

ANNUAL MEETING UPDATE

LOOKING AHEAD TO SGIM 2020: JOIN US IN BIRMINGHAM!

Eric Rosenberg, MD, MSPH, FACP; Ben Taylor, MD, MPH

Dr. Rosenberg (eir@ufl.edu) is professor and chief, Division of General Internal Medicine, University of Florida, associate chief medical officer, UF Health Shands Hospitals, and chair of the 2020 Annual Meeting. Dr. Taylor (bbtaylor@uabmc.edu) is associate professor, Division of General Internal Medicine University of Alabama-Birmingham, associate chief medical officer for clinical effectiveness, UAB Health System, and co-chair of the 2020 Annual Meeting.

On behalf of the 32 members of SGIM's 2020 Annual Meeting Planning Committee, we are thrilled to share our vision and progress for what will be a truly unique gathering in Birmingham, Alabama, May 6-9 to showcase how general internists are leading many of the latest innovations in health outcomes.

This year's theme—"Just Care: Addressing the Social Determinants for Better Health"—reflects the Advisory Committee on National Health Promotion and Disease Prevention for the Dept of Health and Human Services and its definition of *social determinants of health* as factors such as "family, community, income, education, sex, race/ethnicity, place of residence, and access to health care"¹ that substantially impact the likelihood of health or disease among individuals and populations. In addition to assessing and monitoring the status of these across the country, research and implementation of specific policies, programs, and educational initiatives are needed to improve overall health status of Americans and impact the ability to achieve optimal medical outcomes. Our meeting theme and annual meeting programming directly relate to SGIM's mission to cultivate innovative educators, researchers, and clinicians in academic general internal medicine to lead the way to better health for everyone.

In Birmingham, home of The University of Alabama at Birmingham—one of America's leading academic health centers—we will explore the many ways physicians can improve the health of our patients and communities. Birmingham provides an incredible opportunity for our members to bridge the theme from last year's annual meeting, "Courage to Lead," to this year's "Just Care." The legacy of the civil rights movement is palpable in this great southern city and Birmingham serves as an indelible focal point for change and a powerful indicator of how well we are progressing in medicine's efforts to promote progress, healing, and health.

Before the 2019 Annual Meeting concluded, the 2020

Planning Committee began working to craft an innovative program that continues many exciting features of past meetings while introducing new daily themes to emphasize the most critical aspects of the 2020 meeting and showcase our unique meeting location and its history.

Wednesday, May 6th: we will offer perhaps one of the most highly requested precourses ever focused on Point of Care Ultrasound (POCUS). Led by Drs. Mike Wagner and Robert Smola with additional expert faculty, the precourse will provide ample opportunity for first-hand application of cutting-edge equipment along with expertly led clinical correlation and discussion of implementation in clinical and educational settings.

Thursday, May 7th: our focus will be on civil rights and health. Dr. Eliseo Perez-Stable, director of the National Institute on Minority Health and Disparities, will be our featured plenary speaker and set the stage for an exploration of structural elements of health and disparity. In addition to the outstanding updates, workshops, abstracts, and vignettes that will be presented on Thursday, we will cap off the evening with a truly special civil rights symposium at the Birmingham Civil Rights Institute (<https://www.bcricri.org/>) adjacent to the historic 16th Street Baptist Church. Dr. Raegan Durant will facilitate a special panel of guest speakers who will highlight the past, present, and future of civil rights followed by a reception and opportunity to tour the museum. This will be a ticketed event and seating will be limited so you will want to sign up early!

Friday, May 8th: we will focus on women's health. We are very excited to feature Dr. Leana Wen, former Baltimore Health Commissioner and CEO of Planned Parenthood, as our Peterson lecturer. The evening will feature a presentation of the first episode of the Alfred I. du Pont-Columbia award-winning documentary series, *Unnatural Causes*, followed by a discussion moderated by Drs. Amy Weill and Etsemaye Agonafer. The

continued on page 2

ANNUAL MEETING UPDATE (continued from page 1)

one-hour film, *In Sickness and In Wealth*, presents a highly personal and powerful overview of how the social conditions of our lives help to determine our health status and ways in which some cities and towns are working to address these issues.

Saturday, May 9th: we will focus on public policy, change, and progress. Dr. Kirsten Bibbins-Domingo, vice dean for population health and health equity at the University of California San Francisco School of Medicine and chair of the National Academy of Medicine's Committee focused on social determinants of health and their impact on health-care delivery, will present highlights from the Academy's recent report, "Integrating Social Care into the Delivery of Health Care: Moving Upstream to Improve the Nation's Health," followed by a moderated discussion with Drs. Karen DeSalvo,

SGIM President, and Barbara Jones, chair of the Department of Social Work at Dell Medical School. This presentation will energize our membership and provide a much-anticipated capstone experience.

This will be an amazing meeting with incredible learning, inspiring discussion and shared commitment in Birmingham 2020. We can't wait to see you there!

References

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IMPORTANT DATES FOR THE ANNUAL MEETING!

Final Submission Deadline
January 16, 2020

Early Registration Deadline
March 12, 2020

Standard Registration Deadline
April 30, 2020

SGIM 2020 in
Birmingham, Alabama
May 6-9, 2020

For more information:
<https://connect.sgim.org/annualmeeting>

FROM THE EDITOR

HAPPY NEW YEAR!

Joseph Conigliaro, MD, MPH, Editor in Chief, *SGIM Forum*

As we enter 2020, *SGIM Forum* continues to present a varied and outstanding collection of articles relevant to general internists whether they be clinicians, educators, researchers, or any combination. Eric Rosenberg starts us off with highlights of the upcoming national meeting in Birmingham. It's a testimony to the hard work and ingenuity of the program Chairs and Planning Committee to consistently come up with a rich meeting agenda and program every year that is innovative and diverse. The 2020 meeting theme is "Just Care: Addressing the Social Determinants for Better Health." SGIM President Karen DeSalvo continues, as she has all year, to make us aware of the importance of the social determinants of health. She reminds us of the need to unite with non-medical partners and accept being "the spoke to a partners hub." In addition, Joseph Truglio and his colleagues describe the use of "anti-racist" techniques in selecting applicants for residency programs.

This past year, *Forum* editors solicited articles for theme issues on topics such as gun violence and point-of-care ultrasound (POCUS). We plan future issues

focused on the social determinants of health to coincide with the national meeting as well as on provider burn-out for later in the year. These calls for papers have been very successful, and we are thankful for that. One of this month's articles narrowly missed our POCUS theme issue in December. Noelle Northcutt and colleagues report on a faculty development training program for POCUS in a busy underserved setting.

This month also features a letter from David Himmelstein and a response from Jade Bedell and Adam Block on their piece "Medicare for All 2020" published in the September 2019 *Forum*.¹ Both parties add further thoughtful commentaries regarding this important issue.

Cheers!

References

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SGIM

FROM THE EDITOR *(continued from page 1)*

PRESIDENT'S COLUMN

ADDRESSING THE SOCIAL DETERMINANTS WITH PARTNERS AND HUMILITY

Karen DeSalvo, MD, President, SGIM

... partnership is such an important theme of the NAM report. It is also an essential component of the broader work we must all do to address the social determinants of health. I firmly believe that medicine, particularly academic health centers and their associated medical schools, plays a key role in addressing SDOH. However, this is not medicine's work alone, and we should lean on our partners whose skills and experience complement our own, and sometimes surpass ours.



This past November, I gave grand rounds at Dell Medical School Department of Medicine on the Social Determinants of Health (SDOH). My talk centered on the recommendations of the recent National Academy of Medicine “Integrating Social Care in to Health Care” report (NAM Report).¹

We followed the presentation with a panel discussion that included a multi-disciplinary group of leaders talking about opportunities to advance health leveraging team based approaches and community partnerships. The panel included Barbara Jones, chair, Department of Health Social Work; Jewel Mullen, associate dean for equity; Bill Tierney, chair of population health; and Keegan Warren-Clem, Medio-legal Partnership, who was also a member of the NAM Report Consensus Panel.

We did this special portion of the grand rounds because partnership is such an important theme of the NAM report. It is also an essential component of the broader work we must all do to address the social determinants of health. I firmly believe that medicine, particularly academic health centers and their associated medical schools, plays a key role in addressing SDOH. However, this is not medicine's work alone, and we should lean on our partners whose skills and experience complement our own, and sometimes surpass ours.

Medicine most naturally thinks of this work as what we can do for individual patients in our care. The team-based care approaches like those of the Patient Centered Medical Home or multi-disciplinary team rounds in the acute care setting are “go to” models. Though there are many important members of the health team, social

workers are expert in understanding and addressing the social determinants of health. “A social worker starts where the person is and helps identify what matters most to each person. That’s essential in building a health system that places value on better health outcomes based on each individual’s needs.”²

Dell Medical School is taking the team-based approach further by making structural change in the medical school. It is a bold and a first-in-the-nation approach that established a Department of Health Social Work in the school alongside Medicine, Pediatrics, etc. The work of the Department (Department) is “Advancing the Role of Social Work as an Agent of Health Care Transformation” led by Barbara Jones, a distinguished, senior social work researcher and educator from the Steve Hicks School of Social Work who was also a member of the post-Grand Rounds. The faculty in the Department is involved in all four pillars of the school’s mission. In addition to being an essential part of the team for the clinical care models and to conducting research, they also drive the interprofessional education for the medical students.³

While I am proud of the cutting-edge work of Dell Medical School and peers across the country who work to build or strengthen teamwork and partnerships to address the social determinants of health, a question we received following the Grand Rounds presentations has stuck and pushed me to question the physician/medicine centric approach that predominates. The question came from Dr. Aliza Norwood, about whom I wrote in a previous column on medical education approaches to SDOH—“if we know that social influencers have more impact on health than medicine, then shouldn’t social workers be the team leaders for our most vulnerable

continued on page 2

PRESIDENT'S COLUMN (continued from page 1)

patients instead of physicians?” She shared with me later that “the idea I was trying to convey is that I don’t think social workers should necessarily always be the lead, but for patients who have outsized barriers to health that are heavily influenced by their lived environment and social circumstances, it is incredibly difficult for a primary care physician to take the lead and address the patient’s health in a 15-minute visit, and that for many more patients than we realize, social work should be at the forefront. The result of a physician-led model in these cases is waste (ie, prescribe meds the patient can’t afford)...and higher medical costs (for the patient who gets shuttled to different referrals/services, for patient and system when they end up in the hospital because of an inability to address the social determinants causing poor health).”

Aliza’s words remind me that though I think I am an open-minded, innovative thinker when it comes to care models, like many doctors, I still gravitate towards a “medical model” for addressing health: one in which the physician is the team lead and/or the medical system the lead partner. These models are predicated on the physician-patient dyad as the “center” of the work and other members of the team support them. Aliza’s question was an important call-out for me since doctors and medicine are but one of many drivers of health and resources for our patients. If we truly want the best for them, then there may be times when we may need to step back and let others lead. This takes a lot of humility.

Stepping back and allowing others lead in the drive for health is true at the individual level. There are many times across the life course that someone’s social drivers outweigh his medical drivers. For example, in the window of interconceptional care as a pathway to reducing maternal mortality, the highest need may be for a social work expertise, not medical. The “dyad” to support could be the patient, and a social worker rather than the patient, and a physician.

This non-medical led model will also be valuable if we really want to develop upstream, preventive models that drive well-being and not just health. Take an outcome like third-grade reading level that is highly correlated with reducing inequity. Achieving an outcome like that requires a mix of policies that are outside of the direct control of medicine, like broad availability of parental leave, access to affordable early childhood education, the availability of a living wage, of safe housing, health food and quality, affordable schools. Of course, there are also clinical drivers necessary to ensuring that children reach a third-grade reading level, including meeting the vaccination schedule and assessment of vision and hearing. But in this important social health outcome, medicine is a helpmeet, and should not be the lead.

We are just beginning this exciting and important journey of addressing health beyond the traditional tools in the healthcare sphere. Medicine and physicians have very important work to play as part of the broad fabric to support our

patients and communities. As we build this work, we should recognize that we do not always need to be at the center of the work building a system in which the team members and partners are spokes on *our* hub. Medicine needs to accept that in the case of addressing the social determinants of health, we may need to be the spoke in a *partner’s* hub, which is the goal of building a model that best meets the needs of our patients as people. This will require a significant shift in our world view and I am thankful to the provocative question that has caused me to mull this. This new humility will be necessary if we are to help our patients and communities achieve their physical, emotional, and social goals.

References

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3. Dell Medical School. First-of-its-kind health social work department at Dell Medical School means better whole-person care for all. <https://dellmed.utexas.edu/news/first-of-its-kind-health-social-work-department-at-dell-medical-school-means-better-whole-person-care-for-all>. Published March 28, 2019. Accessed December 15, 2019.

SGIM

PRESIDENT'S COLUMN *(continued from page 2)*

PERSPECTIVE (continued from page 2)

- In what ways does our program perpetuate and support institutionalized racism?

Through this process, we identified several areas for growth. After the first committee meeting, it was noted that there was a concentration of power amongst program leadership, all white men, positioned at the head of the table. At subsequent meetings, “ground rules” were established to promote empowered dialogue and to encourage anyone to “call out” potential biases at play in the discussions. We have introduced universal orientation workshops and mandatory in-person anti-racist training for interviewers. Notably absent from the meetings were community members. We have since created a program advisory board, including community members and patients, more actively involved in our program’s design and recruitment processes.

We observed that traditional metrics, in particular medical school ranking, were overly represented at the top of our rank list. This prompted a reevaluation of how applicant

metrics were weighed and a restructuring of the final rank list to better reflect our program’s mission. We now have rank list reviews in each committee meeting to further redistribute power to all committee members and to foster explicit discussions of alignment of program mission with rank list.

Conclusion

Through applying anti-racism to the holistic review process, we identified multiple areas where our profession continues to perpetuate institutional racism in health care. We have also begun to move towards an anti-racist residency recruitment process. Much work remains. An explicit national conversation regarding how GME recruitment perpetuates racist structures, practices and policies is needed.

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SGIM

PERSPECTIVE

DEVELOPING AN ANTI-RACIST RESIDENCY RECRUITMENT PROCESS

Joseph Truglio, MD, MPH; Ann-Gel S. Palermo, DrPH, MPH; Leona Hess, PhD, MSW;
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Introduction

Racism is a system of structuring opportunity and assigning values based on the social interpretation of how one looks (what we call *race*). This system unfairly disadvantages some individuals and communities, unfairly advantages others, and saps the strength of the whole society through the waste of human resources.¹ Structural racism, including structural barriers, societal norms and unearned privilege amongst white students and physicians, has a particularly powerful impact on medical trainee recruitment. This has contributed to individuals and communities of color being underrepresented in medicine and medical education. Holistic review (see the table) in part aims to reduce this inequity by promoting purposeful inclusivity of metrics, experiences, and attributes that capture the mission-relevant characteristics of an applicant.² This approach prevents a disproportionate reliance on a single feature of an applicant and is considered a best practice in medical school admissions. Holistic review provides a more balanced consideration of applicant metrics than traditional approaches, yet does not explicitly address the institutional racism at the heart of racial inequities in health care. In this article, we call for the application of anti-racism to the holistic review process in residency recruitment and describe our experience in developing an anti-racist approach to recruitment for a new Internal Medicine and Pediatrics (MedPeds) program.

Anti-racism

Anti-racism is “an active and consistent process of change to eliminate individual, institutional and systemic racism” and redistribute power and privilege.³ This is done by identifying and dismantling structures and processes that perpetuate the values and norms of white dominant culture and centering the voices and experiences of those individuals and groups historically underrepresented,

and underprivileged, and under-resourced within a system.

An anti-racist recruitment process builds upon holistic review and centers marginalized and oppressed patients, community members, and applicants in the formation of the program mission and generation of the applicant metrics (see the table). The explicit aim is not simply to recruit a high percentage of applicants from backgrounds underrepresented in medicine (URM), but also to shift power in residency recruitment and training away solely from the academic medical center to the patients and communities that will be cared for by residents. The process and outcome metrics should therefore be defined and measured in partnership with those communities.

Our approach focused on three overlapping and interdependent actions: redistributing power, dismantling institutionalized racism, and dismantling personally mediated racism.

Redistributing Power

We sought to deliberately integrate power sharing throughout our process. Early on, we held a meeting of stakeholders, including local community health workers, leaders from community-based organizations, faith leaders/pastors, and patients. The group contributed to our program’s mission and identified characteristics of applicants that best aligned with this mission and reflected the experiences of the community. The product was used to inform the screening of applicants for interviews and to develop the interview sheets used to review applications and interview applicants. During recruitment, each applicant was interviewed by a physician and a non-physician representing a wide diversity of personal and professional backgrounds. Each interviewer presented their applicants and contributed to the applicant’s ranking.

continued on page 2

PERSPECTIVE (continued from page 1)

Application of Anti-racism to the Holistic Review Process	
Holistic Review Process ²	Anti-racist Review Process
Selection criteria are <ul style="list-style-type: none"> • broad-based • clearly linked to school mission and goals • promote diversity 	Mission, goals and concepts of excellence are defined in partnership with marginalized and oppressed patient populations.
A balance of experiences, attributes, and academic metrics (EAM) is <ul style="list-style-type: none"> • Used to assess applicants with the intent of creating a richly diverse interview and selection pool and student body; • Applied equitably across the entire candidate pool; and • Grounded in data that provide evidence supporting the use of selection criteria beyond grades and test scores. 	The assessment of EAM <ul style="list-style-type: none"> • Seeks to promote social and racial justice • Explicitly prioritizes stated values of patients/community • Eliminates those metrics that perpetuate structural racism and unearned privilege
<ul style="list-style-type: none"> • Individualized consideration to how each applicant may contribute to the learning environment and practice of medicine • Balancing the range of criteria needed in a class to achieve the outcomes desired by the school 	<ul style="list-style-type: none"> • Individual and structural racism explicitly included in assessment • Recognition of challenges of white admission staff and committee members in identifying and valuing the contributions of applicants of color
Race and ethnicity may be considered only when: <ul style="list-style-type: none"> • narrowly tailored to achieve mission-related educational interests and goals associated with student diversity • considered as part of a broader mix of factors 	Power and privilege (amongst applicants, faculty, and community) are universally considered and explicitly discussed in program design and while making recruitment decisions

Mitigating Institutionalized Racism

Institutional policies and practices that support prejudicial and discriminatory beliefs disadvantage some socially constructed racial groups while benefiting others. For example, preference is given to applicants who have been inducted into certain honor societies, when induction is based on standards that only the privileged and highly resourced can attain. We aimed to deemphasize those factors that were most impacted by institutionalized racism and least predictive of the characteristics we sought in applicants. The impact of racism on the Alpha Omega Alpha (AOA) selections process has been described in the literature and observed in our own institution.⁴ We therefore blinded our selections committee

to AOA status. Numerous studies demonstrating that USMLE scores are predictive only of future performance on standardized tests, and that once above a threshold of approximately 215-220, higher scores do not significantly improve this predictive value.⁵ Further, an over-reliance on such standardized exam scores perpetuates institutionalized racism embedded within educational systems—segregated housing and public school systems, access to test preparation programs, generational experience in medical education within white families, etc. We did not use USMLE scores for our initial review process. Once applicants were selected for a potential interview, the program director removed USMLE scores from their application if they

had a Step 1 score of 220 or higher. Those with Step 1 scores less than 220 were reviewed by the program director for evidence of ability to pass future licensing exams—performance on Step 2, shelf scores, and/or explicit documentation of factors that would impact their Step 1 performance (i.e., personal or family health). After this process, USMLE scores were removed.

Mitigating Personally Mediated Racism

The inclusion of multiple interviewers sought to reduce the impact of any individual's bias on the recruitment process. Our interviewers were either all implicit bias and anti-racist trainers or completed in-person or home-grown on-line implicit bias training. We blinded our interviewers to those metrics and characteristics known to trigger bias, including applicant picture, self-identified race, sex, gender and age, until the time of the interview. Committee meetings were grounded in maintaining a critical consciousness of the many biases at play, with members encouraged to openly discuss concerns around individual and institutional biases.

An Emergent Process

Anti-racism is an inherently emergent process. We engaged in continuous self-reflection, guided in part by of the below questions:

- Who determines our program's mission? Who is impacted by our program but does not have a voice in this mission?
- What voices within our institution/community are not heard in the recruitment process? What voices are over-represented?
- What assumptions are made regarding applicant metrics? How are bias and stereotyping present in this process?
- What patterns emerge in our ranking and match outcomes?

continued on page 3

MEDICAL EDUCATION

POINTING THE INDICATOR TOWARD INNOVATION: A FOCUSED POINT-OF-CARE ULTRASOUND (POCUS) FACULTY DEVELOPMENT PROGRAM IN AN ACADEMIC SAFETY NET HOSPITAL

Noelle M. Northcutt, MD; Gerard Salame, MD; Kelly E. Schoeppler, PharmD; Rebecca Allyn, MD

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Background

Point-of-care ultrasound (POCUS) is now part of the internist's toolkit. Data has consistently demonstrated internists, hospitalists, residents, and medical students can effectively learn POCUS across a spectrum of clinical applications.¹⁻³ Educating providers in POCUS during the clinical day is challenging, and educating providers during non-clinical days is in direct competition with other important priorities such as wellness, work-life balance, and childcare.

So how does a moderate-sized academic hospitalist group in a safety net hospital with minimal funding for POCUS receive an introductory experience in POCUS? We created the Faculty Development Workshop Series (FDWS) in POCUS to address this question.

Methods

The FDWS was studied with approval by the Colorado Multiple Institutional Review Board (COMIRB). The primary outcome was hospital medicine providers attending an abridged POCUS curriculum will exhibit improved POCUS image acquisition and interpretation as demonstrated by comparison of pre- and post-test scores of trainees. Trainees completed a five question pre-test to start each session and a five question post-test to end each session. The pre-test and post-test questions mirrored each other thematically but were 10 unique questions applicable to each session. Trainees also completed a FDWS evaluation survey after the last session.

A COMIRB-approved POCUS needs assessment

survey of the hospitalist group was conducted six months prior and resulted in 33 responses. The survey indicated the main motivators for POCUS training were to improve bedside education to learners as well as to increase accuracy and speed of clinical decision making. All tests and surveys were built using RedCAP and accessed using Quick Response (QR) codes embedded in audiovisual presentation material.

Target Audience and Resources

Denver Health is a 527-bed academic safety net hospital. At the time of the FDWS there were 47 clinical hospitalists: 39 physicians (MD/DO) and eight advanced practice practitioners (APPs). Three hospitalist faculty from the Denver Health Hospital Medicine group directed the FDWS; two of whom are experienced POCUS educators (co-authors NN and GS). At the time of the FDWS, the group had one cart-based POCUS device, and one portable tablet-based device with a single phased array probe. Four different industry vendors provided day-of presentation cart-based equipment for each session free of charge. Paid volunteers were used for live-scanning.

Design

We chose a duration of six one-hour sessions at the traditional lunch hour of 12pm-1pm, each 2 weeks apart. We disseminated shared expectations for the scheduled sessions to the entire group in advance of each session. Each session was 55 minutes. A prior-session review, a

continued on page 2



MEDICAL EDUCATION *(continued from page 1)*

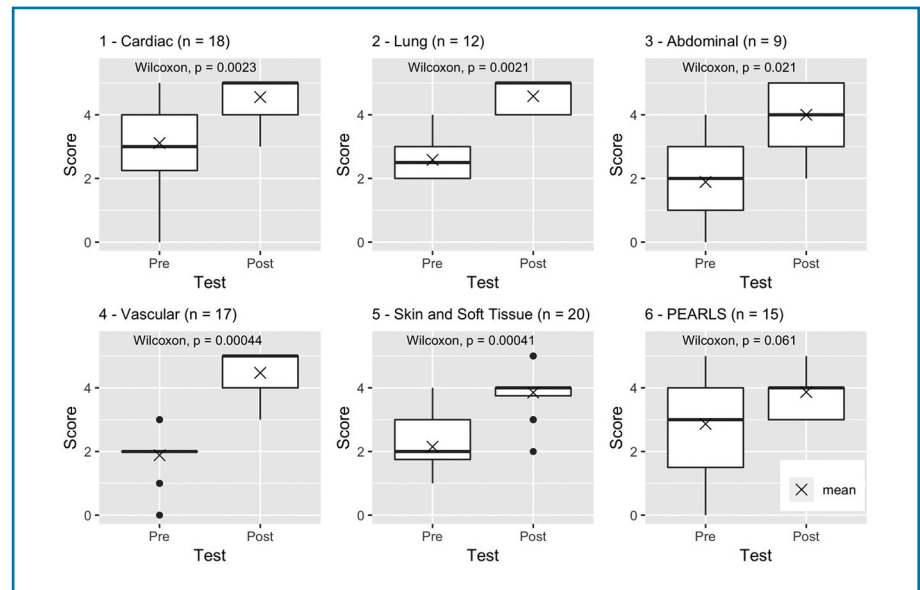
quiz, and a ten minute didactic comprised the first 20 minutes, followed by three interactive stations and a post-test for 35 minutes. We based our session structure on cumulative experience teaching POCUS courses.

Structure priorities:

1. **Each session should stand alone.** The trainee's experience is not contingent on attendance at prior sessions.
2. **Create an educational model emphasizing hands-on training accommodating trainees with various levels of POCUS learning ability.** Some users can mimic an expert with little coaching, and others require a great deal of hands-on guidance. The goal was to create enough space in the program to accommodate the spectrum.
3. **Make time management a shared priority.** The learning space was protected from unnecessary noise with phones and pagers on silent. Both didactics and live scanning of volunteers took place in a single room to avoid lost time and distraction moving between separate locations.
4. **Create space for faculty to experience uncertainty.** We excluded residents, students, and other learners from the FDWS to promote a low-stakes learning environment and maximize the amount of 1:1 expert: faculty learner hands-on time.

Curriculum

The co-directors tailored the curriculum towards a novice audience by reviewing the Needs Assessment and through their experience as educators. Focused sessions were Cardiac parasternal long axis (PLAX) only, Lung, Urinary system and Free fluid ("Abdomen" in results), Vascular (inferior vena cava and internal jugular), Skin & Soft Tissue, and the PEARLS approach to scanning for



the internist. Didactics focused on visual aids and high-yield bullet points for the abridged application being presented. Trainees then divided into three equally sized groups for the three interactive stations. Two hands-on stations involved live scanning of volunteers guided by NN and GS. The third station was equipped with a self-guided slideshow pathology review associated with the session's application. RA kept time for each session to ensure transitions occurred on schedule.

Statistical Analysis

For descriptive data, continuous variables are presented as the median (range). Pre-test versus post-test data were compared using the Wilcoxon test, and data were paired when appropriate. Data was analyzed using R studio v1.1.453 and a p-value of <0.05 was considered to be statistically significant.

Results

Twenty-eight physicians and all eight of the groups' advanced practice practitioners attended at least one session. The majority of attendees reported "No prior training" or "Less than 5 hours of prior training" in POCUS. Median pre- and post-test scores were compared by

session. Post-test scores significantly improved compared to pre-test scores at five out of six sessions (see figure). For the PEARLS session, a trend towards test score improvement was observed, but did not achieve statistical significance ($p = 0.061$).

We compared the change in pre- to post-test scores for physicians v. APPs for the four sessions that were attended by at least five APPs (Cardiac, Vascular, Skin and Soft Tissues, and PEARLS). There was no significant difference in the improvement between pre- and post-test scores when comparing APPs to physicians for 3 of the 4 sessions. In the PEARLS session, APP scores improved significantly more than physician scores ($p = 0.002$).

Twenty-six hospitalists completed the post-series evaluation: 20 physicians, six advanced practice providers; of these, 20 providers attended at least one workshop. "The design of the workshop is innovative" and "the design of the workshops respects my time" were both given "Agree" and "Strongly Agree" by 100% of respondents. The vast majority of attendees (94%) felt that the core curricular components were "highly valuable" or "valuable."

continued on page 3

MORNING REPORT

THE HYPE WITH HYPERAMMONEMIC ENCEPHALOPATHY: THE CASE OF THE CONFUSED VETERAN

Matthew Mirsky, MD; Jill Huded, MD

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(Written in call-and-response format with italicized text to be read by presenter)

A 71-year-old veteran with multiple myeloma, heart failure with reduced ejection fraction, coronary artery disease, and atrial flutter presented to a large, urban Veterans Affairs Medical Center (VAMC) from his outpatient chemotherapy infusion clinic for confusion and lethargy. He was accompanied by a close friend who provided much of the history.

Confusion, encephalopathy, acute brain failure, altered mental status, reversible dementia and acute confusional state are all terms indicating generalized brain dysfunction that is triggered by an acute illness. In an attempt to clarify these terms, diagnostic criteria for delirium were created in 1980 with the third edition of the Diagnostic and Statistical Manual of Mental Disorders (DSM). It has since been updated to the DSM-5, defining delirium as diagnostic criteria that include an acute change from baseline with disturbances in attention and cognition (ie memory deficit, disorientation, language, perception). It is critical to know what a patient's baseline mental and functional status is when distinguishing between delirium and more chronic dementia.

An elderly patient coming in with acute delirium presents a broad differential diagnosis. It is important to consider organic, modifiable causes including medications, electrolyte abnormalities, hypoxia, alcoholism, liver disease, stroke and/or infection. Additional history, examination and lab findings will further develop the differential diagnosis. Delirium has been called the "canary in the coal mine" as it is a signal of an acute medical condition warranting evaluation and treatment. The difficulty often comes in identifying the medical condition it is signaling.

Upon further questioning, the patient's friend noted a one-month decline in mentation and functional status. Prior to his decline he was living alone, driving, and

managing his own finances in an apartment with 17 stairs. At admission the patient had been living with his friend for the past "few weeks," who had taken over as his primary caretaker. He was originally diagnosed with Durie Salmon Stage IIa IgG light chain multiple myeloma three years prior and was transitioned to a new chemotherapeutic regimen of daratumumab/dexamethasone one week before admission. He subsequently became increasingly fatigued with a poor appetite. Then, while in the VAMC infusion clinic he was found to be lethargic and therefore sent to the emergency department (ED).

The presence of anorexia and a new chemotherapeutic regimen in a subacute, progressive confusion can guide a differential towards an electrolyte abnormality, infectious, or medication induced etiology of acute encephalopathy. Relative risk data shows that patient's with electrolyte abnormalities have a 1.4-5.1 times higher likelihood of developing delirium compared to 3.1 times for infection and 2.9-4.5 times due to medication.¹ All of these must remain at the top of the differential diagnosis based off of this patient's clinical history.

In the ED, the patient had a temperature 97.7, pulse 74, respiratory rate 16, and a blood pressure of 106/63. He appeared cachectic with temporal wasting and was noted to be oriented to person with tangential speech. Remote memory was intact as he was correctly able to name the entire 1955 Brooklyn Dodgers lineup. Physical exam was notable for coarse breath sounds in the right lower lobe. Further workup with a non-contrast CT head showed no intracranial process. Urinalysis was noncontributory, and comprehensive blood count was unrevealing other than a BUN of 29 and creatinine of 1.5. CT chest showed possible segmental pneumonia in

continued on page 2

MORNING REPORT (continued from page 1)

RLL. Blood cultures were drawn and the patient was started on vancomycin and piperacillin-tazobactam for presumptive hospital acquired pneumonia.

At this point a reasonable working diagnosis for this veteran would be delirium secondary to pneumonia. Delirium accounts for 30% of all elderly patients admitted to the hospital.² It is a poor prognostic indicator associated with one year mortality rates of 35-40%, higher nursing home placement (47% compared to 18%), and worse functioning/cognition.² A key concept in delirium is the idea that removal of the precipitating factor should lead to some improvement in mentation.

The patient's mentation waxed and waned throughout his admission. On hospital day three, one of two blood cultures were positive for coagulase negative staph. This was deemed a contaminant. He displayed clinical resolution of the pneumonia, and his antibiotics were deescalated to amoxicillin-clavulanic acid. On day four of his admission, a MiniCog was performed due to persistent confusion. A MiniCog is scored out of five total points with a score of 3-5 indicating a lower likelihood of cognitive impairment. The patient scored 1/5 with poor clock draw and only one word on delayed recall. This was followed by the Montreal Cognitive Assessment (MOCA), where he scored only five out of 30 potential points. Any MOCA score less than 25 is considered abnormal, suggesting some form of cognitive impairment. He received only one point for visuospatial, naming, and attention cognitive domains and two points for orientation.

It is important to reevaluate diagnoses as patient's progress through admission. This patient's presumed precipitating factor for encephalopathy has resolved and yet he is still clinically unchanged. A broader differential must be evaluated and further workup pursued.

Metabolic and hormonal contributors to delirium were evaluated, including serum vitamin B12 and TSH levels, and found to be within normal limits. CT head was repeated, this time with contrast, showing no evidence of myeloma metastasis to brain, subdural hematoma or intraparenchymal insult. Despite normal synthetic liver function, ammonia was drawn and found to be elevated to 105 umol/L (normal 11-32 umol/L). He had no prior serum ammonia levels charted. Ultrasound of the liver was then performed, showing hepatomegaly but no evidence of fibrosis. Liver synthetic function was evaluated with serum platelet count and INR within normal limits and albumin decreased to 3.1 g/dL.

Elevated ammonia with normal hepatic function is an uncommon presentation seen in patients with advanced multiple myeloma, valproic acid overdose, and various urea cycle disorders.⁴ It is postulated that in hyperammonemia secondary to multiple myeloma, the large population of plasma cells overproduce ammonia due to increased production of cytokines and immunoglobulins.⁵ Elevated ammonia is thought to cause changes in astrocyte size and function, with resulting neurologic manifestations including confusion.⁴ Hyperammonemic encephalopathy is treated with systemic chemotherapy; hemodialysis is effective only when used in concert with chemotherapy.⁵ In contrast to encephalopathy related to cirrhosis, there is no role for lactulose in treating hyperammonemic encephalopathy associated with multiple myeloma.

Lactulose was trialed, despite no direct evidence supporting its use in multiple myeloma, for five days. There was no improvement in mentation despite adequate bowel movements. Almost two weeks into the Veteran's hospital stay, repeat MOCA was performed. He continued to perform poorly with a score of 7/30. After goals of care conversations with

the patient's friend and healthcare power of attorney, it was decided to try chemotherapy again. He received daratumumab and dexamethasone on day 12. Within several days, he was noted to have improved wakefulness, attention and ability to interact. He was discharged to a skilled nursing facility on day 17 of his hospitalization with a primary diagnosis of hyperammonemic encephalopathy secondary to progressive multiple myeloma. Unfortunately, he was readmitted several weeks later with confusion and a serum ammonia level of 92 umol/L. He was enrolled in hospice and expired soon thereafter.

This case elucidates an uncommon etiology of encephalopathy as well as the challenges in treating hyperammonemic encephalopathy. Hyperammonemia is a common cause of encephalopathy in veterans; however, it is usually attributed to severe liver disease. The patient's delirium was originally attributed to pneumonia, however when his condition did not improve with antibiotics, the decision was made to workup additional etiologies eventually leading to the diagnosis of non-cirrhotic hyperammonemic encephalopathy.

Discussion

Hyperammonemic encephalopathy in progressive multiple myeloma has been documented in case reports for thirty years and is associated with a high mortality. There is no prevalence data or randomized controlled trials currently published, but the little research that has been published shows that it is more frequently seen in men and the most common subtype is IgG, as in this patient.⁵ Treatment of hyperammonemic encephalopathy involves management of underlying etiology via chemotherapy rather than symptomatic treatment with lactulose. Early workup and initiation of chemotherapeutics is critical in symptom management. With this in mind a high index of suspicion for hyper-

continued on page 3

HEALTH POLICY

MORTALITY DUE TO UNINTENTIONAL INJURY

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Unintentional injury/accident is the third most common cause of death in the United States after heart disease and cancer. Age adjusted death rate for this cause has further increased by 4.2% from 2016 to 2017 based upon the most recent data published.¹ Common causes of mortality related to unintentional injuries are poisoning, motor vehicle accidents, and falls—additional causes include homicide, Alzheimer’s disease, and Parkinson’s disease. We treat patients with heart disease and cancer, and to discuss prevention strategies for these diseases is an important aspect of our job. It would make sense to also pay specific attention to the common causes of unintentional injuries in order to try to mitigate the effects on mortality.

According to the Center for Disease Control, the total number of deaths due to unintentional injury in 2017 was 169,936; this translates into 52.2 deaths per 100,000 populations that are attributed to unintentional injuries. Within this group, most deaths are related to poisoning (64,795), followed by motor vehicle traffic (40,231) and fall (36,338) deaths. These are all alarming numbers especially when we note that number of unintentional injuries is increasing for the second year in a row. The United States is spending billions of dollars on the treatment for these conditions for example it is estimated that there were 39.5 million visits to physician offices and 29.2 million emergency room visits for unintentional injuries in 2017.

Based upon national vital statistics, the life expectancy at birth decreased from 78.9 years in 2014 to 78.6 years in 2017. One of the main explanations is increased mortality from unintentional injuries; such injuries/accidents have now exceeded chronic lower respiratory diseases as cause of death.¹ Although these numbers give rise to many questions, the most important one is what can be done to reduce these numbers. Internists, ER physicians, and hospitalists can play a special role to help reduce the number of unintentional injuries given their central role in the management and counseling for these injuries.

Many unintentional poisoning deaths are related to opioid overdose. It is a well-known fact that many adults who use prescription opioids eventually become addicted to heroin. Currently, this opioid crisis is being tackled at national and state levels. Electronic prescription of controlled substances is one such step forward with mandated electronic prescription of narcotic medications for pain management in many states. Early reports show the efficacy of this strategy. In addition, naloxone training is being offered to many patients and their loved ones to prevent poisoning deaths. Treatment of pain with mindfulness-based interventions and physical therapy may reduce opioid dependence and misuse.⁴ Physician themselves are being mindful of these facts while prescribing opioids for chronic pain, thus playing a vital role in de-escalating the opioid crisis and eventually reducing mortality.

Another important cause of unintentional injury is trauma due to motor vehicle accidents. Due to nature of the mechanism of injury and the fact that about half of these deaths occur within a short time after the injury, prevention should be the main strategy. Most people pay attention to their primary care doctors regarding disease prevention recommendations; therefore, one of the best advices given to patients could be wearing of seat belt while driving. Physicians are providing effective resuscitation in the emergency department. They can also be an advocate for road safety regulations, seat belt use, and keeping medically unfit drivers off the road.³ Encouraging use of seat belt is the single most effective way of helping drivers reduce mortality from motor vehicle accidents.⁵

Deaths caused by falls have been increasingly recognized since median age of the population is increasing over time. Each year, more than one in four older adults 65 and over will fall. Many of these falls will ultimately lead to death due to trauma, bleeding, lack of mobility, or resulting infection. Falls result in more than \$31 billion in annual Medicare costs. CDC has made STEADI

continued on page 2

HEALTH POLICY (continued from page 1)

(Stopping Elderly Accidents Deaths & Injuries) an important initiative in this regard.² This important initiative helps PCPs to follow established guidelines and use effective strategies to address fall risk.

Because of the physician-patient relationship and profound impact of patient trust on their physicians, these small steps can make a real change in safety culture in our society. We should be able to alter the trend of increased unintentional injuries by working together with state and federal agencies to regulate the use of opioid, advocating for road safety measures, encouraging the use of seat belts and preventing falls at home, nursing facilities and

hospitals. These measures will certainly help to reverse mortality from unintentional injury.

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LETTER TO THE EDITOR

CORRECTING THE RECORD ON MEDICARE FOR ALL

David U. Himmelstein, MD

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Block and Bedell's description of Medicare for All in the September 2019 *SGIM Forum* includes some important oversights, errors, and misconceptions.¹ They ignore the well-documented savings on administrative costs in hospitals and physicians' offices that could be realized by a single payer reform. For instance, Duke's health system at present employs about 1,600 billing clerks whose efforts would be unnecessary if that system were funded through a global budget rather than per-patient payments. Currently, administration accounts for one quarter of total U.S. hospital expenditures, twice the share in Canada or Scotland's single payer systems. Similarly, much of the time (and expense) doctors and their office staff devote to documentation, dealing with prior-authorization requirements, varying referral networks and formularies, and collecting co-payments would be saved. Most analyses of the costs of implementing single payer reform have concluded that savings on providers' and insurers' overhead would offset any costs of added care due to expanded and upgraded coverage.

Block and Bedell's projection of a surge in the utilization of outpatient specialist care is at odds with the findings of studies of previous coverage expansions. Physician visits, surgical procedure rate, and inpatient admissions did not increase in the wake of the implementation of Medicare or the ACA.

They imply, incorrectly, that funding for clinical care in hospitals—and hence clinicians' salaries—would decline because the prices paid for services would be below those currently paid by commercial insurers. As noted above, The Medicare for All bills in Congress would fund hospitals through global operating budgets (much as we currently fund fire departments). That payment strategy would effectively abolish "prices" for individual services—just as it makes little sense to ask the price of a fire department responding to a fire alarm. Hospital budgets would reflect the actual costs of delivering care, and substantial savings on billing and bureaucracy would allow more generous clinical funding at hospitals' current level of total expenditures.

Similarly, Block and Bedell's implication that doctors' incomes would go down ignores projections of the economic effects of single payer reform. While estimates vary, most foresee some increase in physicians' take home pay (after accounting for savings on office overhead). Canadian doctors' incomes rose substantially after single payer reform was implemented in that country.

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SGIM

MORNING REPORT *(continued from page 1)*

continued on page 3

LETTER TO THE EDITOR/RESPONSE

MEDICARE FOR ALL: A REBUTTAL TO DR. HIMMELSTEIN

Adam E. Block, PhD; Jade L. Bedell, MHA

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We are grateful for the response and detailed critique from Dr. David Himmelstein as we work towards improving health care in the United States. We look forward to continuing to read Dr. Himmelstein and colleagues' vast contributions to the health policy literature.

- 1) Dr. Himmelstein counters that new demand for services would be limited because in the past, other insurance expansions did not lead to high utilization growth. However, Medicaid payments grew by 12% in 2014, at the start of the ACA.¹ Further, a study in the *Quarterly Journal of Economics* found that coverage expansion of Medicare in 1965 resulted in a 46% increase in hospital admissions and a 28% increase in spending between 1965 and 1970.² The Medicare for All legislation would compound that because most of the population would move from large deductibles and other cost sharing to \$0 in cost sharing. Additionally, there would be a broad expansion of service coverage including home care, dental care, and long-term care services.
- 2) Dr. Himmelstein cites that we do not address administrative savings. However, savings from administrative costs were discussed in our "Medicare for All 2020" article and our estimate of 10% administrative savings was confirmed in a paper published by Himmelstein and Woolhandler in *JAMA* stating that 12% of health insurer cost is administration compared to *about 2% in Canada, and Medicare is a 10% differential*.³ *It is unclear that reduced administrative costs would exceed the increase in costs that result from increased demand caused by lowered cost sharing and expansion of coverage of services.*
- 3) While we agree that the Medicare for All bills do propose global budgets as the method to fund hospitals, government budgets are historically not "protections" for provider reimbursement rates. Government reimbursements are generally lower than commercial rates in the US and abroad.^{4,5} Therefore, we expect

lower budgets for hospitals and providers as a result of Medicare for All; and economics holds that lower wages for providers leads to fewer providers.

We believe the primary conclusion stands: the reduction in copayments will lead to an increase in demand for care while a reduction in provider reimbursements will result in a reduction in supply. These basic economics shift from our current equilibrium to a shortage of services.

Separately, having personally experienced the political challenges of passing the ACA, which impacted the health care for less than 10% of the population, advocating health reform for 100% of the population is not prudent even with a supermajority in the Senate.

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SGIM

MORNING REPORT *(continued from page 2)*

MEDICAL EDUCATION (continued from page 2)**Discussion**

Our study has three key findings. First, a focused POCUS curriculum, mindful of attendee's time, effectively improves provider image interpretation, and foundational POCUS knowledge as demonstrated by improved post-test scores. Second, physician and advanced practice practitioner pre- and post-test scores improved the same amount for the majority of sessions. Lastly, providers like this design.

We had limited resources with which to develop this FDWS. Despite this, our results demonstrate that POCUS knowledge was effectively delivered and participants rated the quality of the sessions very highly. To achieve this success, the co-directors volunteered their time to design and deliver content, maximized hands-on scanning time with a limited number of ultrasound devices, and delivered fast-paced and focused content to keep learners engaged but also limit their time commitment during a clinical day. The FDWS allowed us to identify providers keen to become POCUS champions. POCUS-Leaders in Training is now a faculty program for three providers at a time to receive intensive didactics, hands-on skills training, and image review and feedback.

We expect that physicians and APPs will utilize POCUS in the same fashion in clinical practice; therefore, we want to ensure that both groups made significant gains after attending a session. Our results demonstrate that the design and learning material accommodated both training levels.

Our study has several limitations. Some providers attended POCUS courses previous to the workshop series, but because testing data was anonymous, we did not identify which scores are associated with experience. However, data only reflects providers that took both the pre- and post-tests, which means improvements measured included both inexperienced and experienced providers. In the last session scores did not reach statistical significance which may be due to a Type II error. A control group would have been ideal to test the efficacy of the curriculum, but we did not want to deny any provider educational activity.

We set out to create a series that would give our providers an experience to prepare them to engage in future immersive courses, and expose them to the potential of POCUS in their clinical work. We succeeded in creating an accessible course, well-designed to accommo-

date our clinical services and still engage learners.

Conclusion

Effective faculty education on clinical days is challenging, but can be well attended with creative design focused on consistency and shared expectations. Physicians and advanced practice practitioners have a similar test score improvement in an abridged novice curriculum. This reproducible workshop design offers a way to improve POCUS education for hospitalists.

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MORNING REPORT *(continued from page 2)*

ammonemic encephalopathy should be given to patients with multiple myeloma admitted for altered mentation when more routine etiologies of delirium are not elucidated.

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MEDICAL EDUCATION
