melissa Oeding, P.A.*
Michelle L. Oeding, P.A.
Casey L. Stessman, P.A.
Joseph Strangfeld, P.A.

Infectious Diseases

Brian Goodroad, N.P.
Kristin M. Grage, N.P.
Kathleen M. Kuempel, N.P.

Integrative Health and Wellness

Benjamin E. Backus, D.C.
Ulrich F. Beyendorff, LAc
Jessica Brown, LAc
Jack P. Carver, LAc
Angela B. Clifford, LAc
Robert Crane, LAc
Natalie M. Giacomini, D.C.
Heidi Kimmer, LAc
Lindsay Policano, D.C.
Richard Printon, D.C.
John H. Sampson, D.C.
Jamie Schafer, LAc
Tara Schug, D.C.
Jess Siers, LAc
Ghazala P. Usman, D.C.
Nicole Zaret, LAc

Nephrology

Rougui Bah, N.P.
Rachel A. Sumo, N.P.

Pulmonary, Allergy and Critical Care

Lisa R. Ocker, N.P.

Rheumatology

Corinna Werner, N.P.*

* Left Division in 2020.



Research & Scholarly Activities

Addiction Medicine Division

2020 was a year for the history books for Addiction Medicine. With a busy opioid treatment program, office-based addiction treatment clinic, and consultation services we started the year looking to build our presence in Brooklyn Center and initiate outpatient services of methamphetamine use disorder. March 1, 2020 was the start date for our second 5-year grant from the National Institute on Drug Abuse (NIDA) to support the NorthStar node of the NIDA National Drug Abuse Treatment Clinical Trials Network (CTN). On March 5, 2020, Minnesota reported its first case of COVID-19 and things haven't been the same since.

The demand for addiction services increased in 2020 driven by the pandemic, but also by mass unemployment, stress, political rancor, and the unrest following the murder of George Floyd. Further, many community programs closed under the pressure of COVID-19, forcing patients to seek care elsewhere. The regulatory environment and typical care pathways for addiction medicine required significant reform and innovation to meet this increased demand during a challenging year and Hennepin Healthcare Addiction Medicine rose up to the challenge.

The highly regulated environment of opioid treatment programs requires that many patients come to clinic 6-days per week with minimum attendance at least monthly. In addition to dispensing controlled medications such as methadone and buprenorphine, the Addiction Medicine Clinic engages in individual and group therapy. With the rise of COVID-19, we had a delicate line to balance between safely treating addictions with controlled substances and mitigating the risks of COVID-19.

People with substance use disorders, especially opioid use disorder, are more susceptible to the adverse effects of COVID-19 than those without substance use disorders; yet the very model of treating opioid use disorder through frequent and close contacts potentially placed patients at risk. In addition, the Addiction Medicine staff had to remain on-site in shared offices with little social distancing. Compassion, commitment, and creativity allowed us to maintain services and keep patients and staff safe.

By the end of March, the Addiction Medicine Clinic waiting area had been moved into a tent outside the Shapiro Building and staff checked patients in via laptops. Patients were met at the entrance of the clinic and provided medication. All counseling was delivered over the telephone as staff did not have audiovisual telemedicine resources and most patients lacked devices with sufficient bandwidth for telemedicine. Meanwhile, the clinic examination and group therapy rooms were transformed into staff offices to allow for social distancing and the clinic space was reconfigured



Gavin Bart, M.D., Ph.D., Director, Addiction Medicine Division, and Kathleen Heaney, M.D.

to allow a steady yet small flow of patients through the clinic. The office-based clinic used telemedicine when possible but a significant number of patients receive injectable medications requiring in-person visits. While the consultation service saw an initial dip in requests during the first two months of the pandemic, volume soon returned to prepandemic levels.

Rising to the challenges of COVID-19 required teamwork across the Hennepin Healthcare community. Community donations of PPE for the 600 plus patients who came regularly to our clinic was greatly appreciated. Facilities Management installed an awning outside of our clinic so patients would not be rained on during inclement weather. Infection Control reviewed our space and workflow, frequency helping us revise practices as knowledge of the virus evolved. The volunteers of the Hennepin Healthcare Foundation provided morale boosting sidewalk murals and treats to our staff. Information

Technology acquisition of iPads and telemedicine licenses prevented interruptions in care. And the Addiction Medicine staff stepping up to deliver necessary medication to patients in quarantine kept patients safe from both the risk of overdose and the risks of COVID-19.

Fortunately, there were few interruptions to our research and educational endeavors. Our collaboration with the University of Minnesota's Dr. Kelvin Lim to evaluate the effect of direct current transcranial stimulation and cognitive training on opioid relapse was suspended temporarily due to the needs for social distancing. Two national multi-site studies on treating opioid use disorder in hospital settings (CTN-0098A and CTN-0098B) were delayed in roll out as research staff could not access overwhelmed hospitals. Our multisite trial of a clinical decision support tool for primary care providers addressing opioid use



Left to right: Amy Skroch, N.P., Charles Reznikoff, M.D., Catherine Earl-Torniainen, P.A., and JoAn Laes, M.D., and Gavin Bart, M.D., Ph.D.

disorder (CTN-0095) was delayed as many primary care clinics transformed into COVID testing sites or to telemedicine practices. However, we also found new opportunity to study the effect of COVID-19 regulatory changes in opioid treatment programs on patient drug use (independent analysis and CTN-0112). The Addiction Medicine fellows continued to rotate and engage patients through telemedicine or fully garbed in PPE during inpatient consultations. Our ongoing state-funded Integrated Opioid and Addiction Care ECHO tele-learning community didn't miss a beat and quickly provided a statewide forum to learn about the treatment of opioid use disorder in the time of COVID-19.

By the end of 2020, our staff were exhausted but had successfully adapted to the demands of addiction care in the era of COVID-19. Due to their hard work,

and despite the increased risks faced by those with substance use disorders, COVID cases in addiction medicine mirrored those in the general community.

While no one wants to see COVID-19 as the “new normal” in 2021, the Addiction Medicine staff entered the New Year knowing that they faced one of the greatest crises of the past 100 years with excellence, compassion, and teamwork.

Gavin B. Bart, M.D., Ph.D.

Director, Addiction Medicine Division

Infectious Diseases Division

The Infectious Diseases (ID) research program includes four principal investigators, Jason Baker, M.D., M.S., FIDSA, Kristina Burrack, Ph.D., Anne Frosch, M.D., M.P.H., and Keith Henry, M.D., along with over 12 research staff and additional students. The group's research is broadly focused on infectious diseases that disproportionately affect the community served by Hennepin Healthcare, involving approaches that span immunology, disease pathogenesis, translational intervention studies, and large-scale clinical outcome trials. Prior to COVID-19, the ID research portfolio included studies of HIV prevention and treatment, HIV-related inflammation and cardiovascular disease, and the immunology of effective and pathogenic host response.

In response to COVID-19, the ID Division launched the Program for Immune Therapy and Immunology. Through this initiative, the group conducted numerous NIH and industry funded clinical trials and launched an observational cohort to characterize immune responses and cardiac complications of COVID-19. During the first year of the pandemic, the ID program enrolled over 200 patients into COVID-19 treatment studies and 140 patients into the COVID-19 observational cohort.

Among approximately \$2.5M in research awards received by the ID group during 2020 (12 new awards and 8 renewals), \$1.4M was specific to COVID-19 research (11 new awards) with most of these projects extending into 2021. This new COVID-19 research portfolio also supported research staff from five different programs at HHRI, when projects in those labs had to be temporarily paused. The programs for each of the four ID investigators are summarized below.

Dr. Jason Baker directs a clinical research program focused on immune mediated complications in context of

HIV disease or COVID-19 (funding via NIAID, NHLBI, NIA, NIDA, NIMH and industry). A central theme in this program over the past decade has been the pathogenesis of HIV associated cardiovascular disease. This included testing intervention strategies to reduce chronic inflammation and coagulation activation among persons with HIV. In recent years, Dr. Baker established a collaboration with investigators at the University of Cape Town in South Africa (Dr. Mpiko Ntsekhe), where they are studying the influence of chronic HIV disease on myocardial fibrosis and the implications for heart failure risk.

In response to COVID-19 pandemic, Dr. Baker conducted numerous clinical trials among hospitalized patients with severe COVID-19. These included two adaptive multi-stage trials conducted through the NIH Accelerating COVID-10 Therapeutic Interventions and Vaccines 3 (ACTIV) initiative.

ACTIV-3 was focused on anti-viral strategies, and initially tested monoclonal antibodies, with ACTIV-5 focusing on immunomodulatory strategies. Dr. Baker



Front (left to right): Jason Baker, M.D., Kristina Burrack, Ph.D., Morgan Harris, Hodan Jibrell, Adrian Velez, Leah Westberry, Jon Klaphake, Christine Waller, Anne Frosch, M.D., W. Keith Henry, M.D. Back (left to right): Nwando Ikeogu, Ashley Black, Gayathri Dileepan, Rachael Goldsmith. Not pictured: Kelly Garcia-Meyers, Shari Makendanz.

also led two industry trials that studied the antiviral drug remdesivir (Gilead Sciences) and the anti-GM-CSF inhibitor lenzilumab (Humanigen, Inc.); both agents subsequently demonstrated a positive treatment effect among hospitalized patients. Moving forward, Dr. Baker is protocol chair for an outpatient trial of anti-SARS-CoV-2 IVIG and developing a focus on the immunology of COVID-related cardiac injury, which represents an area of overlap with his HIV research.

In addition to serving on the Hennepin Healthcare Research Institute Operations Committee and Board of Directors, Dr. Baker is a member of the U.S. DHHS Panel on Guidelines for the Use of Antiretroviral Agents in Adults and Adolescents with HIV, and the NIH Panel on Coronavirus Disease 2019 (COVID-19) Treatment Guidelines.

Dr. Kristina Burrack's Lab has a central goal to develop a comprehensive understanding of host-

pathogen interactions in order to enhance immunity and limit immune-mediated pathology, with a focus on the pathogenesis of malaria and other pathogens of global health importance.

The Burrack Lab combines translational research and animal models of Plasmodium infection to investigate the host immune response to malaria. This includes defining immunological mechanisms that promote parasite clearance without causing pathology. Specifically, interactions between innate and adaptive immune cells during Plasmodium infection, with a focus on natural killer (NK) cells and T cells. Overall, the Burrack Lab seeks to improve our knowledge of the immune response to Plasmodium infection, which will inform the development of host-targeted therapeutics and vaccines to promote an effective immune response.

As a result of the COVID-19 pandemic, the Burrack Lab pivoted to assist the ID research group with developing



Left to right: Nwando Ikeogu, Morgan Harris, Gayathri Dileepan, Kristina Burrack, Ph.D., Anne Frosch, M.D.

and implementing laboratory components of COVID-19-related research, including blood and cell processing and development of an COVID-19 antibody assay. During this time, malaria research was put on hold for several months, but has since restarted with support from COVID-relief funding and multiple new grant applications to be submitted in 2021.

Dr. Anne Frosch's Lab is based in translational immunology focused on T and B cell responses to infections and vaccines.

She currently has NIH funding to track vaccine specific immune responses in humans using specialized techniques that are most commonly used in animal models. She is also conducting a clinical trial of iron supplementation for children with HIV, specifically examining how this treatment affects immune activation and vulnerability to other infections. The long-term aim of her research program is to understand how chronic infections and diseases affect critical parts of human adaptive immunity. Recent publications have described the influence of HIV on B-cell immunity to malaria and the influence of recurrent infection on CD4+ T-cell

immunity (PMID: 31470903, 28526680, 32983171). Dr. Frosch has a specific clinical interest in malaria immunology, and has used her research expertise to advocate for access to affordable malaria treatment and prevention for our patients.

During the pandemic, the Frosch Lab led the initiative to offer COVID Convalescent Plasma (CCP) through expanded access and also supported the effort to offer COVID-19 therapies through the NIH/ACTIV clinical trials. Dr. Frosch also implemented and maintained the COVID observational cohort, and is characterizing immune responses to SARS-CoV-2 over time to better understand how patient-specific factors affect long-term protection from the virus.

Dr. W. Keith Henry's clinical research program focuses on evaluation of novel antiretroviral treatment strategies for persons living with HIV, with a focus on safer and more effective options including efforts to improve equity in access and outcomes (i.e. studies that enroll only African-Americans [both native and foreign born], women, or persons with advanced renal failure).



Left to right: Morgan Harris, Nwando Ikeogu, and Gayathri Dileepan.

Of particular interest has been the development of new drugs active against resistance virus and/or that have fewer long-term metabolic side effects. Dr. Henry's group has participated in the key registrational trials for most of the new HIV drugs over the last several decades. Recently, this has included high-impact clinical trials utilizing long-acting injectable HIV medications leading to FDA approval of Cabenuva® (LA formulation of cabotegravir- rilpivirine). A sentinel HIV prevention trial recently completed was DISCOVER, which evaluated tenofovir alafenamide-emtricitabine; results to be published in 2021 in *Lancet HIV* (Dr. Henry was a co-author).

The COVID-19 pandemic had a major impact on Dr. Henry's clinical research program with no new studies opening for approximately 18 months (to be resumed in 2021, with new HIV drugs of high interest islatravir and lenacapavir). Restrictions on campus required that research staff work remotely and/or reduce hours. It took considerable imagination and flexibility on the part of research staff to continue participant engagement and study data collection during this time, and to the credit of the program no

research subject dropped out or missed key study visits (including patients with IM injections) associated with Dr. Henry's HIV protocols.

Moving forward: During 2020, Infectious Diseases investigators pivoted toward the COVID-19 pandemic in response to the community and institutional needs. This necessitated innovative approaches to start new research, strengthened the interconnectedness of our Infectious Diseases programs, and built new collaborations.

In particular, our group is grateful for the collaboration with colleagues across HHRI/HHS and the institutional support and investments that guided us through 2020. As a result, the breadth and focus of Infectious Diseases research at Hennepin Healthcare has now expanded and we are optimistic that our programs will continue to grow and respond to the community we serve.

Jason V. Baker, M.D., M.S., F.I.D.S.A.

Director, Infectious Diseases Division

2020 SUMMARY OF DEPARTMENT OF MEDICINE GRANTS AND CONTRACTS

DIVISION	ANNUAL DIRECT COSTS AWARDED	ANNUAL INDIRECT COSTS AWARDED	ANNUAL TOTAL COSTS AWARDED
Addiction Medicine	\$ 7,370,033	\$ 380,504	\$ 7,750,537
Clinical Pharmacology	2,568,670	411,950	2,980,620
General Internal Medicine	1,411,972	158,977	1,570,949
Geriatric and Palliative Medicine	9,620,185	439,222	10,059,407
Infectious Diseases	1,253,958	238,792	1,492,750
Nephrology	3,903,939	743,009	4,646,948
Pulmonary, Allergy, and Critical Care	633,317	87,683	721,000
Vice Chair of Medicine	265,283	60,624	325,907
Totals	\$27,027,357	\$2,520,761	\$29,548,118

2020 SUMMARY OF FUNDING SOURCES

FUNDING SOURCES	ANNUAL DIRECT COSTS AWARDED	ANNUAL INDIRECT COSTS AWARDED	ANNUAL TOTAL COSTS AWARDED
Foundation	\$ 248,081	\$ 184,608	\$ 332,689
Government	24,151,990	2,095,595	26,247,585
Industry	573,831	192,434	766,265
Internal	2,053,455	148,124	2,201,579
	\$27,027,357	\$ 2,520,761	\$ 29,548,118

Department of Medicine Faculty Publications 2020

The following list of publications includes all articles, editorials, book chapters, and books that were published in 2020. Letters to the editor have not been included.

ADDICTION MEDICINE

Bart GB, Saxon A, Fiellin DA, McNeely J, Muench JP, Shanahan CW, Huntley K, Gore-Langton RE. Developing a clinical decision support for opioid use disorders: a NIDA center for the clinical trials network working group report. *Addict Sci Clin Pract.* 2020;15(1):4.

Carpenter JE, Murray BP, Mazer-Amirshahi M, **Laes JR**, Nacca N, Nelson LS, Perrone J, Schwarz ES, Wiegand TJ, Wax PM. Leadership roles in opioid stewardship and the treatment of patients with opioid use disorder among medical toxicologists. *J Med Toxicol.* 2020;16(2):204-211.

Esdall A, Dinh TT, Mai PP, Hoffman K, Nguyen HT, Khuyen TT, Trang NT, **Bart G**, Giang LM, Korthuis PT. Provider perspectives on integration of substance use disorder and HIV care in Vietnam: A qualitative study. *J Behav Health Serv Res.* 2020: 274-286.

Ford BR, **Bart G**, **Grahan B**, Shearer RD, **Winkelman TNA**. Associations between polysubstance use patterns and receipt of medications for opioid use disorder among adults in treatment for opioid use disorder. *J Addict Med.* 2020; doi: 10.1097/ADM.0000000000000726. (Also listed in *General Internal Medicine*.)

King C, Giang LM, **Bart G**, Kunkel L, Korthuis PT. HIV care continuum characteristics among people with opioid use disorder and HIV in Vietnam: baseline results from the BRAVO study. *BMC Public Health.* 2020;20(1):421.

Shearer RD, Howell BA, **Bart G**, **Winkelman TNA**. Substance use patterns and health profiles among US adults who use opioids, methamphetamine, or both, 2015-2018. *Drug Alcohol Depend.* 2020;214:108162. (Also listed in *General Internal Medicine*.)

CARDIOLOGY

Abraham B, **Megaly M**, Sous M, Fransawyalkomos M, Saad M, Fraser R, Topf J, **Goldsmith S**, **Simegn M**, Bart B, Azzo Z, Mesiha N, Sharma R. Meta-analysis comparing torsemide versus furosemide in patients with heart failure. *Am J Cardiol.* 2020;125(1):92-99. (Also listed in *Medicine Education*.)

Anderson N, **Ives ST**, **Carlson MD**, Apple F. Should we monitor troponin up to peak value when evaluating for acute coronary syndrome? *Cleve Clin J Med.* 2020;87(8):480-482. (Also listed in *General Internal Medicine*.)

Bangalore S, Maron DJ, O'Brien SM, Fleg JL, Kretov EI, Briguori C, Kaul U, Reynolds HR, Mazurek T, Sidhu MS, Berger JS, Mathew RO, Bockeria O, Broderick S, Pracon R, **Herzog CA**, Huang Z, Stone GW, Boden WE, Newman JD, Ali ZA, Mark DB, Spertus JA, Alexander KP, Chaitman BR, Chertow GM, Hochman JS, Group I-CR. Management of coronary disease in patients with advanced kidney disease. *N Engl J Med.* 2020;382(17):1608-1618.

Boorsma EM, Ter Maaten JM, Damman K, Dinh W, Gustafsson F, **Goldsmith S**, Burkhoff D, Zannad F, Udelson JE, Voors AA. Congestion in heart failure: a contemporary look at physiology, diagnosis and treatment. *Nat Rev Cardiol.* 2020;17(10):641-655.

Buda KG, **Steffens JD**, **Gamam A**, **Rajagopal S**, **Ogugua F**, **Reyes JL**, **Karim R**, **Herzog CA**. Atropine-induced ventricular asystole during a dobutamine stress test. *J Med Cases* 2020;11(5):125-128. (Also listed in *Medicine Education*.)

Department of Medicine Faculty Publications 2020

CARDIOLOGY (CONT.)

Calcaterra D, Heather B, **Kohl LP**, **Erickson HL**, **Prekker ME**. Bedside veno-venous ECMO cannulation: a pertinent strategy during the COVID-19 pandemic. *J Card Surg.* 2020;35(6):1180-1185. (Also listed in *Pulmonary, Allergy and Critical Care.*)

Carlson MD, Roy B, Groenewoud AS. Assessing quantitative comparisons of health and social care between countries. *JAMA.* 2020;324(5):449-450.

Connaire JJ, Sundermann ML, Perumal R, **Herzog CA**. A novel radiofrequency device to monitor changes in pulmonary fluid in dialysis patients. *Med Devices (Auckl).* 2020;13:377-383.

Levin A, Agarwal R, Herrington WG, Heerspink HL, Mann JFE, Shahinfar S, Tuttle KR, Donner JA, Jha V, Nangaku M, de Zeeuw D, Jardine MJ, Mahaffey KW, Thompson AM, Beaucage M, Chong K, Roberts GV, Sunwold D, Vorster H, Warren M, Damster S, Malik C, Perkovic V; participant authors of the International Society of Nephrology's 1st International Consensus Meeting on Defining Kidney Failure in Clinical Trials (including **Herzog, CA**). International consensus definitions of clinical trial outcomes for kidney failure: 2020. *Kidney Int.* 2020;98(4):849-859.

Lindner G, Burdmann EA, Clase CM, Hemmelgarn BR, **Herzog CA**, Malyszko J, Nagahama M, Pecoits-Filho R, Rafique Z, Rossignol P, Singer AJ. Acute hyperkalemia in the emergency department: a summary from a Kidney Disease: Improving Global Outcomes (KDIGO) conference. *Eur J Emerg Med.* 2020;27(5):329-337.

Maher PJ, Khan S, **Karim R**, Richardson LD. Determinants of empiric transfusion in gastrointestinal bleeding in the emergency department. *Am J Emerg Med.* 2020;38(5):962-965.

McDonald BA, **Buda KG**, Hall JR 2nd, **Carlson MD**, **Kempainen R**. Protamine-induced bradycardic arrest in a diabetic patient. *Cureus.* 2020;12(10):e10955. (Also listed in *Medicine Education and Pulmonary, Allergy and Critical Care.*)

Meyers HP, Bracey A, Lee D, Lichtenheld A, Li W, Singer D, Kane J, **Dodd KW**, Meyers K, **Shroff GR**, Singer A, Smith SW. Accuracy of expert electrocardiography versus ST-segment elevation myocardial infarction criteria for diagnosis of acute coronary occlusion myocardial infarction. *Circulation.* 2020;142:A12682. (Also listed in *Pulmonary, Allergy and Critical Care.*)

O'Lone E, Howell M, Viecelli AK, Craig JC, Tong A, Sautenet B, Herrington WG, **Herzog CA**, Jafar TH, Jardine M, Krane V, Levin A, Malyszko J, Rocco MV, Strippoli G, Tonelli M, Wang AY, Wanner C, Zannad F, Winkelmayer WC, Wheeler DC. Identifying critically important cardiovascular outcomes for trials in hemodialysis: an international survey with patients, caregivers and health professionals. *Nephrol Dial Transplant.* 2020;35(10):1761-1769.

O'Lone E, Viecelli AK, Craig JC, Tong A, Sautenet B, Herrington WG, **Herzog CA**, Jafar TH, Jardine M, Krane V, Levin A, Malyszko J, Rocco MV, Strippoli G, Tonelli M, Wang AYM, Wanner C, Zannad F, Winkelmayer WC, Wheeler DC, Investigators S-HCCW. Establishing core cardiovascular outcome measures for trials in hemodialysis: report of an international consensus workshop. *Am J Kidney Dis.* 2020;76(1):109-120.

Ostermann M, Bellomo R, Burdmann EA, Doi K, Endre ZH, Goldstein SL, Kane-Gill SL, Liu KD, Prowle JR, Shaw AD, Srisawat N, Cheung M, Jadoul M, Winkelmayer WC, Kellum JA; Conference Participants (including **Herzog CA**). Controversies in acute kidney injury: conclusions from a Kidney Disease: Improving Global Outcomes (KDIGO) Conference. *Kidney Int.* 2020;98(2):294-309.

Roy B, Wolf J, **Carlson MD**, Akkermans R, Bart B, Batalden P, Johnson JK, Wollersheim H, Hesselink G. An international comparison of factors affecting quality of life among patients with congestive heart failure: a cross-sectional study. *PLoS One.* 2020;15(4):e0231346.

Sedhom R, Abdelmaseeh P, **Megaly M**, **Asinger R**. Use of direct oral anticoagulants in the treatment of left ventricular thrombi: A systematic review. *Am J Med.* 2020. 133(11):1266-1273 e1266. (Also listed in *Medicine Education.*)

Sharma A, Miranda DF, Rodin H, Bart BA, Smith SW, **Shroff GR**. Do not disregard the initial 12 lead ECG after out-of-hospital cardiac arrest: It predicts angiographic culprit despite metabolic abnormalities. *Resusc Plus.* 2020;4:100032. doi: 10.1016/j.resplu.2020.100032. eCollection

Department of Medicine Faculty Publications 2020

CARDIOLOGY (CONT.)

Shroff GR, Sanchez OA, Miedema MD, Kramer H, Ix JH, Duprez DA, Jacobs DR, Jr. Coronary artery calcium progresses rapidly and discriminates incident cardiovascular events in chronic kidney disease regardless of diabetes: The Multi-Ethnic Study of Atherosclerosis (MESA). *Atherosclerosis*. 2020;310:75-82.

Smith AAH, **Iqbal OJ**. Mitral valve prolapse and sudden cardiac death: A perspective on risk-stratification. *Cleve Clin J Med*. 2020;87(3):136-138.

Smith AAH, Wananu MK, **Bachour F**. Calcific embolus resulting in ST elevation myocardial infarction: A rare complication of mitral annular calcification. *J Cardiol Cases*. 2020;21(1):5-7.

Stewart GM, Johnson BD, Sprecher DL, Reddy YNV, Obokata M, **Goldsmith S**, Bart B, Oughton A, Fillmore C, Behm DJ, Borlaug BA. Targeting pulmonary capillary permeability to reduce lung congestion in heart failure: a randomized, controlled pilot trial. *Eur J Heart Fail*. 2020;22(9):1641-1645.

Wetmore JB, **Herzog CA**, Sexter A, **Gilbertson DT**, Liu J, Kasner SE. Outcomes following ischemic stroke in older patients with CKD stages 4 and 5: A retrospective cohort study. *Am J Kidney Dis*. 2020;76(6):784-793. (Also listed in *Nephrology*.)

Wetmore JB, Roetker NS, **Herzog CA**. Response by Wetmore et al to letter regarding article, "Direct-acting oral anticoagulants versus warfarin in Medicare patients with chronic kidney disease and atrial fibrillation." *Stroke*. 2020;51(12):e363-e364. (Also listed in *Nephrology*.)

Wetmore JB, Roetker NS, Yan H, **Reyes JL**, **Herzog CA**. Direct-acting oral anticoagulants versus warfarin in Medicare patients with chronic kidney disease and atrial fibrillation. *Stroke*. 2020;51(8):2364-2373. (Also listed in *Nephrology and Medicine Education*.)

Book Chapter

Carlson MD, **Shroff GR**. Noninvasive Testing in the Diagnosis of Ischemic Heart Disease in CKD: Scope, Pitfalls and Future Directions. *Kidney Disease in the Cardiac Catheterization Laboratory: A Practical Approach*. Sprint; eds. Janani Rangaswami, Edgar V. Lerma, Peter A. McCullough. 2020;19-35.

CLINICAL PHARMACOLOGY

Garey L, **Japuntich SJ**, Nelson KM, Scott-Sheldon LAJ. Using social media to recruit youth who use electronic cigarettes. *Am J Health Behav*. 2020;44(4):488-498.

Hammett PJ, Lando HA, Erickson DJ, Widome R, Taylor BC, Nelson D, **Japuntich SJ**, Fu SS. Proactive outreach tobacco treatment for socioeconomically disadvantaged smokers with serious mental illness. *J Behav Med*. 2020;43(3):493-502.

Harris AC, Muelken P, **LeSage MG**. Beta-Carbolines found in cigarette smoke elevate intracranial self-stimulation thresholds in rats. *Pharmacol Biochem Behav*. 2020;198:173041.

Harris AC, Smethells JR, Palumbo M, Goniewicz M, **LeSage MG**. Comparison of the relative abuse liability of electronic cigarette aerosol extracts and nicotine alone in adolescent rats: a behavioral economic analysis. *Int J Environ Res Public Health*. 2020;17(3):860.

Japuntich SJ, Dunne EM, Krieger NH, Ryan PM, Rogers E, Sherman SE, Fu SS. Proactive tobacco treatment in a behavioral health home. *Community Ment Health J*. 2020;56(2):328-332.

Japuntich SJ, Hammett PJ, Rogers ES, Fu S, Burgess DJ, Shahawy OE, Melzer AC, Noorbaloochi S, Krebs P, Sherman SE. Effectiveness of proactive tobacco cessation treatment outreach among smokers with serious mental illness. *Nicotine Tob Res*. 2020;22(9):1433-1438.

Leavens ELS, Ford B, **Ojo-Fati O**, **Winkelman TNA**, **Diaz Vickery K**, **Japuntich SJ**, **Busch AM**. Electronic cigarette use patterns and chronic health conditions among people experiencing homelessness in MN: A statewide survey. *BMC Public Health*. 2020;20(1):1889. (Also listed in *General Internal Medicine and Medicine Education*.)

Moitra E, Tarantino N, Garnaat SL, Pinkston MM, **Busch AM**, Weisberg RB, Stein MD, Uebelacker LA. Using behavioral psychotherapy techniques to address HIV patients' pain, depression, and well-being. *Psychotherapy*. 2020;57(1):83-89.

Department of Medicine Faculty Publications 2020

CLINICAL PHARMACOLOGY (CONT.)

Robinson C, Gradinati V, Hamid F, Baehr C, Crouse B, Averick S, Kovaliov M, Harris D, Runyon S, Baruffaldi F, **LeSage M**, Comer S, Pravetoni M. Therapeutic and prophylactic vaccines to counteract fentanyl use disorders and toxicity. *J Med Chem.* 2020;63(23):14647-14667.

Smethells JR, Burroughs D, Saykao A, **Pentel PR**, Rezvani AH, **LeSage MG**. The reinforcement threshold and elasticity of demand for nicotine in an adolescent rat model of depression. *Drug Alcohol Depend.* 2020;219:108433.

Swain Y, Muelken P, Skansberg A, Lanzdorf D, Haave Z, **LeSage MG**, Gewirtz JC, **Harris AC**. Higher anhedonia during withdrawal from initial opioid exposure is protective against subsequent opioid self-administration in rats. *Psychopharmacology (Berl).* 2020;237(8):2279-2291.

Wong AL, McElroy SM, Robinson JM, Mulloy SM, El Banna FK, **Harris AC**, **LeSage MG**, Lee AM. Flavor-specific enhancement of electronic cigarette liquid consumption and preference in mice. *Drug Alcohol Depend.* 2020;211: 107995.

ENDOCRINOLOGY, METABOLISM, AND DIABETES

Diem SJ, Greer NL, MacDonald R, McKenzie LG, Dahm P, Ercan-Fang N, **Estrada A**, et al. Efficacy and safety of testosterone treatment in men: an evidence report for a clinical practice guideline by the American College of Physicians. *Ann Intern Med.* 2020;172(2):105-118.

Hashmi H, **Fish L**. Multiple Endocrine neoplasia Type 1- A clarion call for clarity. *J Endocrine Soc.* 2020;4:Supplement_1,MON-922. (Also listed in *Medicine Education*.)

Hashmi H, **LaFave L**. The Creatinine, the crib and the manometer navigating the labyrinth of primary aldosteronism. *J Endocrine Soc.* 2020;4:Supplement_1,SUN-191. (Also listed in *Medicine Education*.)

Johnson-Rabbett B, **Hashmi H**, **Lyerla R**, **LaFave L**. Is the Freestyle Libre Flash Glucose Monitor accurate in the critically ill? *J Endocrine Soc.* 2020;4:Supplement_1, SAT-639. (Also listed in *Medicine Education*.)

GASTROENTEROLOGY

Ashhab AA, Rodin H, **Campos M**, Abu-Sulb A, Hall JA, **Powell J**, Debes JD. Response to hepatitis B virus vaccination in individuals with chronic hepatitis C virus infection. *PLoS One.* 2020;15(8):e0237398. (Also listed in *Medicine Education*.)

Campo M, **Campbell J**, **Gonzalez H**. High grade, poorly differentiated neuroendocrine carcinoma: 3 cases diagnosed in an 8-month period in a Minneapolis safety net hospital. *J Med Cases.* 2020;10(4):120-122. (Also listed in *Medicine Education*.)

Fokuo JK, Masson CL, Anderson A, **Powell J**, Bush D, Ricco M, Zevin B, Ayala C, Khalili M. Recommendations for implementing hepatitis C virus care in homeless shelters: the stakeholder perspective. *Hepatol Commun.* 2020;4(5):646-656.

Masson CL, Fokuo JK, Anderson A, **Powell J**, Zevin B, Bush D, Khalili M. Clients' perceptions of barriers and facilitators to implementing hepatitis C virus care in homeless shelters. *BMC Infect Dis.* 2020;20(1):386.

Sharara AI, El Mokahal A, Harb AH, Khalaf N, Sarkis FS, M ME-H, Mansour NM, **Malli A**, Habib R. Risk prediction rule for advanced neoplasia on screening colonoscopy for average-risk individuals. *World J Gastroenterol.* 2020;26(37):5705-5717.

Department of Medicine Faculty Publications 2020

GENERAL INTERNAL MEDICINE

- Anderson N, **Ives ST**, **Carlson MD**, Apple F. Should we monitor troponin up to peak value when evaluating for acute coronary syndrome? *Cleve Clin J Med*. 2020;87(8):480-482. (Also listed in *Cardiology*.)
- Daw JR, Kolenic GE, Dalton VK, Zivin K, **Winkelman T**, Kozhimannil KB, Admon LK. Racial and ethnic disparities in perinatal insurance coverage. *Obstet Gynecol*. 2020;135(4):917-924.
- Daw JR, **Winkelman TNA**, Dalton VK, Kozhimannil KB, Admon LK. Medicaid Expansion Improved Perinatal Insurance Continuity For Low-Income Women. *Health Aff (Millwood)*. 2020;39(9):1531-1539.
- Dewey C, Hingle S, **Goelz E**, **Linzer M**. Supporting clinicians during the COVID-19 pandemic. *Ann Intern Med*. 2020;172(11):752-753.
- Ford BR, **Bart G**, **Grahan B**, Shearer RD, **Winkelman TNA**. Associations between polysubstance use patterns and receipt of medications for opioid use disorder among adults in treatment for opioid use disorder. *J Addict Med*. 2020; doi: 10.1097/ADM.0000000000000726. (Also listed in *Addiction Medicine*.)
- Garrett N, Bikah Bi Nguema Engoang JA, Rubin S, **Vickery KD**, **Winkelman TNA**. Health system resource use among populations with complex social and behavioral needs in an urban, safety-net health system. *Health (Amst)*. 2020;(3):100448.
- Goelz E**, Audi C, Poplau S, Fresse R, **Linzer M**, **Stillman M**. The BETER tool: A mentorship intervention for addressing burnout in medicine department providers. *Physician Leadersh J*. 2020:36-44.
- Golembeski CA, Sufrin CB, Williams B, Bedell PS, Glied SA, Binswanger IA, Hylton D, **Winkelman TNA**, Meyer JP. Improving Health Equity for Women Involved in the Criminal Legal System. *Womens Health Issues*. 2020;30(5):313-319.
- Goodwin J, **Ives S**, **Hashmi H**. Sweet Syndrome and Hashimoto Thyroiditis: A case report and review of the literature. *AACE Clinical Case Reports*. 2020;6(4):e179-e182. (Also listed in *Medicine Education*.)
- Johnson P**, **Linzer M**, Shippee ND, Heegaard W, Webb F, **Vickery KD**. Development and implementation of an interdisciplinary intensive primary care clinic for high-need high-cost patients in a safety net hospital. *Popul Health Manag*. 2020;23(2):124-131.
- Kunnenman M, Branda ME, Hargraves IG, Sivilly AL, Lee AT, **Gorr H**, Burnett B, Suzuki T, Jackson AE, Hess E, **Linzer M**, Brand-McCarthy SR, Brito JB, Noseworthy PA, Montori VM. Shared decision making for stroke prevention in atrial fibrillation: a randomized clinical trial. *JAMA Intern Med*. 2020;180(9):1215-1224.
- Leavens ELS, Ford B, **Ojo-Fati O**, **Winkelman TNA**, **Diaz Vickery K**, **Japuntich SJ**, **Busch AM**. Electronic cigarette use patterns and chronic health conditions among people experiencing homelessness in MN: A statewide survey. *BMC Public Health*. 2020;20(1):1889. (Also listed in *Clinical Pharmacology and Medicine Education*.)
- Linzer M**, Ford BR, Guthrie KF, **Vickery KD**. Team-based care: caring for the team under payment reform. *J Gen Intern Med*. 2020;35(5):1600-1602.
- Linzer M**, Smith CD, Hingle S, Poplau S, Miranda R, Freese R, Palamara K. Evaluation of work satisfaction, stress, and burnout among us internal medicine physicians and trainees. *JAMA Netw Open*. 2020;3(10):e2018758
- Manivannan A, Adkins-Hempel M, Shippee ND, **Vickery KD**. Experiences with work and participation in public programs by low-income Medicaid enrollees using qualitative interviews. *J Gen Intern Med*. 2020;35(10):2983-2989.
- McKee K, Admon LK, **Winkelman TNA**, Muzik M, Hall S, Dalton VK, Zivin K. Perinatal mood and anxiety disorders, serious mental illness, and delivery-related health outcomes, United States, 2006-2015. *BMC Womens Health*. 2020;20(1):150.
- Menon NK, Shanafelt TD, Sinsky CA, **Linzer M**, Carlasure L, Brady KJS, **Stillman MJ**, Trockel MT. Association of physician burnout with suicidal ideation and medical errors. *JAMA Netw Open*. 2020;3(12):e2028780.

Department of Medicine Faculty Publications 2020

GENERAL INTERNAL MEDICINE (CONT.)

Oliverio AL, Admon LK, Mariani LH, **Winkelman TNA**, Dalton VK. Health outcomes and health care utilization among obstetric deliveries with concurrent CKD in the United States. *Am J Kidney Dis.* 2020;75(1):148-150.

Pandita, D. Telehealth and addressing health equity. Op Ed, *Health Tech Magazine.* 2020;July 21.

Pennington K, **Ives ST**, **Frosch AEP**, **Shaughnessy MK.** Delayed clinical presentation of Plasmodium falciparum malaria after leaving an endemic area: a tale of two patients. *J Travel Med.* 2020;27(6):188-193. (Also listed in *Infectious Diseases.*)

Prasad K, Poplau S, Brown R, Yale S, Grossman E, Varkey AB, Williams E, Neprash H, **Linzer M**, Healthy Work Place Investigators. Time pressure during primary care office visits: a prospective evaluation of data from the Healthy Work Place study. *J Gen Intern Med.* 2020;35(2):465-472.

Pueringer RC, Mazepa M, Olson AP, **Ives ST.** A fiery pivot. *J Hosp Med.* 2020;15(7):419-423.

Puglisi LB, **Winkelman TNA**, Gross CP, Wang EA. Cancer prevalence among adults with criminal justice involvement from a national survey. *J Gen Intern Med.* 2020;35(3):967-968.

Rook JM, Fox JA, Feuerbach AM, Blum JR, Henschen BL, Oot AR, Pierce JB, Davey CS, **Winkelman TNA.** Today's students, tomorrow's physicians: opinions on enacted and prospective health care policies. *Int J Health Serv.* 2020;50(3):324-333.

Shafto K, Shah A, Smith J, Wang Q, Devries S, Kreitzer MJ, Baxley F. Impact of an online nutrition course to address a gap in medical education: A feasibility study. *PRIMER* 2020;4:5.

Shearer RD, Howell BA, **Bart G**, **Winkelman TNA.** Substance use patterns and health profiles among US adults who use opioids, methamphetamine, or both, 2015-2018. *Drug Alcohol Depend.* 2020;214:108162. (Also listed in *Addiction Medicine.*)

Sinsky C, **Linzer M.** Practice and policy reset post-COVID-19: Reversion, transition, or transformation? *Health Aff (Millwood).* 2020;39(8):1405-1411.

Vang M, **Linzer M**, Freese R, **Vickery K**, Shippee N, **Coffey EM.** Facilitating visit attendance with staff reminder calls in a safety-net clinic. *J Gen Intern Med.* 2020;35(4):1317-1319.

Vickery KD, Ford BR, Harwood EM, Guthrie KF, **Linzer M.** Awareness of payment reform: a survey of patients, staff, and providers in safety net primary care clinics. *J Gen Intern Med.* 2020;35(5):1597-1599.

Vickery KD, Shippee ND, Guzman-Corrales LM, Cain C, Turcotte Manser S, Walton T, Richards J, **Linzer M.** Changes in quality of life among enrollees in Hennepin Health: a Medicaid expansion ACO. *Med Care Res Rev.* 2020;77(1):60-73

Vickery KD, Shippee ND, Menk J, Owen R, Vock DM, Bodurtha P, Soderlund D, Hayward RA, Davis MM, Connett J, **Linzer M.** Integrated, accountable care for Medicaid expansion enrollees: A comparative evaluation of Hennepin health. *Med Care Res Rev.* 2020;77(1):46-59.

Winkelman TNA, Ford BR, Schlafer RJ, McWilliams A, Admon LK, Patrick SW. Medications for opioid use disorder among pregnant women referred by criminal justice agencies before and after Medicaid expansion: A retrospective study of admissions to treatment centers in the United States. *PLoS Med.* 2020;(5):e1003119.

Winkelman TNA, Phelps MS, Mitchell KL, Jennings L, Schlafer RJ. Physical health and disability among U.S. adults recently on community supervision. *J Correct Health Care.* 2020;26(2):129-137.

Book Chapter

Pryce DJ, Madhar AMJ. Viral hepatitis. In: Annamalai A, ed. *Refugee health care: An essential medical guide.* New York, NY: Springer International Publishing; 2020:79-94.

Department of Medicine Faculty Publications 2020

GERIATRIC AND PALLIATIVE MEDICINE

Agustini B, Lotfaliany M, Woods RL, McNeil JJ, Nelson MR, Shah RC, **Murray AM**, Ernst M, Reid CM, Tonkin A, Storey E, Lockery JE, Williams LJ, Berk M, Mohebbi M, on behalf of the ASPREE investigators. Patterns of association between depressive symptoms and chronic medical morbidities in older adults. *J Amer Geriatrics Soc.* 2020;68(8):1834-1841.

Agustini B, Mohebbi M, Woods RL, McNeil JJ, Nelson MR, Shah RC, **Murray AM**, Ernst ME, Reid CM, Tonkin A, Lockery JE, Berk M, on behalf of the ASPREE Investigator Group. The association of antihypertensive use and depressive symptoms in a large older population with hypertension living in Australia and the United States. *J Human Hypertens.* 2020;34(11):787-794.

Berk M, Woods RL, Nelson MR, Shah RC, Reid CM, Storey E, Fitzgerald S, Lockery JE, Wolfe R, Mohebbi M, Dodd S, **Murray AM**, Stocks N, Fitzgerald P, Mazza C, Agustini B, McNeil JJ. Effect of Aspirin vs placebo on the prevention of depression in older people: A randomized clinical trial. *JAMA Psychiatry.* 2020;77(10):1012-1020.

Chan AT, Drew DA, Nguyen LH, Joshi AD, Ma W, Guo CG, Lo CH, Mehta RS, Kwon S, Sikavi DR, Magicheva-Gupta MV, Fatehi ZS, Flynn JJ, Leonardo BM, Albert CM, Andreotti G, Beane-Freeman LE, Balasubramanian BA, Brownstein JS, Bruinsma F, Cowan AN, Deka A, Ernst ME, Figueiredo JC, Franks PW, Gardner CD, Ghobrial IM, Haiman CA, Hall JE, Deming-Halverson SL, Kirpach B, Lacey JV Jr, Marchand LL, Marinac CR, Martinez ME, Milne RL, **Murray AM**, Nash D, Palmer JR, Patel AV, Rosenberg L, Sandler DP, Sharma SV, Schurman SH, Wilkens LR, Chavarro JE, Eliassen AH, Hart JE, Kang JH, Koenen KC, Kubzansky LD, Mucci LA, Ourselin S, Rich-Edwards JW, Song M, Stampfer MJ, Steves CJ, Willett WC, Wolf J, Spector T. The COronavirus Pandemic Epidemiology (COPE) Consortium: A Call to Action. *Cancer Epidemiol Biomarkers Prev.* 2020;29(7):1283-1289.

Chowdhury EK, Ernst ME, Nelson M, Margolis K, Beilin LJ, Johnston C, Woods R, **Murray A**, Wolfe R, Storey E, Shah RC, Lockery J, Tonkin A, Newman A, Abhayaratna W, Stocks N, Fitzgerald S, Orchard S, Trevaks R, Donnan G, Grimm R, McNeil J, Reid CM, Asprey Investigator Group. Impact of the 2017 American Heart Association and American College of Cardiology hypertension guideline in aged individuals. *J Hypertens.* 2020;38(12):2527-2536.

Chowdhury EK, Nelson MR, Ernst ME, Margolis KL, Beilin LJ, Johnston CI, Woods RL, **Murray AM**, Wolfe R, Storey E, Shah RC, Lockery JE, Tonkin AM, Newman AB, Williamson JD, Abhayaratna WP, Stocks NP, Fitzgerald SM, Orchard SG, Trevaks RE, Donnan GA, Grimm R, McNeil JJ, Reid CM, Asprey Investigator Group. Factors associated with treatment and control of hypertension in a healthy elderly population free of cardiovascular disease: A cross-sectional study. *Am J Hypertens.* 2020;33(4):350-361.

Diaz MM, Hu X, Fenton BT, Kimuli I, Lee A, Lindsey H, Bigelow JK, **Maiser S**, Altalib HH, Sico JJ. Prevalence of and characteristics associated with in-hospital mortality in an Ugandan neurology ward. *BMC Neurol.* 2020;20(1):42.

Ernst ME, Chowdhury EK, Beilin LJ, Margolis KL, Nelson MR, Wolfe R, Tonkin AM, Ryan J, Woods RL, McNeil JJ, Reid CM, Asprey Investigator Group (including **Murray A**.). Long-term blood pressure variability and risk of cardiovascular disease events among community-dwelling elderly. *Hypertension.* 2020;76(6):1945-1952.

Ernst ME, Chowdhury EK, Nelson MR, Reid CM, Margolis KL, Beilin LJ, Stocks N, **Murray AM**, Wolfe R, Lockery JE, Orchard SG, Woods RL, McNeil JJ; the ASPREE Investigator Group. Antihypertensive medication use and blood pressure control among treated older adults. *J Clin Hypertens.* 2020;22(8):1406-1414.

Everett EA, Pedowitz E, **Maiser S**, Cohen J, Besbris J, Mehta AK, Chi L, Jones CA. Top ten tips palliative care clinicians should know about amyotrophic lateral sclerosis. *J Palliat Med.* 2020;23(6):842-847.

Department of Medicine Faculty Publications 2020

GERIATRIC AND PALLIATIVE MEDICINE (CONT.)

Fink HA, Hemmy LS, Linskens EJ, Silverman PC, MacDonald R, McCarten JR, Talley KMC, Desai PJ, Forte ML, Miller MA, Brasure M, Nelson VA, Taylor BC, Ng W, Ouellette JM, Greer NL, **Sheets KM**, Wilt TJ, Butler M. Diagnosis and treatment of clinical alzheimer's-type dementia: A systematic review. Rockville (MD): *Agency for Healthcare Research and Quality (US)*;2020. 20-EHC003.

Fink HA, Linskens EJ, MacDonald R, Silverman PC, McCarten JR, Talley KMC, Forte ML, Desai PJ, Nelson VA, Miller MA, Hemmy LS, Brasure M, Taylor BC, Ng W, Ouellette JM, **Sheets KM**, Wilt TJ, Butler M. Benefits and harms of prescription drugs and supplements for treatment of clinical Alzheimer-type dementia. *Ann Intern Med.* 2020;172(10):656-668.

Fransquet PD, Lacaze P, Saffery R, Phung J, Parker E, Shah R, **Murray AM**, Woods RL, Ryan J. Blood DNA methylation signatures to detect dementia prior to overt clinical symptoms. *Alzheimers Dement.* 2020;2(1):e12056.

Fransquet PD, Lacaze P, Saffery R, Phung J, Parker E, Shah RC, **Murray A**, Woods RL, Ryan J. DNA methylation analysis of candidate genes associated with dementia in peripheral blood. *Epigenomics.* 2020;12(23):2109-2123.

Gilmartin-Thomas JFM, Cicuttini FM, Owen AJ, Wolfe R, Ernst ME, Nelson MR, Lockery J, Woods RL, Britt C, Liew D, **Murray AM**, Workman B, Ward SA, McNeil JJ, ASPREE Investigator Group. Moderate or severe low back pain is associated with body mass index amongst community-dwelling older Australians. *Arch Gerontol* 2020;91(2):104231

Jozwiak R, Recka K. The anorexia-cachexia syndrome: Definitions, evaluation, and nonpharmacological management #386. *J Palliat Med.* 2020;23(2):287-289.

Lacaze P, Sebra R, Riaz M, Hooper AJ, Tiller J, Bakshi A, Woods RL, Tonkin AM, Reid CM, **Murray AM**, Nicholls SJ, Watts GF, Schadt E, McNeil JJ. Familial hypercholesterolemia in a healthy elderly population. *Circ Genom Precis Med.* 2020;13(4):e002938.

Lacaze P, Sebra R, Riaz M, Tiller J, Revote J, Phung J, Parker EJ, Orchard SG, Lockery JE, Wolfe R, Strahl M, Wang YC, Chen R, Sisco D, Arnold T, Thompson BA, Buchanan DD, Macrae FA, James pA, Abhayaratna WP, Lockett TJ, Gibbs P, Tonkin AM, Nelson MR, Reid CM, Woods RL, **Murray AM**, Winship I, McNeil JJ, Schadt E. Medically actionable pathogenic variants in a population of 13,131 health elderly individuals. *Genet Med* 2020;22(11):1883-1886.

Lewis JP, Riaz M, Xie S, Polekhina G, Wolfe R, Nelson M, Tonkin AM, Reid CM, **Murray AM**, McNeil JJ, Shuldiner AR, Lacaze P. Genetic variation in pear1, cardiovascular outcomes and effects of aspirin in a healthy elderly population. *Clin Pharmacol Ther.* 2020;108(6):1289-1298.

Li X, Slinin YX, Zhang L, Dengel DR, Tupper D, Metzger GJ, **Murray AM**. Cerebral blood flow characteristics following hemodialysis initiation in older adults: A prospective longitudinal pilot study using arterial spin labeling imaging. *Neuroimage Clin.* 2020;28:102434.

Lockery JE, Ernst ME, Broder JC, Orchard SG, **Murray A**, Nelson MR, Stocks NP, Wolfe R, Reid CM, Liew D, Woods RL, Asprey Investigator Group. Prescription medication use in older adults without major cardiovascular disease enrolled in the aspirin in reducing events in the elderly (ASPREE) clinical trial. *Pharmacotherapy.* 2020;40(10):1042-1053.

Luo Y, **Murray AM**, Guo YD, Tian R, Ye PP, Li X, Li GG, Lu FP, Ma YC, Sun Y, Wang YZ, Xiao YF, Zhang QM, Zhao XF, Zhao HD, Chen XM. Cognitive impairment and associated risk factors in older adult hemodialysis patients: A cross-sectional survey. *Sci Rep.* 2020;10(1):12542.

Mahady SE, Woods RL, Wolfe R, Nelson MR, **Murray AM**, McNeil JJ. Aspirin for primary prevention in adults older than 70 Years is not supported by high-quality trial data and may cause harm. *Am J Med.* 2020;133(7):e389-e390.

Orchard SG, Lockery JE, Gibbs P, Polekhina G, Wolfe R, Zalberg J, Haydon A, McNeil JJ, Nelson MR, Reid CM, Kirpach B, **Murray AM**, Woods RL for the ASPREE Investigator Group. Cancer history and risk factors in healthy older people enrolling in the ASPREE clinical trial. *Contemp Clin Trials.* 2020;96:106095

Department of Medicine Faculty Publications 2020

GERIATRIC AND PALLIATIVE MEDICINE (CONT.)

Paganoni S, Macklin EA, Hendrix S, Berry JD, Elliott MA, **Maisers S**, Karam C, Caress JB, Owegi MA, Quick A, Wymer J, Goutman SA, Heitzman D, Heiman-Patterson T, Jackson CE, Quinn C, Rothstein JD, Kasarskis EJ, Katz J, Jenkins L, Ladha S, Miller TM, Scelsa SN, Vu TH, Fournier CN, Glass JD, Johnson KM, Swenson A, Goyal NA, Pattee GL, Andres PL, Babu S, Chase M, Dagostino D, Dickson SP, Ellison N, Hall M, Hendrix K, Kittle G, McGovern M, Ostrow J, Pothier L, Randall R, Shefner JM, Sherman AV, Tustison E, Vigneswaran P, Walker J, Yu H, Chan J, Wittes J, Cohen J, Klee J, Leslie K, Tanzi RE, Gilbert W, Yeramian PD, Schoenfeld D, Cudkovic ME. Trial of sodium phenylbutyrate-taurursodiol for amyotrophic lateral sclerosis. *N Engl J Med*. 2020;383(10):919-930.

Phillips JN, Besbris J, Foster LA, Kramer NM, **Maisers S**, Mehta AK. Models of outpatient neuropalliative care for patients with amyotrophic lateral Sclerosis. *Neurology*. 2020;95(17):782-788.

Pinese M, Lacaze P, Rath EM, Stone A, Brion MJ, Ameur A, Nagpal S, Puttick C, Husson S, Degraeve D, Cristina TN, Kahl VFS, Statham AL, Woods RL, McNeil JJ, Riaz M, Barr M, Nelson MR, Reid CM, **Murray AM**, et al. The Medical Genome Reference Bank contains whole genome and phenotype data of 2570 healthy elderly. *Nat Commun*. 2020;11(1):435.

Robman LD, Thao LTP, Guymer RH, Wolfe R, Woods RL, Hodgson LAB, Phung J, Makeyeva GA, Le-Pham YA, Orchard SG, Suleiman J, Maguire E, Trevaks RE, Ward SA, Riaz M, Lacaze P, Elsdon S, Abhayaratna WP, Nelson MR, Ernst ME, Reid CM, McNeil JJ, **Murray AM**, ASPREE Investigator Group. Baseline characteristics and age-related macular degeneration in participants of the "ASPIrin in reducing events in the elderly" (ASPREE)-AMD trial. *Contemp Clin Trials Commun*. 2020;20:100667.

Rubins JB. Underutilization of portable orders for life-sustaining treatment at discharge from hospital: observational study at US academic trauma center. *J Gen Intern Med*. 2020;35(7):2065-2068.

Ryan J, Storey E, **Murray AM**, Woods RL, Wolfe R, Reid CM, Nelson MR, Chong T, Williamson JD, Ward SA, Lockery JE, Orchard SG, Trevaks R, Kirpach B, Newman AB, Ernst ME, McNeil JJ, Shah RC. Randomized placebo-controlled trial of the effects of aspirin on dementia and cognitive decline. *Neurology*. 2020;95(3):e320-e331.

Ryan J, Woods RL, Britt CJ, **Murray AM**, Shah RC, Reid CM, Wolfe R, Nelson MR, Orchard SG, Lockery JE, Trevaks RE, Storey E for the ASPREE Investigator Group. Normative data for the symbol digit modalities test in older white Australians and Americans, African-Americans, and Hispanic/Latinos. *J Alzheimer Dis Reports* 2020;4:313-323.

Smith AAH, Luxenberg E, **Meyers R**. A 68-year old man with peripheral artery disease and unusual skin findings. *Clev Clin J Med*. 2020;87(10):605-612.

Woods RL, Polekhina G, Wolfe R, Nelson MR, Ernst ME, Reid CM, Shah RC, Lockery JE, Orchard SG, **Murray AM**, McNeil JJ, Groupdagger AI. No modulation of the effect of aspirin by body weight in healthy older men and women. *Circulation*. 2020;141(13):1110-1112.

Zhou Z, Ofori-Asenso R, Curtis A, Breslin M, Wolfe R, McNeil JJ, **Murray AM**, Ernst ME, Reid CM, Lockery JE, Woods RL, Tonkin AM, Nelson MR. Association of statin use with disability-free survival and cardiovascular disease among healthy older adults. *J Amer Coll Cardiol*. 2020;76:17-27.

Book Chapter

Holley AH, **Sheets K**, **Okonkwo N**, **Kerzner LJ**. Detecting, assessing & responding to elder mistreatment. In: Walter LC, Chang A, Chen P, et al., eds. Current diagnosis and treatment: *Geriatrics*. 3rd Edition. New York, NY: McGraw-Hill; 2020. (Also listed in *Medicine Education*.)

Department of Medicine Faculty Publications 2020

HEMATOLOGY/MEDICAL ONCOLOGY

Alliance Cancer in the Older Adult C, Adjei A, Buckner JC, Cathcart-Rake E, Chen H, Cohen HJ, Dao D, De Luca JE, Feliciano J, Freedman RA, Goldberg RM, Hopkins J, Hubbard J, Jatoi A, Karuturi M, Kemeny M, Kimmick GG, Klepin HD, Krok-Schoen JL, Lafky JM, Le-Rademacher JG, Li D, Lichtman SM, Maggiore R, Mandelblatt J, **Morrison VA**, Muss HB, Ojelabi MO, Sedrak MS, Subbiah N, Sun V, Tuttle S, VanderWalde N, Wildes T, Wong ML, Woyach J. Arti Hurria, M.D.: A tribute to her shining legacy in the alliance for clinical trials in oncology. *J Geriatr Oncol.* 2020;11(2):179-183.

Boeckh MJ, Arvin AM, Mullane KM, Camacho LH, Winston DJ, **Morrison VA**, Hurtado K, Durrand Hall J, Pang L, Su SC, Kaplan SS, Annunziato PW, Popmihajlov Z, V. Protocol 001 Trial Group, V. Protocol 011 Trial Group. Immunogenicity of inactivated varicella zoster vaccine in autologous hematopoietic stem cell transplant recipients and patients with solid or hematologic cancer. *Open Forum Infect Dis.* 2020;7(7):ofaa172.

Jacobsen AM, **Gilbertson DT**, Tarchand G, **Morrison VA**. Chemoimmunotherapy practice patterns in older patients with chronic lymphocytic leukemia: impact of age and baseline characteristics on treatment choices. *J Geriatr Oncol.* 2020;11(1):134-140. (Also listed in *Nephrology*.)

Levin E, Peng Y, Ji Y, **Gilbertson D**, **Morrison VA**. Practice patterns in older patients with diffuse large B-cell lymphoma: a medicare analysis, 2007-2015. *J Geriatr Oncol.* 2020;11(8):1344-1348. (Also listed in *Nephrology*.)

Morrison VA, Hamilton L, Ogbonnaya A, Raju A, Hennenfent K, Galaznik A. Treatment approaches for older and oldest patients with diffuse large B-cell lymphoma-use of non-R-CHOP alternative therapies and impact of comorbidities on treatment choices and outcome: a Humedica database retrospective cohort analysis, 2007-2015. *J Geriatr Oncol.* 2020;11(1):41-54.

HOSPITAL MEDICINE

Serchen J, Doherty R, Atiq O, **Hilden D**. Racism and health in the United States: A policy statement from the American College of Physicians. *Ann Intern Med.* 2020;173(7):556-557.

INFECTIOUS DISEASES

Baker JV, Wolfson J, Peterson T, Mooberry M, Gissel M, Mystakelis H, Henderson MW, Garcia-Myers K, Rhame FS, Schacker TW, Brummel-Ziedins KE, Sereti I, Key NS, Tracy RP. Factor Xa inhibition reduces coagulation activity but not inflammation among people with HIV: a randomized clinical trial. *Open Forum Infect Dis.* 2020;7(2):ofaa026.

Fletcher CV, Podany AT, Thorkelson A, Winchester LC, Mykris T, Anderson J, Jorstad S, **Baker JV**, Schacker TW. The lymphoid tissue pharmacokinetics of tenofovir disoproxil fumarate and tenofovir alafenamide in HIV-infected persons. *Clin Pharmacol Ther.* 2020;108(5):971-975.

Fox TC, Clabots C, Porter SB, Bender T, Thurans P, Colpan A, **Boettcher J**, Johnson JR. Bacterial "virulence" traits and host demographics predict escherichia coli colonization behaviors within households. *Open Forum Infect Dis.* 2020;7(11):ofaa495.

Frosch AEP. Artesunate versus quinine: keeping our options open. *Clin Infect Dis.* 2020;70(2):288-289.

Ghazi L, **Baker JV**, Sharma S, Jain MK, Palfreeman A, Necsoi C, Murray DD, Neaton JD, Drawz PE. Role of inflammatory biomarkers in the prevalence and incidence of hypertension among HIV-positive participants in the START Trial. *Am J Hypertens.* 2020;33(1):43-52.

Kunisaki KM, **Baker JV**, Collins G, MacDonald DM, Bakowska E, El Filali KM, Nnakelu E, La Rosa A, Connett JE. Lung function decline in early HIV infection: Impact of antiretroviral drug timing and drug regimen. *Am J Respir Crit Care Med.* 2020;201(6):739-741.

Lim S, DeBruin DA, Leider JP, Sederstrom N, Lynfield R, **Baker JV**, Kline S, Kesler S, Rizza S, Wu J, Sharp RR, Wolf SM. Developing an ethics framework for allocating Remdesivir in the COVID-19 pandemic. *Mayo Clin Proc.* 2020;95(9):1946-1954.

Malhotra D, Burrack KS, Jenkins MK, **Frosch AE**. Antigen-specific CD4(+) T cells exhibit distinct kinetic and phenotypic patterns during primary and secondary responses to infection. *Front Immunol.* 2020;11:2125.

Department of Medicine Faculty Publications 2020

INFECTIOUS DISEASES (CONT.)

Ondigo BN, Hamre KES, **Frosch AEP**, Ayodo G, White MT, John CC. Antibody profiles to *P. falciparum* antigens over time characterize acute and long-term malaria exposure in an area of low and unstable transmission. *Am J Trop Med Hyg.* 2020;103(6):2189-2197.

Patel P, Bush T, Conley L, Unger ER, Darragh TM, **Henry K**, Escota G, Brooks JT, Kojic EM. Prevalence, incidence, and clearance of human papillomavirus types covered by current vaccines in men with human immunodeficiency virus in the SUN study. *J Infect Dis.* 2020;222(2):234-242.

Pennington K, **Ives ST**, **Frosch AEP**, **Shaughnessy MK**. Delayed clinical presentation of plasmodium falciparum malaria after leaving an endemic area: a tale of two patients. *J Travel Med.* 2020;27(6):188-193. (Also listed in *General Internal Medicine*.)

Peterson TE, **Baker JV**, Wong LY, Rupert A, Ntusi NAB, Esmail H, Wilkinson R, Sereti I, Meintjes G, Ntsekhe M, Thienemann F. Elevated n-terminal prohormone of brain natriuretic peptide among persons living with HIV in a South African peri-urban township. *ESC Heart Fail.* 2020;7(5):3246-3251.

Shiau S, Bender AA, O'Halloran JA, Sundermann E, Aggarwal J, Althoff KN, **Baker JV**, Deeks S, Fried LP, Karpiak S, Karris MY, Marcotte TD, Nachege JB, Margolick JB, Erlandson KM, Moore DJ. The current state of HIV and aging: Findings presented at the 10th international workshop on HIV and aging. *AIDS Res Hum Retroviruses.* 2020;36(12):973-981.

Volkman HR, Walz EJ, Wanduragala D, Schiffman E, **Frosch A**, Alpern JD, Walker PF, Angelo KM, Coyle C, Mohamud MA, Mwangi E, Haizel-Cobbina J, Nchanji C, Johnson RS, Ladze B, Dunlop SJ, Stauffer WM. Barriers to malaria prevention among immigrant travelers in the United States who visit friends and relatives in sub-Saharan Africa: a cross-sectional, multi-setting survey of knowledge, attitudes, and practices. *PLoS One.* 2020;15(3):e0229565.

Book Chapter

Shaughnessy M, **Frosch AP**. Parasitic infections. In: Annamalai A, ed. *Refugee Healthcare, an Essential Medical Guide*. Second Edition. New York, NY:Springer International Publishing; 2020.

NEPHROLOGY

Carlos C, Grimes B, Segal M, **Johansen K**. Predialysis fluid overload and gait speed: a repeated measures analysis among patients on chronic dialysis. *Nephrol Dial Transplant.* 2020;35(6):1027-1031.

Colvin M, Smith JM, Hadley N, Skeans MA, Uccellini K, Goff R, Foutz J, **Israni AK**, Snyder J, **Kasiske BL**. 2018 OPTN/SRTR Annual Data Report: Heart. *Am J Trans.* 2020;20(S1):340-426.

D'Arcy ME, Pfeiffer RM, Rivera DR, Hess GP, Cahoon EK, Arron ST, Brownell I, Cowen EW, **Israni AK**, Triplett MA, Yanik EL, Engels EA. Voriconazole and the risk of keratinocyte carcinomas among lung transplant recipients in the United States. *JAMA Dermatol.* 2020;156(7):772-779.

Delgado C, **Johansen KL**. Revisiting serum creatinine as an indicator of muscle mass and a predictor of mortality among patients on hemodialysis. *Nephrol Dial Transplant.* 2020;35(12):2033-2035.

Divers J, Ma L, Brown WM, Palmer ND, Choi Y, **Israni AK**, et al. GWAS for time to failure of kidney transplants from African American deceased donors. *Clin Transplant.* 2020;34(6):e13827.

Harhay MN, Rao MK, Woodside KJ, **Johansen KL**, Lentine KL, Tullius SG, Parsons RF, Alhamad T, Berger J, Cheng XS, Lappin J, Lynch R, Parajuli S, Tan JC, Segev DL, Kaplan B, Kobashigawa J, Dadhania DM, McAdams-DeMarco MA. An overview of frailty in kidney transplantation: measurement, management and future considerations. *Nephrol Dial Transplant.* 2020;35(7):1099-1112.

Hart A, Lentine KL, **Kasiske BL**. The cost of screening kidney transplant candidates for coronary artery disease. *Am J Kidney Dis.* 2020;75(5):684-686.

Hart A, Smith JM, Skeans MA, Gustafson SK, Wilk AR, Castro S, Foutz J, Wainright JJ, Snyder B, **Kasiske BL**, **Israni AK**. 2018 OPTN/SRTR Annual Data Report: Kidney. *Am J Trans.* 2020;20(S1):20-130.

Hole BD, Evans KM, Pyart R, Davids MR, Bedat CG, Hanafusa N, Harris DCH, Jager KJ, Jha V, **Johansen KL**, McDonald S, Masakane I, Rosa-Diez G, Saran R, **Wetmore JB**, Caskey FJ. International collaborative efforts to establish kidney health surveillance systems. *Kidney Int.* 2020;98(4):812-816.

Department of Medicine Faculty Publications 2020

NEPHROLOGY (CONT.)

Israni AK, Zaun D, Hadley N, Rosendale JD, Schaffhausen C, McKinney W, Snyder J, **Kasiske BL**. 2018 OPTN/SRTR Annual Data Report: Deceased Organ Donation. *Am J Trans*. 2020;20(S1):509-541.

Jacobsen AM, **Gilbertson DT**, Tarchand G, **Morrison VA**. Chemoimmunotherapy practice patterns in older patients with chronic lymphocytic leukemia: impact of age and baseline characteristics on treatment choices. *J Geriatr Oncol*. 2020;11(1):134-140. (Also listed in *Hematology/Medical Oncology*.)

Johansen KL, **Wetmore JB**, **Gilbertson DT**. Advancing the mission of the US Renal Data System: Challenges and opportunities. *Am J Kidney Dis*. 2020;76(5):605-606.

Kandaswamy R, Stock PG, Gustafson SK, Skeans MA, Urban R, Fox A, **Israni AK**, Snyder JJ, **Kasiske BL**. 2018 Annual Data Report: Pancreas. *Am J Trans*. 2020;20(S1):131-192.

Ku E, Lee BK, McCulloch CE, Roll GR, Grimes B, Adey D, **Johansen KL**. Racial and ethnic disparities in kidney transplant access within a theoretical context of medical eligibility. *Transplantation*. 2020;104(7):1437-1444.

Kwong A, Kim WR, Lake JR, Smith JM, Schladt DP, Skeans MA, Noreen SM, Foutz J, Miller E, Snyder JJ, **Israni AK**, **Kasiske BL**. 2018 OPTN/SRTR Annual Data Report: Liver. *Am J Trans*. 2020;19(S1):193-299.

Levin E, Peng Y, Ji Y, **Gilbertson D**, **Morrison VA**. Practice patterns in older patients with diffuse large B-cell lymphoma: a medicare analysis, 2007-2015. *J Geriatr Oncol*. 2020;11(8):1344-1348. (Also listed in *Hematology/Medical Oncology*.)

Li S, Liu J, Dluzniewski PJ, **Wetmore JB**, **Gilbertson DT**, Bradbury BD. Association of hospital transfusion use and infection-related rehospitalizations among patients receiving hemodialysis: a retrospective cohort study. *Hemodial Int*. 2020;24(1):79-88.

Maripuri S, **Johansen KL**. Risk of gadolinium-based contrast agents in chronic kidney disease-is zero good enough? *JAMA Intern Med*. 2020;180(2):230-232.

McAdams-DeMarco MA, Van Pilsum Rasmussen SE, Chu NM, Agoons D, Parsons RF, Alhamad T, **Johansen KL**, Tullius SG, Lynch R, Harhay MN, Rao MK, Berger J, Cooper M, Tan JC, Cheng XS, Woodside KJ, Parajuli S, Lentine KL, Kaplan B, Segev DL, Kobashigawa JA, Dadhania D, Workgroup ASTKPCoP. Perceptions and practices regarding frailty in kidney transplantation: results of a national survey. *Transplantation*. 2020;104(2):349-356.

McKinney WT, Schaffhausen CR, Bruin MJ, Chu S, Schladt D, Matas A, Snyder J, **Kasiske B**, **Israni AK**. Development of a patient-specific search of transplant program outcomes and characteristics: Feedback from kidney transplant patients. *Trans Direct*. 2020;6(8):e585.

Nguyen TT, Pearson RA, Mohamed ME, Schladt DP, Berglund D, Rivers Z, Skaar DJ, Wu B, Guan W, van Setten J, Keating BJ, Dorr C, Rimmel RP, Matas AJ, Mannon RB, **Israni AK**, Oetting WS, Jacobson PA. Pharmacogenomics in kidney transplant recipients and potential for integration into practice. *J Clin Pharm Ther*. 2020;45(6):1457-1465.

Petrun BM, Christie R, Nygaard RM, **Israni A**, Hill MJ, Richardson CJ, Stahler PA. Graft survival of fourth-time renal transplant recipients is similar to third-time recipients: A SRTR database analysis. *Clin Transplant*. 2020;34(7):e13884.

Schaffhausen CR, Bruin MJ, Chu S, Fu H, McKinney WT, Schladt D, Snyder JJ, Kim WR, Lake JR, **Kasiske BL**, **Israni AK**. Tool to aid patients in selecting a liver transplant center. *Liver Transpl*. 2020;26(3):337-348.

Schaffhausen CR, Bruin MJ, Chu S, Wey A, McKinney WT, Snyder JJ, Lake JR, Matas AJ, **Kasiske BL**, **Israni AK**. Comparing pretransplant and posttransplant outcomes when choosing a transplant center: focus groups and a randomized survey. *Transplantation*. 2020;104(1):201-210.

Department of Medicine Faculty Publications 2020

NEPHROLOGY (CONT.)

Sheshadri A, Cullaro G, **Johansen KL**, Lai JC. Association of Karnofsky performance status with waitlist mortality among older and younger adults awaiting kidney transplantation. *Clin Transplant*. 2020;34(6):e13848.

Sheshadri A, Kittiskulnam P, Delgado C, Sudore R, Lai JC, **Johansen KL**. Association of motivations and barriers with participation and performance in a pedometer-based intervention. *Nephrol Dial Transplant*. 2020;35(8):1405-1411.

Sheshadri A, Kittiskulnam P, Lai JC, **Johansen KL**. Effect of a pedometer-based walking intervention on body composition in patients with ESRD: a randomized controlled trial. *BMC Nephrol*. 2020;21(1):100.

Smith JM, Weaver T, Skeans MA, Horslen SP, Miller E, Noreen SM, Snyder JJ, **Israni AK**, Kasiske BL. 2018 OPTN/SRTR Annual Data Report: Intestine. *Am J Trans*. 2020;20(S1):300-339.

Snyder JJ, Musgrove D, Zaun D, Wey A, Salkowski N, Rosendale J, **Israni AK**, Hirose R, **Kasiske BL**. The Centers for Medicare and Medicaid Services' proposed metrics for recertification of organ procurement organizations: Evaluation by the Scientific Registry of Transplant Recipients. *Am J Transplant*. 2020;20(9):2466-2480.

Sy J, Streja E, Grimes B, **Johansen KL**. The marginal cost of frailty among Medicare patients on hemodialysis. *Kidney Int Rep*. 2020;5(3):289-295.

Valapour M, Lehr, CJ, Skeans MA, Smith JM, Uccellini K, Goff R, Foutz J, **Israni AK**, Snyder JJ, **Kasiske BL**. 2018 OPTN/SRTR Annual Data Report: Lung. *Am J Trans*. 2020;20(S1):427-508.

Wang JH, Gustafson SK, Skeans MA, Lake JR, Kim WR, **Kasiske BL**, **Israni AK**, **Hart A**. 2018 OPTN/SRTR Annual Data Report: Hepatitis C. *Am J Trans*. 2020;20(S1):542-568.

Wei J, **Johansen KL**, McCulloch CE, Lipkowitz M, Weir M, Lin F, Campese VM, Smogorzewski M, Ku E. Association between APOL1 genotype and need for kidney replacement therapy in patients without diabetes: does age matter? *Am J Kidney Dis*. 2020;75(2):294-296.

Wetmore JB. Calcimimetics: A promise unfulfilled. *Am J Kidney Dis*. 2020;76(3):308-310.

Wetmore JB. Pruritis: A vexing problem with a promising new therapy. *Kidney Int Rep*. 2020;5(5):577-579.

Wetmore JB, **Herzog CA**, Sexter A, **Gilbertson DT**, Liu J, Kasner SE. Outcomes following ischemic stroke in older patients with CKD stages 4 and 5: A retrospective cohort study. *Am J Kidney Dis*. 2020;76(6):784-793. (Also listed in *Cardiology*.)

Wetmore JB, Roetker NS, **Herzog CA**. Response by Wetmore et al to letter regarding article, "direct-acting oral anticoagulants versus warfarin in Medicare patients with chronic kidney disease and atrial fibrillation." *Stroke*. 2020;51(12):e363-e364. (Also listed in *Cardiology*.)

Wetmore JB, Roetker NS, Yan H, **Reyes JL**, **Herzog CA**. Direct-acting oral anticoagulants versus warfarin in Medicare patients with chronic kidney disease and atrial fibrillation. *Stroke*. 2020;51(8):2364-2373. (Also listed in *Cardiology and Medicine Education*.)

Wetmore JB, Yan H, **Gilbertson DT**, Liu J. Factors associated with elective withdrawal of maintenance hemodialysis: a case-control analysis. *Am J Nephrol*. 2020;51(3):227-236.

Wey A, Foutz J, Gustafson SK, Carrico RJ, Sisaithong K, Tosoc-Haskell H, McBride M, Klassen D, Salkowski N, **Kasiske BL**, **Israni AK**, Snyder JJ. The collaborative innovation and improvement network (coiin): Effect on donor yield, waitlist mortality, transplant rates, and offer acceptance. *Am J Transplant*. 2020;20(4):1076-1086.

Wey A, **Hart A**, Snyder JJ. Posttransplant outcome evaluations of transplant programs: Long-term outcomes are more important than short term outcomes. *Am J Transplant*. 2020;20(10):2813-2821.

Wey A, Salkowski N, Carrico RJ, Shepherd S, **Kasiske BK**, Thompson B, **Israni AK**, Snyder JJ. Association between changes in MPSC review criteria and use of kidneys for transplantation. *Clin Transplant*. 2020;34(7):e13872.

Department of Medicine Faculty Publications 2020

PULMONARY, ALLERGY AND CRITICAL CARE

Aronson M, Henderson T, **Dodd K**, Lovell E, Cirone M, Williamson K. Emergency medicine resident perceptions of a novel curriculum: Advanced mental performance in the emergency department. *Ann Emerg Med.* 2020;76(4s):S13.

Calcaterra D, Heather B, **Kohl LP, Erickson HL, Prekker ME**. Bedside veno-venous ECMO cannulation: a pertinent strategy during the COVID-19 pandemic. *J Card Surg.* 2020;35(6):1180-1185. (Also listed in *Cardiology*.)

Caraganis A, Mulder M, **Kempainen RR**, Brown RZ, Oswald M, Hoffman B, **Prekker ME**. Interobserver variability in the recognition of hypoxic-ischemic brain injury on computed tomography soon after out-of-hospital cardiac arrest. *Neurocrit Care.* 2020;33(2):414-421.

Cho RJ, Adams A, Ambur S, Lunos S, **Shapiro R, Prekker ME**. Ultrasound assessment of diaphragmatic motion in subjects with ARDS during transpulmonary pressure-guided PEEP titration. *Respir Care.* 2020;65(3):314-319.

Cole JB, Olives TD, Ulici A, Litell JM, Bangh SA, Arens AM, Puskarich MA, **Prekker ME**. Extracorporeal membrane oxygenation for poisonings reported to U.S. poison centers from 2000 to 2018: An analysis of the National Poison Data System. *Crit Care Med.* 2020;48(8):1111-1119.

Driver BE, **Prekker ME**, Reardon RF, Fantegrossi A, Walls RM, Brown CA, 3rd. Comparing emergency department first-attempt intubation success with standard-geometry and hyperangulated video laryngoscopes. *Ann Emerg Med.* 2020;76(3):332-338.

Fisher KA, Olson SM, Tenforde MW, Feldstein LR, Lindsell CJ, Shapiro NI, Files DC, Gibbs KW, **Erickson HL, Prekker ME**, Steingrub JS, Exline MC, Henning DJ, Wilson JG, Brown SM, Peltan ID, Rice TW, Hager DN, Ginde AA, Talbot HK, Casey JD, Grijalva CG, Flannery B, Patel MM, Self WH, I. V. Y. Network Investigators, CDC Covid-Response Team. Telework before illness onset among symptomatic adults aged ≥ 18 years with and without COVID-19 in 11 outpatient health care facilities-United States, July 2020. *MMWR Morb Mortal Wkly Rep.* 2020;69(44):1648-1653.

Fisher KA, Tenforde MW, Feldstein LR, Lindsell CJ, Shapiro NI, Files DC, Gibbs KW, **Erickson HL, Prekker ME**, Steingrub JS, Exline MC, Henning DJ, Wilson JG, Brown SM, Peltan ID, Rice TW, Hager DN, Ginde AA, Talbot HK, Casey JD, Grijalva CG, Flannery B, Patel MM, Self WH, I. V. Y. Network Investigators, CDC Covid-Response Team. Community and close contact exposures associated with COVID-19 among symptomatic adults ≥ 18 years in 11 outpatient health care facilities-United States, July 2020. *Morb Mortal Wkly Rep.* 2020;69(36):1258-1264.

Henderson T, Aronson M, **Dodd K**, Lovell E, Putman M, Cirone M, Glowacki N, Altaher A, Salzman D, Williamson K. Stress inoculation in emergency medicine residents: Effects of a mental performance tool on stress response during a simulated resuscitation. *Ann Emerg Med.* 2020;76(4s):S64.

Jacoby KJ, Singh P, **Prekker ME, Leatherman JW**. Characteristics and outcomes of critically ill patients with severe hyperammonemia. *J Crit Care.* 2020;56:177-181.

Lumbard DC, Lacey AM, Endorf FW, Gayken JR, Fey RM, Schmitz KR, Deisler RF, Calcaterra D, **Prekker M**, Nygaard RM. Severe hypothermia and frostbite requiring ECMO and four limb amputations. *J Burn Care Res.* 2020;41(6):1301-1303.

McDonald B, Hall J, **Buda KG, Kempainen R**. Brandycardic arrest following protamine infusion in a 68-year-old woman. *Chest.* 2020;158(4):A56-A57. (Also listed in *Medical Education*.)

McDonald BA, Buda KG, Hall JR 2nd, **Carlson MD, Kempainen R**. Protamine-induced bradycardic arrest in a diabetic patient. *Cureus.* 2020;12(10):e10955. (Also listed in *Cardiology and Medicine Education*.)

Meyers HP, Bracey A, Lee D, Lichtenheld A, Li W, Singer D, Kane J, **Dodd KW**, Meyers K, **Shroff GR**, Singer A, Smith SW. Accuracy of expert electrocardiography versus ST-segment elevation myocardial infarction criteria for diagnosis of acute coronary occlusion myocardial infarction. *Circulation.* 2020;142:A12682. (Also listed in *Cardiology*.)

Department of Medicine Faculty Publications 2020

PULMONARY, ALLERGY AND CRITICAL CARE (CONT.)

Mosier J, Reardon RF, DeVries PA, Stang JL, Nelsen A, **Prekker ME**, Driver BE. Time to loss of preoxygenation in emergency department patients. *J Emerg Med.* 2020;59(5):637-642.

Prekker ME, Brunsvold ME, Bohman JK, Fischer G, Gram KL, Litell JM, Saavedra-Romero R, Hick JL. Regional planning for extracorporeal membrane oxygenation allocation during coronavirus disease 2019. *Chest.* 2020;158(2):603-607.

Prekker ME, Donelan C, Ambur S, Driver BE, O'Brien-Lambert A, Hottinger DG, Adams AB. Adoption of low tidal volume ventilation in the emergency department: A quality improvement intervention. *Am J Emerg Med.* 2020;38(4):763-767.

Russell DW, Casey JD, Gibbs KW, Dargin JM, Vonderhaar DJ, Joffe AM, Ghamande S, Khan A, Dutta S, Landsperger JS, Robison SW, Bentov I, Wozniak JM, Stempel S, White HD, Krol OF, **Prekker ME**, Driver BE, Brewer JM, Wang L, Lindsell CJ, Self WH, Rice TW, Semler MW, Janz D, Prepare II Investigators. Protocol and statistical analysis plan for the PREventing cardiovascular collaPse with Administration of fluid REsuscitation during Induction and Intubation (PREPARE II) randomized clinical trial. *BMJ Open.* 2020;10(9):e036671.

Self WH, Tenforde MW, Stubblefield WB, Feldstein LR, Steingrub JS, Shapiro NI, Ginde AA, **Prekker ME**, et al. Decline in SARS-CoV-2 antibodies after mild infection among frontline health care personnel in a multistate hospital network - 12 states, April-August 2020. *MMWR Morb Mortal Wkly Rep.* 2020;69(47):1762-1766.

Self WH, Tenforde MW, Stubblefield WB, Feldstein LR, Steingrub JS, Shapiro NI, Ginde AA, **Prekker ME**, et al. Seroprevalence of SARS-CoV-2 Among Frontline Health Care Personnel in a Multistate Hospital Network - 13 Academic Medical Centers, April-June 2020. *Morb Mortal Wkly Rep.* 2020;69(35):1221-1226.

Tenforde MW, Billig Rose E, Lindsell CJ, Shapiro NI, Files DC, Gibbs KW, **Prekker ME**, Steingrub JS, Smithline HA, Gong MN, Aboodi MS, Exline MC, Henning DJ, Wilson JG, Khan A, Qadir N, Stubblefield WB, Patel MM, Self WH, Feldstein LR; CDC COVID-19 Response Team. Characteristics of adult outpatients and inpatients with COVID-19 - 11 Academic Medical Centers, United States, March-May 2020. *Morb Mortal Wkly Rep.* 2020;69(26):841-846.

Tenforde MW, Kim SS, Lindsell CJ, Rose EB, Shapiro NI, Files C Gibbs KW, **Erickson HL**, et al. Symptom duration and risk factors for delayed return to usual health care among outpatients with COVID-19 in a multistate health care systems network United States, March-June 2020. *Morb Mortal Wkly Rep.* 2020;69:993-998.

Book Chapter

Budhram G, **Dodd KW**, Weekes AJ, Reardon RF. Resuscitation of the critically ill In: Ma OJ, Mateer JR, Reardon RF, eds. *Ma and Mateer's Emergency Ultrasound.* 4th Edition. New York, NY: McGraw-Hill; 2020.

RHEUMATOLOGY

Mahmood SB, **Abou Zahr Z**. Systemic lupus erythematosus triggered by trimethoprim-sulfamethoxazole. *Scand J Rheumatol.* 2020;49(6):507-508. (Also listed in *Medicine Education.*)

Mahmood SB, **Nelson E**, **Padniewski J**, **Nasr R**. Polymyalgia Rheumatica: An updated review. *Clev Clin J Med.* 2020;87(9):549-556. (Also listed in *Medicine Education.*)

Padniewski JJ, Thottam E, **Nasr R**. IgG4 sclerosing disease of the esophagus: A case-based review. *Rheumatol Int.* 2020;40(10):1733-1737.

Department of Medicine Faculty Publications 2020

MEDICINE EDUCATION

Abdelaziz HK, **Megaly M**, Debski M, Rahbi H, Kamal D, Saad M, Wiper A, More R, Roberts DH. Meta-analysis comparing percutaneous to surgical access in transfemoral transcatheter aortic valve implantation. *Am J Cardiol.* 2020;125(8):1239-1248.

Abraham B, **Megaly M**, Sous M, Fransawyalkomos M, Saad M, Fraser R, Topf J, **Goldsmith S**, **Simegn M**, Bart B, Azzo Z, Mesiha N, Sharma R. Meta-analysis comparing torsemide versus furosemide in patients with heart failure. *Am J Cardiol.* 2020;125(1):92-99. (Also listed in *Cardiology*)

Ashhab AA, Rodin H, **Campos M**, Abu-Sulb A, Hall JA, **Powell J**, Debes JD. Response to hepatitis B virus vaccination in individuals with chronic hepatitis C virus infection. *PLoS One.* 2020;15(8):e0237398. (Also listed in *Gastroenterology*.)

Brandeland MA. If I die young: Reflections on the social determinants of critical illness. *J Crit Care.* 2020;56:157-158.

Buda KG, Megaly MS, Omer M, Xenogiannis I, Brillakis ES. Use of radiation protection measures in live percutaneous coronary interventions cases at interventional scientific meetings. *JACC Cardiovasc Interv.* 2020;13(7):905-906.

Buda KG, Steffens JD, Gamam A, Rajagopal S, Ogugua F, Reyes JL, Karim R, Herzog CA. Atropine-induced ventricular asystole during a dobutamine stress test. *J Med Cases* 2020;11(5):125-128. (Also listed in *Cardiology*.)

Campo M, Campbell J, Gonzalez H. High grade, poorly differentiated neuroendocrine carcinoma: 3 cases diagnosed in an 8-month period in a Minneapolis safety net hospital. *J Med Cases.* 2020;10(4):120-122. (Also listed in *Gastroenterology*.)

Chin CD, Fares CM, **Campos M**, Chen HW, Shintaku IP, Konecny GE, Rao J. Association of pd-11 expression by immunohistochemistry and gene microarray with molecular subtypes of ovarian tumors. *Mod Pathol.* 2020;33(10):2001-2010.

Coetzee D, **Pereira AG**, Scheurer JM, Olson AP. Medical student workshop improves student confidence in working with trained medical interpreters. *J Med Educ Curric Dev.* 2020 May 11;7:2382120520918862.

Cole JB, Klein LR, Strobel AM, Blanchard SR, **Nahum R**, Martel ML. The use, safety, and efficacy of olanzapine in a level I pediatric trauma center emergency department over a 10-year period. *Pediatr Emerg Care.* 2020;36(2):70-76.

Elbadawi A, Elgendy IY, **Megaly M**, et al. Temporal trends and outcomes of transcatheter mitral valve repair among nonagenarians. *JACC Cardiovasc Interv.* 2020;13(11):1385-1387.

Elbadawi A, Elzeneini M, Thakker R, Mahmoud K, Elgendy IY, **Megaly M**, et al. Sex differences in in-hospital outcomes of transcatheter mitral valve repair (from a national database). *Am J Cardiol.* 2020;125(9):1391-1397.

Elbadawi A, Mahmoud K, Elgendy IY, Elzeneini M, **Megaly M**, Ogunbayo G, Omer MA, Albert M, Kapadia S, Jneid H. Racial disparities in the utilization and outcomes of transcatheter mitral valve repair: Insights from a national database. *Cardiovasc Revasc Med.* 2020;21(11):1425-1430.

Elbadawi A, Naqvi SY, Saad M, Elgendy IY, Mahmoud AA, Zainal A, **Megaly M**, Almahmoud MF, Altaweel A, Kleiman N, Abbott JD. In-hospital outcomes with transfemoral versus transapical access for transcatheter aortic valve replacement in patients with peripheral arterial disease. *Cardiovasc Revasc Med.* 2020;21(5):604-609.

Gardeen S, Hylwa S. A Review of Acrylates: Super glue, nail adhesives, and diabetic pump adhesives increasing sensitization risk in women and children. *J Womens Dermatol.* 2020;6(4):263-267.

Glogoza M, **Urbach J**, Rosborough TK, Olet S, St Hill CA, Smith CS, Tierney DM. Tablet vs. station-based laptop ultrasound devices increases internal medicine resident point-of-care ultrasound performance: A prospective cohort study. *Ultrasound J.* 2020;12(1):18.

Department of Medicine Faculty Publications 2020

MEDICINE EDUCATION (CONT.)

Gomutbutra P, **Brandeland M**. Advance care plan and factors related to disease progression in patients with spinocerebellar ataxia type 1: a cross-sectional study in Thailand. *Am J Hosp Palliat Care*. 2020;37(1):46-51.

Goodwin J, **Ives S, Hashmi H**. Sweet Syndrome and Hashimoto Thyroiditis: A case report and review of the literature. *AACE Clinical Case Reports*. 2020;6(4):e179-e182. (Also listed in *General Internal Medicine*.)

Hall JA, Rusten M, Abughazaleh RD, Wuertz B, Souksavong V, Escher P, Ondrey F. Effects of PPAR-gamma agonists on oral cancer cell lines: Potential horizons for chemopreventives and adjunctive therapies. *Head Neck*. 2020;42(9):2542-2554.

Hamandi M, Saad M, Hasan R, **Megaly M**, Abbott JD, Dib C, Szerlip M, Potluri S, Lotfi A, Kiemeneij F, Al-Azizi KM. Distal versus conventional transradial artery access for coronary angiography and intervention: A meta-analysis. *Cardiovasc Revasc Med*. 2020;21(10):1209-1213.

Hashmi H, Fish L. Multiple Endocrine neoplasia Type 1- A clarion call for clarity. *J Endocrine Soc*, 2020;4:Supplement_1,MON-922. (Also listed in *Endocrinology, Metabolism, and Diabetes*.)

Hashmi H, LaFave L. The Creatinine, the crib and the manometer navigating the labyrinth of primary aldosteronism. *J Endocrine Soc*, 2020;4:Supplement_1,SUN-191. (Also listed in *Endocrinology, Metabolism, and Diabetes*.)

Husmann R, Davies JB, Ghannam M, Berry B, Kelkar P. Fingolimod-associated macular edema controlled with nepafenac non-steroidal anti-inflammatory ophthalmologic applications. *Clin Mol Allergy*. 2020;18:3. doi: 10.1186/s12948-020-00119-4.

Jha A, Thota A, **Buda KG**, Goel A, Sharma A, Krishnan AM, Patel HK, Wu F. Outcomes and Utilization of Therapeutic Hypothermia in Post-Cardiac Arrest Patients in Teaching Versus Non-Teaching Hospitals: Retrospective Study of the Nationwide Inpatient Sample Database (2016). *Cureus*. 2020;12(8):e9545.

Johnson-Rabbett B, Hashmi H, Lyerla R, LaFave L. Is the Freestyle Libre Flash Glucose Monitor accurate in the critically ill? *J Endocrine Soc*. 2020;4:Supplement_1, SAT-639. (Also listed in *Endocrinology, Metabolism, and Diabetes*.)

Leavens ELS, Ford B, **Ojo-Fati O, Winkelman TNA, Diaz Vickery K, Japuntich SJ, Busch AM**. Electronic cigarette use patterns and chronic health conditions among people experiencing homelessness in MN: A statewide survey. *BMC Public Health*. 2020;20(1):1889. (Also listed in *Clinical Pharmacology and General Internal Medicine*.)

Lemke A, Kohs J, **Weber L**. Evaluating anticoagulation sensitivity among elderly patients managed with an institution's heparin protocol using initial anti-factor Xa levels. *Am J Health Syst Pharm*. 2020;77:Supplement_1):S13-S18.

Liu J, Elbadawi A, Elgendy IY, **Megaly M**, Ogunbayo GO, Krittanawong C, Tamis-Holland JE, Ballantyne CM, Khalid MU, Virani S, Gulati M, Albert M, Bozkurt B, Jneid H. Age-stratified sex disparities in care and outcomes in patients with st-elevation myocardial infarction. *Am J Med*. 2020;133(11):1293-1301.

Mahmood SB, Abou Zahr Z. Systemic lupus erythematosus triggered by trimethoprim-sulfamethoxazole. *Scand J Rheumatol*. 2020;49(6):507-508. (Also listed in *Rheumatology*.)

Mahmood SB, Nelson E, Padniewski J, Nasr R. Polymyalgia Rheumatica: An updated review. *Clev Clin J Med*. 2020;87(9):549-556. (Also listed in *Rheumatology*.)

McDonald B, Hall J, Buda KG, Kempainen R. Brandycardic arrest following protamine infusion in a 68-year-old woman. *Chest*. 2020;158(4):A56-A57. (Also listed in *Pulmonary, Allergy and Critical Care*.)

McDonald BA, Buda KG, Hall JR 2nd, **Carlson MD, Kempainen R**. Protamine-induced bradycardic arrest in a diabetic patient. *Cureus*. 2020;12(10):e10955. (Also listed in *Cardiology and Pulmonary, Allergy and Critical Care*.)

Department of Medicine Faculty Publications 2020

MEDICINE EDUCATION (CONT.)

Megaly M, Abraham B, Pershad A, Rinfret S, Alaswad K, Garcia S, Azzalini L, Gershlick A, Burke MN, Brilakis ES. Outcomes of chronic total occlusion percutaneous coronary intervention in patients with prior bypass surgery. *JACC Cardiovasc Interv.* 2020;13(7):900-902.

Megaly M, Ali A, Abraham B, Khalil C, Zordok M, Shaker M, Tawadros M, Hennawy BS, Elbadawi A, Omer M, Saad M. Outcomes with drug-coated balloons in percutaneous coronary intervention in diabetic patients. *Cardiovasc Revasc Med.* 2020;21(1):78-85.

Megaly M, Brilakis ES. Primary orbital atherectomy for treating a heavily calcified balloon uncrossable lesion. *Cardiovasc Revasc Med.* 2020;21(11S):96-99.

Megaly M, Brilakis ES. Telesupported procedures: when and how. *Catheter Cardiovasc Interv.* 2020;95(5):911-913.

Megaly M, Buda KG, Brilakis ES, Pershad A, Louka B, Saad M, Abdelaziz HK, Anantha Narayanan M, Syed M, Mentias A, Omer M. Outcomes with MANTA device for large-bore access closure after transcatheter aortic valve replacement: A meta-analysis. *Structural Heart.* 2020;7:1-7.

Megaly M, Buda KG, Xenogiannis I, Vemmou E, Nikolakopoulos I, Saad M, Rinfret S, Abbott JD, Aronow HD, Garcia S, Pershad A. Systematic review and meta-analysis of short-term outcomes with drug-coated balloons vs. stenting in acute myocardial infarction. *Cardiovascul Intervent Therapeut.* 2020;36(4):1-9.

Megaly M, Xenogiannis I, Abi Rafeh N, Karpaliotis D, Rinfret S, Yamane M, Burke MN, Brilakis ES. Retrograde approach to chronic total occlusion percutaneous coronary intervention. *Circ Cardiovasc Interv.* 2020;13(5):e008900.

Ogugua F, Gamam A, Basilio B, Osei K. Remote monitoring using implantable cardiac defibrillators for heart failure management in a European cohort: A meta-analysis. *Circulation.* 2020;142:A15225.

Ogugua F, Gamam A, Reyes J. Does racial difference augment the obesity paradox in HFpEF patients? An insight from the national inpatient sample. *J Card Fail.* 2020;26:S134.

Olives T, **Willhite LA**, Lee SC, Evans DK, Jensen A, Regelman HT, McGillis ES. Point-of-sale naloxone: Novel community-based research to identify naloxone availability. *West J Emerg Med.* 2020;21(5):1188-1194.

Omer MA, Tyler JM, Henry TD, Garberich R, Sharkey SW, Schmidt CW, Henry JT, Eckman P, **Megaly M**, Brilakis ES, Chavez I, Burke N, Gossel M, Mooney M, Sorajja P, Traverse JH, Wang Y, Hryniewicz K, Garcia S. Clinical characteristics and outcomes of STEMI patients with cardiogenic shock and cardiac arrest. *JACC Cardiovasc Interv.* 2020;13(10):1211-1219.

Prizment AE, **Onyeaghala G**, Church TR. Editorial: The microbiome, aspirin and colorectal cancer—authors' reply. *Aliment Pharmacol Ther.* 2020;52(11-12):1742-1743.

Prizment AE, **Onyeaghala GC**, Church TR. Letter: Synergistic role of gut flora with aspirin to prevent colorectal cancers—authors' reply. *Aliment Pharmacol Ther.* 2020;52(11-12):1758.

Sedhom R, Abdelmaseeh P, **Megaly M**, **Asinger R**. Use of direct oral anticoagulants in the treatment of left ventricular thrombi: A systematic review. *Am J Med.* 2020. 133(11):1266-1273. (Also listed in *Cardiology*.)

Sultan A, Anugwom CM, Wondifraw Z, **Braimoh GA**, Bane A, Debes JD. Single center analysis of therapy and outcomes of hepatocellular carcinoma in Sub-Saharan Africa. *Expert Rev Gastroenterol Hepatol.* 2020;14(10):1007-1011.

Sultan A, Bane A, **Braimoh G**, Debes JD. Treatment of hepatitis c genotypes 1 to 5 in sub-Saharan Africa using direct-acting antivirals. *Am J Trop Med Hyg.* 2020;103(5):2083-2084.

Department of Medicine Faculty Publications 2020

MEDICINE EDUCATION (CONT.)

Trikudanathan G, **Hashmi H**, Dirweesh A, Amateau S, Azeem N, Mallery, S, Freeman, ML. Rendezvous transgastric and percutaneous sinus tract endoscopy (STE) for debridement of necrotic collections with deep retroperitoneal extension: a case series (with video). *Endosc Int Open*. 2020;08(05):E668-E672.

Vemmou E, Nikolakopoulos I, Xenogiannis I, **Megaly M**, Omer MA, Stanberry L, Garberich R, Rangan BV, Baran KW, Gossl M, Sorajja P, Chavez I, Mooney M, Traverse J, Wang Y, Garcia S, Poulouse A, Burke MN, Brilakis ES. The Impact of novel x-ray systems and x-ray system optimization on patient radiation dose administered during cardiac catheterization. *J Invasive Cardiol*. 2020;32(6):218-221.

Wetmore JB, Roetker NS, Yan H, **Reyes JL**, **Herzog CA**. Direct-acting oral anticoagulants versus warfarin in Medicare patients with chronic kidney disease and atrial fibrillation. *Stroke*. 2020;51(8):2364-2373. (Also listed in *Cardiology, and Nephrology*.)

Wu F, Krishnan AM, Yepes I, Goel A, Clark L, **Buda KG**, Huang S. Transcatheter aorticvalvereplacement versus surgical aortic valve replacement inaortic stenosis with chronic coronary artery disease: Nationwide inpatient analysis. 2020;75(11 Supplement 1):1468.

Wu F, Li P, Goel A, **Buda KG**, Duan K, Li Q. Impella is associated with fewer inpatient cerebral vascular events than tandemheart in cardiogenic shock: Nationwide database analysis. *JACC*. 2020; 75(11 Supplement 1):954.

Xenogiannis I, Gkargkoulas F, Karpaliotis D, Krestyaninov O, Khelinskii D, Jaffer FA, Khatri JJ, Kandzari DE, Wyman RM, Doing AH, Dattilo P, Toma C, Yeh RW, Tamez H, Choi JW, Jaber W, Samady H, Sheikh AM, Potluri S, Patel M, Mahmud E, Elbaruni B, Love MP, Koutouzis M, Tsiafoutis I, Jefferson BK, Patel T, Uretsky B, Moses JW, Lembo NJ, Parikh M, Kirtane AJ, Ali ZA, Hall AB, **Megaly MS**, et al. Retrograde chronic total occlusion percutaneous coronary intervention via saphenous vein graft. *JACC Cardiovasc Interv*. 2020;13(4):517-526.

Xenogiannis I, Nikolakopoulos I, Krestyaninov O, Khelinskii D, Khatri JJ, Doing AH, Dattilo P, Alaswad K, Toma C, Sheikh AM, Jaffer FA, Jefferson BK, Patel T, Chandwaney RH, Jaber W, Samady H, Patel M, Mahmud E, Choi J, Koutouzis M, Tsiafoutis I, **Megaly M**, Omer M, Vemmou E, Rangan BV, Garcia S, Abdullah S, Banerjee S, Burke N, Brilakis ES, Karpaliotis D. Impact of successful chronic total occlusion percutaneous coronary interventions on subsequent clinical outcomes. *J Invasive Cardiol*. 2020;32(11):433-439.

Young J, Payton C, Walker P, White D, **Brandeland M**, Kumar GS, Jentes ES, Settgest A, DeSilva M. Evaluation of a program to improve linkage to and retention in care among refugees with hepatitis B virus infection - three U.S. cities, 2006-2018. *MMWR Morb Mortal Wkly Rep*. 2020;69(21):647-650.

Book Chapter

Holley AH, **Sheets K**, **Okonkwo N**, **Kerzner LJ**. Detecting, assessing & responding to elder mistreatment. In: Walter LC, Chang A, Chen P, et al., eds. *Current diagnosis and treatment: Geriatrics*. 3rd Edition. New York, NY: McGraw-Hill; 2020. (Also listed in *Geriatric and Palliative Medicine*.)

Educational Activities



Medical Education Program

Internal Medicine and Emergency Medicine-Internal Medicine (EM-IM) residents braved the arrival and surges of COVID in 2020, courageously caring for essential workers, immigrants, frail elderly and other vulnerable members of our community. Residents learned the complex pathophysiology and complications of the highly transmissible coronavirus by providing direct care to many patients and engaging in discussions with faculty experts and mentors. They mastered virtual family conferences, attended virtual lectures and Teams meetings, and learned the basics of telemedicine. In summer, in-person (socially distanced) Morning Report and Friday School returned, new interns arrived, and longstanding teaching conferences (Chest-ID, Clinical Cardiology) resumed in RL-110. In December, residents lined up for the Pfizer vaccine. Their resilience in difficult times cannot be overstated. Hennepin residents are defined by their courage, curiosity, willingness to help others, and ability to take ownership over the problems at hand, no matter how frightening or daunting.

Michelle Herbers, Nina Setala, program faculty and residents designed and implemented a virtual interview season in 2020, which allowed us to meet 30% more applicants in the midst of the pandemic. It was a true team effort. Michelle built a new recruitment website, PGY3 Josh Degallier created a short film entitled *A Day in the Life of an Internal Medicine Resident* to showcase our facilities, didactics and multidisciplinary rounds, and Associate Program Director (APD) Michael Lawson organized and filmed faculty describing unique aspects of our program. We highlighted our

Global Health and Primary Care pathways, Butterfly Ultrasound program, research infrastructure, wellness and population health initiatives, immersion activities and integrative medicine mentorship. Chief Residents hosted virtual gatherings prior to interview days and coordinated resident involvement in the recruitment process. We received rave reviews from applicants about their experience, and were beyond happy with our Match results: the 2021-22 intern class is academically exceptional, with 40% underrepresented in medicine, the most in our history.

The Class of 2021 and Chief Residents, who served valiantly during the pandemic, also achieved and thrived academically.

Twelve matched into fellowships in Cardiology, Pulmonary-Critical Care, Gastroenterology, Endocrinology, Nephrology, Rheumatology, Geriatric Medicine and Critical Care. Over half published during training. Eleven became hospitalists at the University of Minnesota, Hennepin, North Memorial, Fairview Ridges, Methodist, St. Mary's Medical Center in Duluth, Mercy Hospital in Iowa and Legacy Emanuel in Portland, Oregon. Two joined Mayo Clinic primary care practices in Redwing and Austin.

One of our programmatic goals is to expand Hennepin's rural footprint and impact; we are ecstatic four graduates have taken jobs in rural Minnesota communities in recent years, where they will provide exceptional care with compassion and kindness to underserved rural people.

George Floyd was killed in May of 2020. Residents had met and cared for George in the months before his death, and remembered him as a kind man juggling multiple jobs who had come to Minnesota to start a new life. In response to his death, Hennepin Healthcare laser-focused its efforts on equity, hiring a new Chief Equity Officer and adding additional diverse leaders to the highest levels of the organization. The Department of Medicine devoted its 2020-2021 Grand Rounds series to Disparities in Medicine, bringing incredible virtual speakers to Hennepin, while Internal Medicine and EM-IM residents formed an Internal Medicine Diversity Committee and helped create a pathway to Chief Residency for residents on J-1 visas. Dr. Anne Becker, Director of Faculty Development for Medicine Education, taught bystander training to all residents to help them recognize and combat discrimination faced by peers, nurses and other employees of color in the workplace. She also facilitated 18 Race in Medical Education Journal Clubs for faculty to help them identify biases, effectively manage racist patients, and better support learners who experience racism at work.



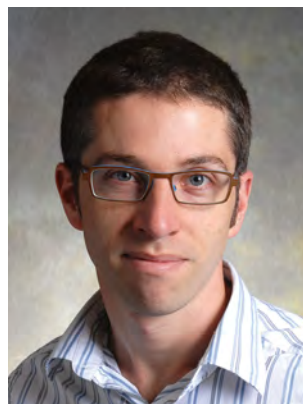
**Rosemary Quirk, M.D.,
D.T.M.H.**

Internal Medicine
Residency Program
Director



Anne Becker, M.D.

Director, Faculty
Development for
Medicine Education



Samuel T. Ives, M.D.

Director, Undergraduate
Medical Education
Associate Program
Director, Internal
Medicine Residency



Michael J. Lawson, M.D.

Associate Program
Director, Internal
Medicine Residency

Attendings and residents are learning to stand up to racial and gender discrimination, be more welcoming and inclusive, and improve support and mentorship for people from diverse backgrounds.

The Class of 2021 was celebrated with love, joy and gratitude at Jax Café in Minneapolis on June 4th, our first in-person program event since the pandemic began. Two amazing residents, Drs. Rebecca Kummer and Vannesa Cederstrom, earned our inaugural Dr. Nick Briese Spirit of the Residency Award, created to honor those who exemplify the highest personal and professional standards, demonstrate clinical excellence and dedication to learning and teaching, and display generosity and a willingness to help others even in the hardest times. These characteristics made Dr. Nick Briese a wonderful physician, friend, teacher and mentor. Through recognizing the selfless service of

residents with this award, we hope Nick's devotion to safety net medicine and medical education will live on in our community forever.

With appreciation,

Rosemary Quirk, M.D., D.T.M.H.

Program Director, Internal Medicine



Rawad Nasr, M.D.

Associate Program Director, Internal Medicine Residency



Brian Yablon, M.D.

Associate Program Director, Internal Medicine Residency



From left: Max Fuller, M.D., Rebecca Kummer, M.D., and Peter Bache-Wiig, M.D.

Chief Residents

HOUSE OFFICERS 2020–2021

PGY I

Mohamed Abdisalam Artan	University of Minnesota Medical School
Katherine Blomquist	Des Moines University College of Osteopathic Medicine
Megan Conlon	University of Minnesota Medical School
Peter Dock	A.T. Still Kirksville School of Osteopathic Medicine
Roberto Fu	Escuela Autónoma de Ciencias Médicas de Centro América
Jeffrey Hall	University of New England College of Osteopathic Medicine
Abubakar Hassan	Sheikh University of Science and Technology College of Medical Sciences
Greta Kreider Carlson (EM/IM)	University of Colorado School of Medicine
Amelia Krug (EM/IM)	University of Minnesota Medical School
Marcela Kuijpers	Escuela Autónoma de Ciencias Médicas de Centro América
Michael Larson	A.T. Still Kirksville School of Osteopathic Medicine
Kirsten Lasley	Kansas City University College of Osteopathic Medicine
Evan Lister	University of Minnesota Medical School
Brooke McDonald	Kansas City University College of Osteopathic Medicine
Nathan Nelson	University of Minnesota Medical School
Nicole Pagel	Des Moines University College of Osteopathic Medicine
Beau Rigstad	Medical College of Wisconsin
Rachel Salz	University of Minnesota Medical School
Benjamin Swart	University of Minnesota Medical School
Gregory Thompson	University of Minnesota Medical School
Colton Thoreson	University of Minnesota Medical School
Nhat Vo	University of Minnesota Medical School
Elizabeth Wendt	Medical College of Wisconsin

HOUSE OFFICERS 2020–2021

PGY II

Mary Bernton	Louisiana State University School of Medicine
Kevin Buda	University of New England College of Osteopathic Medicine
Lea Buda	University of New England College of Osteopathic Medicine
Monazza Chaudhry	Aga Khan Medical College
Constantine Chima	University of Debrecen Medical School
Zachary Davidson (EM/IM)	Icahn School of Medicine at Mount Sinai
Adulrahman Gamam	University of Minnesota Medical School
Yasmin Haji-Kusow	Almaarefa Medical College
Rachel Husmann	University of Minnesota Medical School
Seth LaPorte	Kansas City University College of Osteopathic Medicine
Amber Lindsay	Lewis Katz University School of Medicine
Arianna Lofrano	Des Moines University College of Osteopathic Medicine
Muhammad Arslan Maan	Aga Khan Medical College
Michelle Nguyen (EM/IM)	University of California, David
Fredrick Ogugua	Gulf Medical University
Jessica Padniewski	A.T. Still University Kirksville College of Osteopathic Medicine
Acadia Pechauer	University of Minnesota Medical School
Shrikar Rajagopal	University of Minnesota Medical School
Michael Smith	Frank H. Netter MD School of Medicine at Quinnipiac University
Kabao Vang	University of Minnesota Medical School

HOUSE OFFICERS 2020–2021

PGY III

Ahmad Al-Anii	University of Anbar College of Medicine
Peter Bache-Wiig	University of Minnesota Medical School
Alexander Baxa	Kansas City University College of Osteopathic Medicine
Evan Beacom	Des Moines University College of Osteopathic Medicine
Daniel Bernstein (EM/IM)	University of Minnesota Medical School
Grace Braimoh	University of Debrecen, Poland
Bukhari Burale	Kassala University Faculty of Medicine
Vannesa Cederstrom	University of Minnesota Medical School
Joshua Degallier	University of Minnesota Medical School
Max Fuller	University of South Dakota, Sanford School of Medicine
Hiba Hashmi	Aga Khan Medical College
Toy Hess	University of Minnesota Medical School
Sylwia Kaeding	Chicago Medical School at Rosalind Franklin University
Samuel Katz	Des Moines University College of Osteopathic Medicine
Rebecca Kummer	University of Minnesota Medical School
(John) Leo Maurer	University of Missouri – Columbia
Elisabeth McHale (EM/IM)	University of Minnesota Medical School
Elizabeth Nelson	University of Minnesota Medical School
Jorge Reyes Castro	Universidad de Guayaquil, Ecuador
Allison Smith	Des Moines University College of Osteopathic Medicine
Lauren Thornton	A.T. Still University Kirksville College of Osteopathic Medicine
Jason Wiederin	University of Minnesota Medical School
Gregory Wieland	University of North Dakota School of Medicine
Saida Yassin	Dokuz Eylul Universitesi Tip Fakultesi

HOUSE OFFICERS 2020–2021

PGY IV

Jeffrey Larson	University of Minnesota Medical School
Rebecca Nahum (EM/IM)	University of Minnesota Medical School
Daniel Parsons-Moss (EM/IM)	University of Illinois College of Medicine
Joseph Steffens	University of Washington School of Medicine
Kathleen Wilcox	Medical College of Wisconsin

PGY V

Maros Cunderlik (EM/IM)	University of Minnesota Medical School
Andrew Joob (EM/IM)	University of Illinois College of Medicine

RESIDENT AWARDS

Nicholas Briese Spirit of the Residency Award

Vannesa Cederstrom	University of Minnesota Medical School
Rebecca Kummer	University of Minnesota Medical School

Craig Garrett Excellence in the Practice of Primary Care Medicine Awards

Rebecca Kummer	University of Minnesota Medical School
Saida Yassin	Dokuz Eylul Universitesi Tip Fakultesi

Excellence in the Practice of Primary Care Medicine Awards

Lea Buda	University of New England College of Osteopathic Medicine
Rachel Salz	University of Minnesota Medical School

Morris Davidman Teaching Award

Lauren Thornton	A.T. Still University Kirksville College of Osteopathic Medicine
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Resident Research Award

Grace Braimoh	University of Debrecen, Poland
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DEPARTING HOUSE OFFICERS 2020–2021

NAME	CURRENT POSITION
Ahmad Al-Anii	Primary Care, Mayo Health Systems, Austin
Peter Bache-Wiig	Chief Resident, Hennepin Healthcare
Alexander Baxa	Hospitalist, M Health, Fairview Ridges
Evan Beacom	Primary Care/Hospitalist, University of Minnesota
Grace Braimoh	Gastroenterology Fellow, University of Oklahoma
Bukhari Burale	Primary Care/Hospitalist, Mayo Health Systems, Red Wing
Vannesa Cederstrom	Hospitalist, North Memorial Medical Center
Maros Cunderlik (EM/IM)	Hospitalist, North Memorial Medical Center
Joshua Degallier	Hospitalist, HealthPartners
Max Fuller	Chief Resident, Hennepin Healthcare
Hiba Hashmi	Endocrinology Fellow, University of Minnesota
Toy Hess	Hospitalist, Fairview Ridges
Andrew Joob (EM/IM)	Hospitalist, North Memorial Medical Center
Sylwia Kaeding	Endocrinology Fellow, University of Wisconsin
Samuel Katz	Nephrology Fellow, Hennepin Healthcare
Rebecca Kummer	Chief Resident, Hennepin Healthcare
(John) Leo Maurer	Critical Care Fellow, Hennepin Healthcare
Elizabeth Nelson	Rheumatology Fellow, University of Minnesota
Jorge Reyes Castro	Cardiology Fellow, University of Minnesota
Allison Smith	Dermatology Resident, University of Minnesota
Lauren Thornton	Pulmonary/Critical Care Fellow, University of Minnesota
Jason Wiederin	Hospitalist, Essential Health, St. Mary's Duluth
Gregory Wieland	Hospitalist, Hennepin Healthcare
Saida Yassin	Geriatric Medicine Fellow, Hennepin Healthcare

DEPARTING HOUSE OFFICERS 2020–2021



Pictured left to right: Arti Prasad (Chair of Medicine), Sylwia Kaeding, Alexander Baxa, Gregory Wieland, Lauren Thornton, Samuel Katz, Toy Hess, Rebecca Kummer, Bukhari Burale, Ahmad Al-Anii, Hiba Hashmi, Joshua Degallier, Jorge Reyes-Castro, Peter Bache-Wiig, Elizabeth Nelson, Vannesa Cederstrom, Max Fuller, Allison Smith, Jason Wiederin, Grace Braimoh, and Rosemary Quirk (Program Director)

FELLOWS 2020–2021

SPECIALTY	NAME	MEDICAL SCHOOL	RESIDENCY
Cardiovascular Medicine	Tareq Al Saadi (F1)	University of Damascus Syrian Arab Republic	University of Illinois at Chicago/ Advocate Christ Medical Center Oak Lawn, Illinois
	Joseph Steffens (F1)	University of Washington School of Medicine Seattle, Washington	Hennepin Healthcare Minneapolis, Minnesota
	Maen Assali (F2)	Jordan University of Science Ar-Ramtha, Jordan	Kent Hospital/Brown University Warwick, Rhode Island
	Joseph Jensen (F2)	University of Minnesota Minneapolis, Minnesota	Abbott Northwestern Hospital Minneapolis, Minnesota
	Jared Routh (F3)	Creighton University Omaha, Nebraska	University of Iowa Iowa City, Iowa
	Iulia Tulai (F3)	Universitatea de Medicina Si Farmacie, Romania	Danbury Hospital Danbury, Connecticut
	Jonathan Urbach (F3)	Boston University Boston, Massachusetts	Beth Israel Deaconess Medical Center Boston, Massachusetts Abbott Northwestern Hospital, Minneapolis, Minnesota
Critical Care Medicine	Danika Evans (F1)	Rocky Vista University College of Osteopathic Medicine Parker, Colorado	Hennepin Healthcare – Emergency Medicine Minneapolis, Minnesota
	Sydney Hansen (F1)	Medical College of Wisconsin Milwaukee, Wisconsin	Hennepin Healthcare – Emergency Medicine Minneapolis, Minnesota
	John Leo Maurer (F1)	University of Missouri Columbia, Missouri	Hennepin Healthcare – Internal Medicine Minneapolis, Minnesota
	Chelsea Laber (F2)	Philadelphia College of Osteopathy Philadelphia, Pennsylvania	Kent Hospital/Brown University Warwick, Rhode Island
	Alexandra Schick (F2)	University of Minnesota Minneapolis, Minnesota	Brown University Providence, Rhode Island
Geriatric Medicine	Saida Yassin (F1)	Dokuz Eylul University Izmir, Turkey	Hennepin Healthcare – Internal Medicine Minneapolis, Minnesota

Continued next page

FELLOWS 2020–2021 (CONT.)

SPECIALTY	NAME	MEDICAL SCHOOL	RESIDENCY
Interventional Cardiology	Ahmad Tarek Chami (F1)	University of Aleppo Syrian Arab Republic	Case Western Reserve – Cardiology Fellowship Cleveland, Ohio
	Madelyn Mahowald (F1)	Warren Alpert Medical School Providence, Rhode Island	Mayo Clinic – Cardiology Fellowship Rochester, Minnesota
Nephrology	Juliet Gatiba (F1)	University of Missouri Kansas City, Missouri	Loma Linda University – Internal Medicine Loma Linda, California
	Samuel Katz (F1)	Des Moines University College of Osteopathic Medicine Des Moines, Iowa	Hennepin Healthcare – Internal Medicine Minneapolis, Minnesota
	Christopher Knapp (F2)	University of Minnesota Minneapolis, Minnesota	Hennepin Healthcare – Internal Medicine Minneapolis, Minnesota
	Luke Lundeen (F2)	Rocky Vista University College of Osteopathic Medicine Parker, Colorado	Hennepin Healthcare – Internal Medicine Minneapolis, Minnesota
	Teija Madhusoodanan (F2)	University of Minnesota Minneapolis, Minnesota	Hennepin Healthcare – Internal Medicine Minneapolis, Minnesota
	Ryan Mello (F2)	University of Minnesota Minneapolis, Minnesota	Abbott Northwestern Hospital – Internal Medicine Minneapolis, Minnesota
	Nyan Pyae (F2)	Institute of Medicine Yangon, Myanmar	Lutheran Family Medical Center Brooklyn, New York
Sleep Medicine	Akinbolaji Akingbola (F1)	Tulane University School of Medicine New Orleans, Louisiana	Ochsner Clinic Foundation – Internal Medicine New Orleans, Louisiana
	Sung Lee (F1)	Loma Linda School of Medicine Loma Linda, California	University of Southern California/LAC+USC Medical Center Program – Internal Medicine Los Angeles, California
	Alicia Liendo (F1)	University of Medicine and Health Sciences Basseterre, St. Kitts	Sinai Hospital of Baltimore – Internal Medicine Baltimore, Maryland

2020–2021 Presentations

AMERICAN COLLEGE OF CARDIOLOGY (ACC) 70TH SCIENTIFIC SESSION AND WORLD CONGRESS OF CARDIOLOGY 2021

March 9, 2021 Virtual

Fredrick Ogugua

An Indolent Cause of High-Output Heart Failure in End-Stage Kidney Disease: Application of the Nicoladoni-Israel-Branham Test

ACG 2020 – AMERICAN COLLEGE OF GASTRO- ENTEROLOGY ANNUAL SCIENTIFIC MEETING

October 23-28, 2020 Virtual

Grace Braimoh

Fossa of Landzert Herniation in a Young Woman Presenting with Chronic Episodic Abdominal Pain

AMERICAN COLLEGE OF PHYSICIANS (ACP) 2020 MINNESOTA CHAPTER MEETING

November 7, 2021 Virtual

Monazza Chaudhry

Pulmonary Blastomycosis: A Familiar Foe in the Midwest

Maros Cunderlik

A Case of Massive Caffeine Overdose with Refractory Shock Requiring Extracorporeal Membrane Oxygenation Support

Sylwia Kaeding

Irreversible Brain Injury from Hyperammonemia following Roux-en-Y Gastric Bypass

Brooke McDonald

Pyelonephritis-Induced Septic Thrombophlebitis Leading to Cardiopulmonary Complications in a 46-Year-Old Diabetic

Fredrick Ogugua, Abdul Gamam

Associations of Implantable Cardiac Defibrillator placement in Cardiac Sarcoidosis: An insight from the National Inpatient Sample

Jessica Padniewski

Gazing Into the Crystal: Current Status of Gout Care Among Different Specialties At A Tertiary Academic Center

Allison Smith

Erythema Multiforme as Presenting Rash in Kawasaki Disease in an Adult

Ben Swart, Allison Smith

Not Just Another Pair of Diabetic Feet: A Severe Case of Keratoderma Blenorrhagicum

Lauren Thornton

LAST but not the least

Kabao Vang

Mobile Health Technology for Hypertension Management in Hmong and Latino adults: Empowerment or Entrapment?

Elizabeth Wendt

Subacute Presentation of Transverse Myelitis secondary to Neuromyelitis Optica

Gregory Wieland

An Uncommon Cause of Septic Emboli

AMERICAN HEART ASSOCIATION SCIENTIFIC SESSIONS 2020

November 13-17, 2020, Dallas, Texas

Fredrick Ogugua

Remote Monitoring using Implantable Cardiac Defibrillators for Heart Failure Management in a European Cohort: A meta-analysis

EMIRATES CRITICAL CARE CONFERENCE 2020

December 2020 Virtual

Monazza Chaudhry

Thromboprophylaxis in COVID-19

**HEART FAILURE SOCIETY OF AMERICA (HFSA)
2020 SCIENTIFIC MEETING**

September 30- October 6, 2020 Cleveland, Ohio
Virtual

Fredrick Ogugua

*Does Racial Difference Augment The Obesity Paradox
In HFpEF Patients? An Insight from the National
Inpatient Sample*

**MINNESOTA MEDICAL ASSOCIATION (MMA)
ANNUAL MEETING**

September 25-26, 2020, Virtual

Grace Braimoh

*Fossa of Landzert Herniation in a Young Woman
Presenting with Chronic Episodic Abdominal Pain*

NATIONAL LIPID ASSOCIATION WINTER MEETING

December 10-12, 2020

Kevin Buda

*Safety and Efficacy of PCSK9 Inhibitors in Homozygous
Familial Hypercholesterolemia: A Systematic Review
and Meta-Analysis*

**SOCIETY OF GENERAL INTERNAL MEDICINE (SGIM)
MIDWEST REGIONAL MEETING**

October 22-23, 2020, Virtual

Fredrick Ogugua

Acute Brain Infarct due to Large Atrial Myxoma

**SOCIETY OF GENERAL INTERNAL MEDICINE (SGIM)
ANNUAL MEETING**

April 20-23, 2021

Zachary Davidson

*Quite the Headache: A Case of ITP as Initial
Presentation of Chronic HCV Infection*



New Innovations

Creative Telemedicine Solutions Powered by Data

It was a Friday afternoon in March 2020. The scope of the pandemic was just starting to emerge, and everyone was rapidly trying to adjust to the new reality of practicing medicine with limited physical contact. At Hennepin Healthcare, like most other healthcare delivery organizations in the country, we had decided to shut down all our ambulatory services and decided to rapidly transfer almost 100% of our in-person outpatient care to Synchronous Telemedicine (telephone or video) and also scale up our Asynchronous Telemedicine services (E visits and Store and Forward). We had a sense of urgency around this rapid deployment.

I remember being in meetings for days sometimes for over 12 hours along with the Department of Information System and Technology (IS&T) Informatics teams to determine the best path forward. We were able to scale up our E-visit offerings within 72 hours of the shut down and offer full spectrum Video visits within three weeks, a process that would have normally taken over three years. It was not just a technology marvel to pull this off in such a short time line but also speaks volumes to the grit and determination of the team members who understood what it meant for our patients to stay connected to their providers and teams. Once we were able to test and deploy Telemedicine offerings we then did a phased approach starting with the highest need clinical areas first and eventually going down the list to ancillary services such as Therapies, Nutrition Services, etc., and today almost every clinical service offering has the capability of being provided over Telemedicine if the service areas chooses to do so.

With the pandemic we saw a mushrooming of Telemedicine services. Data nationally suggests that up to

70% of health systems scaled up Telemedicine services in one form or another. The gains were not only in terms of avoiding exposures by limiting patients coming into clinics and hospitals but also helped conserve PPE. This was also supported by loosening of the regulations around telemedicine and realignment of government and commercial payers to support reimbursement for these services at par with face-to-face visits.

As you can imagine, Hennepin Healthcare scaled up telehealth at a rapid pace, but what we learned over time is that standing up telehealth from an IT standpoint is the easy part; adoption by diverse populations is an entirely different challenge driven by a myriad of factors. The end result is a divide in terms of equity of access to healthcare for certain communities. Was telemedicine truly solving the challenge of access to care for our entire patient population? In fact, the concern was that it was making the gap worse. We went back to the drawing board. Telemedicine visit volumes were already a key performance metric for us, but we had never stratified those metrics by race, ethnicity, or language,



Deepti Pandita, M.D., General Internal Medicine Division and HHS Chief Health Information Officer

yet alone more nuanced metrics such as information about income, housing stability, clinical risk, and others. Our analytics team worked with our informatics team to define and add stratifications for certain population groups, so we could really understand who was using and benefiting from our services. Data can be powerful when it allows a new story to emerge, and this was a story that we had not truly examined before.

At the beginning, subdividing our metrics in this way added work for our analytics team, a tall order when the team was already stressed with reporting needs relating to the pandemic.

When our operational leaders were presented with data in a way that was simple, powerful, and consumable, that resulted in true aha moments that drove change.

For example, there was a prevailing assumption that Latinx patients were low utilizers of telemedicine generally, but the data showed that younger patients

were much more likely to engage. There was speculation that this was due to a lack of access to enabling technology in the older population, but a community needs survey revealed a much simpler problem: those patients were less likely to be proficient in English. Updating our telemedicine tools and outreach to support Spanish speakers resulted in a jump to 80% utilization, and it transformed the medical director of the clinic from a critic of telemedicine to one of our strongest advocates.

Thankfully, the story that the data told us was not too alarming. While gaps were uncovered, they were not nearly as drastic as was feared, and armed with data, we had a better understanding of the populations that needed more targeted and culturally aware outreach.

The experience of recognizing the blind spot in our data illustrated a larger concept: the need to raise that awareness across all of clinical and performance metrics. We adjusted our approach to be more deliberate, and now every time a reporting need is identified, those reports are stratified, as a matter

of course, along race, ethnicity, gender, and age. Moreover, we added pre-built populations to the data explorer tools that our physicians use, so that they too can understand if and where disparities exist across their patients.

Once we began showing these stratified metrics to our operational leads, executive teams recognized the power of data to drive our strategic direction. Thus, equity has become, not a standalone goal in its own right, but layered into every other strategic goal, be it financial, clinical, or operational.

The data also empowered our team to get creative in finding solutions. We created a custom code to translate messages via text to log into zoom into Spanish and Somali. We further leveraged this technology to do outreach with vaccines later on. We developed instructional videos in multiple languages for patients to be empowered to leverage Telemedicine. We had initially launched our Video visits to just launch via MyChart which is an English-only medium so we again did some local innovation and enabled patients to be able to do visits outside of MyChart.

The Telemedicine journey has been one of iteration, innovation, intrigue and there have been numerous learnings along the way. The most gratifying part is how our patients have stepped up and embraced this

new way of getting care. Our patient experience scores are consistently higher for Virtual care compared to face-to-face. We also have been deliberate in balancing the equity side of Telemedicine and using it as a tool to bridge gaps in equitable care as evidenced by our data rather than create a larger digital divide. We are continuously advocating for Telemedicine as a sustainable care delivery tool and as evidenced by our recent win at the Minnesota legislature our advocacy efforts paid off and we will continue to get reimbursed at same rate as face-to-face care for both audio only and audio/video visits.

While we went full steam ahead and scaled from a zero Telemedicine footprint to a sustainable viable model, much still needs to be done. A traditional and systematic approach has to be evolved incorporating activities such as strategy development, needs assessment, business cases and plans, readiness assessment, implementation plans, change management interventions, and ongoing monitoring and evaluation. Only then can we have a successful telemedicine service that is integrated into everyday clinical practice.

Deepti Pandita, M.D.

General Internal Medicine Division and
HHS Chief Health Information Officer

Project ECHO and the National Nursing Home COVID-19 Action Network

The Department of Medicine was one of hundreds of ECHO training centers that participated in the National Nursing Home COVID-19 Action Network. This national program reached over 9000 nursing homes across the U.S. with the objective of facilitating best practices for COVID-19. November 2020 was the beginning of what would become the largest surge in COVID-19 cases in Minnesota. Deaths in skilled nursing facilities rose relentlessly starting in November through the early winter months until the effects of the vaccines, available at the end of December, took hold. It was at this moment, November 9, 2020, that Hennepin Healthcare began a series of interactive, virtual learning sessions using ECHO methodology with curriculum tailored to the staff of skilled nursing facilities.

ECHO methodology is not designed as a webinar to present information. It is a series of virtual sessions involving a closed cohort of participants. The sessions create a safe forum for presenting curriculum, discussing clinical cases, and building consensus about best practices. The philosophy of “all teach, all learn” proved valuable during a time of uncertainty at the height of the pandemic.

Supported by the federal Agency for Healthcare Research and Quality (AHRQ), and in collaboration with the Institute for Healthcare Improvement (IHI) and Project ECHO at the University of New Mexico, the Hennepin training center collaborated with the University of Minnesota ECHO training center. This collaboration resulted in coordinated recruitment of nursing home participants, standardized curriculum

between the two centers and shared subject matter experts. Topics included infection prevention strategies such as surveillance and testing, as well as management of illness. The curriculum addressed nursing home staff burn-out and workforce shortages.

Nearly three-quarters of the skilled nursing facilities in Minnesota participated in the nursing home ECHO. The program was presented in weekly 90 minute sessions as funded by AHRQ, through August 31, 2021. Over 100 weekly sessions were presented by facilitators Roberta Meyers and Gregory Leierwood from the Department of Medicine with coordination provided by Deanna Bauer. The ECHO continues today with twice monthly sessions, rebranded as the Minnesota Geriatrics ECHO. A core group of interested participants share their experiences and continue to provide one another support as the pandemic persists.



Roberta M. Meyers, M.D., Geriatric and Palliative Medicine Division and Vice Chair of Clinical Affairs pictured with Gregory J. Leierwood, N.P.

The innovations key to the success of the program include the use of ECHO methodology, the ability to tailor session content and curriculum to real-life, current challenges faced by skilled nursing facility staff, and the collaboration with the University of Minnesota.

Plans are to continue the Minnesota Geriatric ECHO because of the ongoing interest of the participants and the effectiveness of the “all teach, all learn” philosophy in developing best practices in skilled nursing facilities.

Roberta M. Meyers, M.D.
Geriatric and Palliative Medicine Division
and Vice Chair of Clinical Affairs



Alvin L. Schultz Education & Research Fund



The Alvin L. Schultz Education and Research Fund was established in 2001 for the purpose of enhancing the education and research activities within the Department of Medicine.

The Alvin L. Schultz Education and Research Funds are used to: bring in well-known visiting professors for Medicine Grand Rounds and other special events including the Alvin L. Schultz Visiting Professorship and the Department of Medicine Distinguished Alumnus of the Year; support residents who present their research at regional and national scientific meetings; provide support for residents' research projects; and provide funding to enable residents to have an off-campus experience either in the U.S. or at designated international sites.

Since 2009, the Alvin L. Schultz Education and Research Fund has not received corporation grants and has depended solely on donations from the Department of Medicine faculty and alumni members to sustain this fund.

To contribute to this fund, our organizational partner, the Hennepin Health Foundation (HHF), supports and oversees philanthropic activities on the HCMC campus. You can support the Alvin L. Schultz Education and Research Fund administered by the Hennepin Healthcare Research Institute (HHRI), by making a charitable donation through the HHF website donation portal at www.hcmc.org/hhf/, or submit a check to the HHRI Account #4987, Office of Development, 914 South 8th St, Minneapolis, Minnesota 55404.

HHRI is a 501(c)3 non-profit and your charitable gift is tax deductible as allowed by the IRS.

Alvin L. Schultz Education and Research Fund 2020

In academic year 2020-2021, the Alvin L. Schultz fund did not support any resident activities due to the COVID-19 quarantines. Residents who participated in posters, oral presentations, or workshops did so virtually. There was also no resident travel as part of the Global Health Pathway. We look forward to resuming support from the Alvin L. Schultz fund for our residents in the upcoming year.

Thank you to everyone who made donations or continue to donate, making these educational opportunities possible. These experiences make it possible for our residents to continue to develop academically, making them competitive for fellowships and job opportunities. Your support is greatly appreciated.

THE FUND WILL SUPPORT THE FOLLOWING DEPARTMENT OF MEDICINE VISITING PROFESSORS:

29TH ANNUAL ALVIN L. SCHULTZ, MD VISITING PROFESSOR

Thursday, March 18, 2021

Donald Warne, M.D., M.P.H.

Director, Indians Into Medicine (INMED) & Public Health Programs, Associate Dean, Diversity, Equity and Inclusion, School of Medicine and Health Sciences, University of North Dakota, Grand Forks, North Dakota

Presentation:

"Unresolved Trauma and American Indian Health Equity"

DISTINGUISHED RESIDENT ALUMNUS OF THE YEAR

Thursday, April 15, 2021

Kevin Larsen, M.D., F.A.C.P.

Senior Vice President, Clinical Innovation and Translation, Optum Labs, Washington, DC

Presentation:

"The Role of Government and Large Corporations in the Move to Value Based Health Care"

Alvin L. Schultz Education and Research Fund 2020

Alvin L. Schultz, M.D. Visiting Professorship at HCMC was established in 1989 upon Dr. Alvin L. Schultz's retirement as Chairman of the Department of Medicine to honor his devoted service to the Department for the purpose of enhancing the education and research activities within the Department of Medicine.

ALVIN L. SCHULTZ, M.D. VISITING PROFESSORS:

- 1989 R. Gordon Douglas, Jr., M.D.
- 1990 Alvan R. Feinstein, M.D.
- 1991 Allen C. Steere, M.D.
- 1992 John M. Eisenberg, M.D.
- 1993 Stephen C. Joseph, M.D.
- 1994 Jordan J. Cohen, M.D.
- 1995 Frank B. Cerra, M.D.
- 1996 David Satcher, M.D.
- 1997 Charles H. Hennekens, M.D.
- 1998 Elizabeth Barrett-Connor, M.D.
- 1999 William P. Castelli, M.D.
- 2000 Stephen Straus, M.D.
- 2001 Nicole Lurie, M.D., M.S.P.H.
- 2002 George A. Sarosi, M.D., M.A.C.P.
- 2003 Michael Osterholm, Ph.D., M.P.H.
- 2004 Christopher J.L. Murray, M.D.
- 2005 Christine K. Cassel, M.D., M.A.C.P.
- 2006 Jeffrey Glassroth, M.D., M.A.C.P.
- 2007 Deborah Prothrow-Stith, M.D.
- 2008 Lonnie R. Bristow, M.D., M.A.C.P.
- 2009 Jeffrey G. Wiese, M.D., F.A.C.P.
- 2010 Faith T. Fitzgerald, M.D., M.A.C.P.
- 2011 William T. Branch, Jr, M.D., M.A.C.P.
- 2012 Judith Bowen, M.D., F.A.C.P.
- 2013 Edward Ehlinger, M.D., M.S.P.H.
- 2014 Victor M. Montori, M.D., M.Sc.
- 2015 David L. Battinelli, M.D.
- 2018 Sanjeev Arora, M.D., F.A.C.G., M.A.C.P.
- 2021 Donald Warne, M.D., M.P.H.

Distinguished Resident Alumnus of the Year was inaugurated in 2007 to bring former HCMC Residents who are established in their medical/research practice back to the HCMC Department of Medicine to present current topics of their expertise.

DISTINGUISHED RESIDENT ALUMNUS OF THE YEAR:

- 2007 Rosemary A. Quirk, M.D., D.T.M.H.
- 2008 Rama K. Mallampalli, M.D.
- 2009 Kenneth McQuaid, M.D.
- 2010 Hernando González Quirós, M.D.
- 2011 Robert H. Lohr, M.D., F.A.C.P.
- 2012 Sue Ravencraft, M.D., F.A.C.P.
- 2013 Karin Nelson, M.D.
- 2014 Heather Gantzer, M.D.
- 2016 David Van Dyke, M.D.
- 2017 Andrew Kamp, M.D.
- 2021 Kevin Larsen, M.D., F.A.C.P.

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Editors

Sandra M. Main
Renee L. B. Marrero
Belinda J. Rogers

Design

Lisa Haines, juju

Section Introductions

Arti Prasad, M.D.
Rosemary Quirk, M.D., D.T.M.H
Michelle L. Herbers
Chad Hood
Jill E. Kennedy
Sandra M. Main
Belinda J. Rogers

