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Update from the AAIM Board Chair

As we settle into a new calendar year, I have been reflecting on the true value that AAIM brings to academic medicine, ever more important as we navigate changes occurring within our health care delivery system as well as policies impacting our educational programs. Over the past several years, the Alliance has evolved into a genuine collaborative of administrators, department chairs, clerkship and residency directors, and subspecialty departmental leaders all working toward a common cause. The strength of the organization is and has always been its membership, with so many talented individuals volunteering their time and energy. AAIM has had another extraordinary year, and President D. Craig Brater, MD, shared many of these accomplishments in his December letter. I would like to take this opportunity to highlight some of the work on which the councils and AAIM committees will be focusing over the next year as they continue to promote excellence in academic medicine.

Over the past several years, the Alliance has evolved into a genuine collaborative of administrators, department chairs, clerkship and residency directors, and subspecialty departmental leaders all working toward a common cause.

The AAIM Innovation Center, chaired by Lisa Bellini, MD, continues to foster educational innovations in academic internal medicine through the highly successful Innovation Grants program. For fiscal year 2017, AAIM received 75 letters of intent, 43 of which were selected by the Innovation Grants Subcommittee to submit a full proposal, with 13 recipients announced in February. The committee is launching the new Collaborative on Learning and Work Environment Optimization, using AAIM's response to the Accreditation Council for Graduate Medical Education (ACGME) request for feedback on resident duty hours as a framework. AAIM continues its support of the Collaborative on Healing and Renewal in Medicine (CHARM). CHARM is composed of students, residents, and faculty as well as other partner organizations. The group recently completed a charter on physician well-being, and it is currently also writing a white paper to guide the conduct of high-quality research on learner wellness, developing an annotated bibliography of published interventions and best practices, and creating faculty development modules. In addition, the newly established AAIM Wellness Committee, chaired by Gopal Yadavalli, MD, after receiving input from each of the association councils, has decided that its initial focus will be on wellness activities at AAIM conferences, addressing culture in institutions that contribute to burnout, administrator and staff wellness, compiling best evidence, and advocacy for promoting wellness.

The AAIM Education Committee, chaired by Heather Laird Fick, MD, submitted a formal position on the second phase of the review of the ACGME Common Program Requirements, and is currently working on focused faculty development as well as an expansion of the curated milestone evaluation exhibit. The AAIM Diversity and Inclusion Committee, led by Maria Maldonado, MD, is partnering with the education committee on a position paper about the inclusion of cultural competency and humility in the undergraduate and graduate medical education curriculum, and is additionally focusing efforts on best practices for diversity in recruitment, retention, and promotion. The AAIM Health Care Policy Committee, chaired by Susan Lane, MD, is in the process of developing advocacy online resources in addition to monthly blogs.

The AAIM Research Committee, chaired by Robert A. Salata, MD, is completing its preparation for the Residency Research Pathway Directors Summit that will take place in conjunction with Academic Internal Medicine Week 2017. The committee recently submitted a manuscript on the physician-scientist workforce as well as a paper on best practices in resident-driven research. A new medical education research subcommittee has also been formed and is exploring a collaboration with the innovations committee to support new scholars through the grants application process. The AAIM Medical Student to Resident Interface Committee (chaired by Steven Angus, MD) is continuing its work on the subinternship and fourth year curricula. The AAIM Resident to Fellow Interface Committee (chaired by Elaine Muchmore, MD) has finalized its manuscript on program fellowship letters, and continues its advocacy for a uniform fellowship start date. The AAIM Member Engagement Committee (chaired by Jonathan Meyer) is continuing work on developing an ambassador program and is examining the AAIM Mentoring Program. Last but by no means least, special thanks goes out to the AAIM Educational Program Planning Committee, chaired by Dominick Tammaro, MD, which, along

with each of the constituent program planning teams, has organized a fantastic program for our newly configured Academic Internal Medicine Week (March 19-22, 2017, in Baltimore, MD).

Our councils have been equally busy. APM (under president Mary Klotman, MD) is working on highlighting the roles of vice chairs of research and of education within departments. CDIM (led by president L. James Nixon, MD), is contemplating a revision of its curriculum, completing its highly popular annual survey, and working on collaborations with the National Board of Medical Examiners. APDIM (with president Brian M. Aboff, MD) is focusing on milestone reporting, in addition to faculty development on topics including burnout, educational leadership, and milestone assessment. ASP (led by president Patty W. Wright, MD) has proposed the formation of a fellow/resident-to-faculty/practicing physician interface committee and has begun work on a position paper addressing medical leave policies. AIM (via president Musty Habhab) will be releasing its updated *Administrator's Guide* and 2017 AIM Salary Survey in late spring.

With a growing membership and expanding scope of activity, the Alliance will be undergoing a process of strategic planning over the next few months to determine how best to direct efforts going forward and thus position ourselves for the most impact on the future of academic medicine. It will allow us to prioritize our many initiatives as well as maximize the synergies across constituent councils and committees and also engage new members in the work to be done. Watching AAIM grow into an organization that has a tremendous impact on the national stage has been so rewarding, but perhaps even more important is the value that AAIM has provided and continues to provide to countless individuals in terms of their own career trajectory and professional development.

In closing, I continue to feel privileged every day to work with a group of such inspirational and hard-working individuals, and want to express my appreciation to all of our volunteer leaders and to our members as well as to the outstanding AAIM staff. As I prepare to soon transition off the board after a five-year stretch, your support trust has meant a great deal to me. I look forward to many exciting adventures ahead.

Sincerely,

Sara B. Fazio, MD
Chair, AAIM Board of Directors

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Alliance for Academic Internal Medicine
330 John Carlyle Street
Suite 610
Alexandria, VA 22314

Telephone: (703) 341-4540
Fax: (703) 519-1893
Email: AAIM@im.org
Website: www.im.org

AAIM is a consortium of five academically focused specialty organizations representing departments of internal medicine at medical schools and teaching hospitals in the United States and Canada. AAIM consists of the Association of Professors of Medicine (APM), the Association of Program Directors in Internal Medicine (APDIM), the Association of Specialty Professors (ASP), the Clerkship Directors in Internal Medicine (CDIM), and the Administrators of Internal Medicine (AIM). Through these organizations, AAIM represents department chairs and chiefs; clerkship, residency, and fellowship program directors; division chiefs; and academic and business administrators as well as other faculty and staff in departments of internal medicine.

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An Individualized Approach to USMLE Step 2 Clinical Skills Remediation

A passing United States Medical Licensing Examination (USMLE) Step 2 Clinical Skills (CS) grade is required for acceptance into an accredited residency, with a number of programs considering this score when deciding which applicants to interview or rank in the National Resident Match Program (1). For almost all specialties, matched applicants made fewer attempts on Step 2 CS than those who did not match (2). Between 2013 and 2015, the average retake pass rate for this test was approximately 84% (3). Clearly, students need remediation programs to prepare students for the retake of this high-stake, expensive exam. Unfortunately, publications or programs for guidance are lacking. East Tennessee State University Quillen College of Medicine developed a program to assist students who need to retake the exam.

When a student fails Step 2 CS, he or she is advised to seek remediation assistance from the Objective Structured Clinical Examination (OSCE) director. Because the only feedback USMLE provides is performance bands for the three scoring subcomponents (spoken English proficiency, communication and interpersonal skills [CIS], integrated clinical encounter [ICE]), a detailed assessment is initially necessary to identify problematic areas. The first step therefore is a faculty-observed OSCE modeled after the exam. The director creates the standardized patient (SP) training materials, a "gold standard" note, encounter rubrics, a patient note rubric, and a door chart all with input from a clinical faculty team. We have trained two SPs with readily available schedules to assist with these encounters. The OSCE employs the same time restrictions and remaining time announcements as the USMLE exam (4). The note is documented using the online Step 2 CS interactive patient note template (5).

During the simulated encounter, the OSCE director completes the CIS encounter rubric to rate questioning skills, information-sharing skills, and general professional manner and rapport. As an additional piece of the CIS subcomponent score, the SP completes a post-encounter feedback form rating rapport and professionalism. While viewing the encounter, the director also completes an ICE encounter rubric assessing information-gathering ability, physical exam skills, attention to patient comfort, and organization and flow. After the student writes the note, the director completes an ICE patient note rubric based on the USMLE patient note format. The ICE encounter and note rubrics can be compared to differentiate between a data collection issue during the encounter and a lack of documentation of information collected from the patient. Immediately following this initial encounter, the director provides feedback related to the ICE and CIS subcomponents and reviews the rubrics with the student.

An independent remediation plan is then generated to address deficits in both areas; the focus is not solely on the subcomponent identified in the initial assessment OSCE. The plan consists of independent work and additional sessions with the necessary faculty and is modified throughout the process in response to ongoing assessment and feedback.

Independent work is feedback driven and includes review of the student's OSCE video encounters and performing practice cases with peers. Immediately following each OSCE, the director provides a feedback summary, with a link to the encounter video, to the student and to all faculty members assisting with the remediation. It is highly recommended that the student view each encounter, observing for identified behaviors or deficits, before the next practice OSCE. The student is instructed to work with a peer to review cases from a commercially available review book, while applying the Step 2 CS time constraints and documenting the note using the online Step 2 CS template (5). The note and encounter are then reviewed using the review book sample note and encounter discussion.

Faculty assistance is provided based on the student's needs. Participating faculty members are trained in Step 2 CS expectations as OSCE facilitators. Additional tools that may be used include observed live patient encounters, additional OSCEs, and applied (problem-focused) sessions with SPs. When issues with physical exam technique are identified, the student works with the physical exam course director for repetitive physical exams in the clinic; the instructor provides feedback after each encounter. When organization, flow, and attention to patient comfort are identified for improvement, an SP-applied session with the OSCE director is arranged. The director selects various presentations and provides feedback as the student moves through the focused physical exam on the SP.

All participating students perform additional faculty-observed OSCEs structured the same as the initial OSCE. All encounter video links are sent with the feedback summary for review by the student and all involved faculty. When CIS is identified as needing improvement, multiple repetitive sessions are included in the remediation plan. Repetitive simulated encounters have been especially helpful when behavioral changes (attention to patient comfort, interruptions, responding to emotions) are required. Difficulties with clinical reasoning are frequently identified when students attempt to justify diagnoses with supportive findings from the history and physical (regardless of the failed subcomponent). In addition, unclear understandings of expectations for supporting differentials are frequently observed, which contributes to poor performance in this area.

OSCEs are typically one week apart, between which independent case work provides a chance for formative

review. Near the retake date, a final session (one or two OSCEs) is scheduled, where student goals are to obtain a 60th percentile score on ICE rubrics and 70th percentile score on CIS rubrics, based on internal range, median, and variance data.

Additionally, test anxiety should be acknowledged as a problem. A number of students reported feeling confident immediately after their initial Step 2 CS exam, despite failing. Following the retake, these same students reported a strong certainty of a second failure because they could identify numerous areas for improvement during the encounter and patient note, despite eventually receiving a passing score. It is important to share this kind of information with students during the final session to help mitigate the overwhelming sense of failure that can follow the retake. Two of the seven students remediated so far have also reported benefit from counseling through the university assistance program.

Observation and feedback from faculty aware of the Step 2 CS expectations as well as OSCEs and rubrics designed to model the CS format were the key elements intentionally employed in each individualized remediation program. The sample size is small, but over the three years since implementation, all eight students completing this remediation program passed the Step 2 CS on their first retake attempt. Faculty involvement is key, and time is often limited before the retake must be scheduled. Having designated, trained faculty to coordinate the process has been beneficial to the development of these remedial programs.

AUTHOR

Caroline Abercrombie, MD
OSCE Director
Office of Academic Affairs
East Tennessee State University Quillen College of Medicine

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How Research Residencies Can Expand and Sustain the Physician-Scientist Workforce: "Best Ideas" from a Special Session of the 2016 APM Winter Meeting

In 1995, the American Board of Internal Medicine (ABIM) piloted a program to create a sustainable physician-scientist workforce. This "ABIM Research Pathway," or Physician-Scientist Training Program (PSTP), has since graduated more than 1,000 physician-scientists, about 80% of whom have gone on to successful careers in academic medicine. This success has been well documented (1,2), most recently in the National Institutes of Health (NIH) *Physician Scientist Workforce Working Group Repor*t (3).

In contrast to the well-grounded Medical Scientist Training Program (MSTP), PSTP engages the more mature and committed practicing physician, who often has translatable questions and therefore, following a research-intensive fellowship, is ripe for a faculty appointment. This model is utilized widely in Europe, particularly in the United Kingdom, where research training is undertaken after medical school, either before or after core clinical years. Despite these successes, complexities encountered in the pursuit of a career in academic medicine coupled with an aging physician-scientist workforce and the paucity of innovative strategies addressing challenges has generated well-justified concerns as to whether a plan to replenish, grow, and sustain the physician-scientist workforce is achievable in our current health care environment.

The 2016 APM Winter Meeting dedicated several sessions to novel ways of growing the physician-scientist workforce and capitalizing on PSTP successes. Sessions reviewed many of the challenges facing residents in this pathway, including a difficult funding climate, increased time of training, and lack of adequate diversity, as well as forgoing the financial benefits offered in private practice and industry. A special session, featuring a panel of academic leaders from Ohio State University, Duke, Vanderbilt, and Mount Sinai, focused on generating best ideas to approach the complex problem of growing and sustaining PSTPs. The panel provided an overview of the unique elements within each respective PSTP and broad discussion led to four sets of "best ideas" and recommendations.

1. Establishing New PSTPs

Getting a new PSTP off the ground presents financial and logistic challenges, but the return on investment is significant. Strategies aimed at targeting buy-in from all internal medicine subspecialties, several of which are geared toward procedure-focused training, must address unique elements for training within each subspecialty. Furthermore, methods that have worked well at established PSTPs, such as personalized mentoring and networking strategies, should be applied to emerging programs. At Vanderbilt, the Tinsley Harrison Society provides PSTP participants with a community, stipend and academic support, exposure to visiting professors, access to a repository of successful grants, and internal peer review. Similarly, at Duke, the Robert J. Lefkowitz Society brings together residents and fellows pursuing research-intensive careers across all departments to promote peer-to-peer mentoring, faculty engagement, and academic and career development support.

The key, however, is to expand the physician-scientist pipeline even before students graduate from medical school. Strategies for creating a cadré of "home-grown" physician-scientists could include identifying worthy candidates early during medical school, facilitating their exposure to highly productive laboratories with a track record of high-quality mentoring and providing focused advice on the physician-scientist trajectory. One approach is to encourage a dedicated year in biomedical research for interested non-MSTP students, such as the highly competitive Howard Hughes Medical Institute Medical Research Fellows Program. Candidates should also be encouraged to attend national conferences, such as the joint meeting of the Association of American Physicians, American Society of Clinical Investigation, and American Physician-Scientists Association, unrivaled opportunities for networking with the country's most gifted mentors. The Interurban Clinical Club recently invited (for the first time in its 110-year history) the participation of medical students as Jon Epstein Scholars (4). Finally, PSTP directors and leaders should collaborate at the national level to create best practices and with department chairs maximize opportunities to identify PSTPs at an early stage.

2. Expanding the Pool of PSTP Applicants and Attracting Talent

Encouraging greater participation in PSTPs has been a challenge in some areas of the country. The difficult funding climate and numerous logistic and real-life issues faced by physician-scientists discourage many of our most promising young physicians from entering a research-intensive career. Instead, they become motivated to pursue lucrative subspecialty practice-based or more flexible "lifestyle-friendly" specialties. More effective outreach to targeted groups of students in select undergraduate programs that encourage pursuit toward a research career, such as the Peer Mentorship program at Duke, could assist in populating the physician-scientist pipeline early. Furthermore, highly

qualified international medical graduates have often successfully transitioned into PSTP. At Ohio State University, this recruitment model has evolved to incorporate targeted outreach to key European programs. In addition, sustained effort to increase diversity via targeted recruitment of women and underrepresented minorities remains an imperative.

Programs focused on providing formal PhD training for residents and fellows in categorical programs, such as the Specialty Training and Advanced Research (STAR) Program at University of California, Los Angeles, the Stanford University program, and the Physician Scholars Program at Mount Sinai often draw promising candidates into research training. Vanderbilt is piloting a program that would allow MSTP candidates to short-track through residency and obtain their PhD during fellowship research years. The advantage of these programs is their ability to customize research around clinical training in a way that satisfies both graduate medical education and graduate school requirements, with the idea of producing a pool of MD-PhDs who can be graduated into a faculty position. However, the strategy requires careful calibration between the timing of and schedules for clinical and research activity as well as the ability to find a higher level of salary support beyond the duration of traditional clinical training. The STAR program has produced more than 130 such graduates, 80% of whom have continued in academic medicine.

3. Identifying and Defining Funding Mechanisms

PSTPs will require dedicated funding not only during training, but also as participants transition into junior faculty positions. These mechanisms include the new "K" award with acceptable pay lines, which does not require awardees or applicants to forgo their "new investigator" status and furnishes support that lasts long enough to facilitate R01 grant submission and thus reduces the K to R01 gap. This new K award should also enforce research protected time of at least 75% effort. The amount of loans forgiven through loan repayment programs also requires reassessment given the increased medical education costs and length of physician-scientist training. Faculty leading PSTPs also need mid-level NIH support and incentives, particularly since the K24 does not apply to mentoring physician-scientists.

4. Promoting Interaction through PSTP Consortia

An acute need exists for the regular assembly of PSTP directors to discuss novel ideas that will enhance the size and quality of the physician scientist workforce. Perception that this model will foster competition among PSTPs needs to be countered with the reality of the growing problem of replenishing a diminishing workforce. For the first time, AAIM will sponsor a Research Pathway Directors Summit in March 2017. This encouraging move will assemble leaders of both established and emerging PSTPs to discuss new ideas, provide guidance, and hopefully move the field forward toward a sustainable plan to grow and cultivate future physician-scientists. Indeed, Milewicz et al (5) have correctly emphasized the importance of the academic community acting now, together with NIH and other foundations, such as the Doris Duke Charitable Foundation, to address challenges facing young physician-scientists. With what appears to be sufficient momentum, the time is now ripe to rekindle a tangible effort that will grow and sustain the physician-scientist workforce.

AUTHORS

Robert A. Baiocchi, MD, PhD
Associate Professor
Department of Internal Medicine
Ohio State University College of Medicine

Lapo Alinari, MD, PhD
Assistant Professor
Department of Internal Medicine
Ohio State University College of Medicine

Michael Grever, MD
Chair
Department of Internal Medicine
Ohio State University College of Medicine

Nancy J. Brown, MD
Chair
Department of Medicine
Vanderbilt University School of Medicine

Mary E. Klotman, MD
Chair
Department of Medicine
Duke University School of Medicine

Mone Zaidi, MD, PhD
Professor
Department of Medicine
Icahn School of Medicine at Mount Sinai

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Building Interprofessional Education into Your Curriculum

As the health care system in the United States evolves, more and more emphasis is placed on collaborative care—utilizing multiple health care professionals to work effectively in teams to deliver high-quality patient-centered care. Unfortunately, much of medical (and other professional) education has remained in silos, lacking deliberate interprofessional learning activities. Traditionally, interprofessional education is an experience in which two or more learners from different professions learn with and from each other. By incorporating increased interprofessional education into medical education, we can enhance learner ability to optimize collaborative practice in which multiple health professionals from different backgrounds work together with patients, families, and communities to deliver the highest quality of care.

Licensing bodies and professional organizations have incorporated interprofessional education and collaborative practice into their standards. The Liaison Committee on Medical Education (LCME) Standard 7.9 describes the need to prepare medical students to function collaboratively on health care teams via curricular experiences including practitioners or students from other health professions. This need is further underscored by the Association of American Medical Colleges Core Entrustable Professional Activities for Entering Residency 9—collaborate as a member of an interprofessional team. Finally, American Board of Internal Medicine Milestone 8—works effectively within an interprofessional team—further reinforces the importance of deliberate interprofessional education and assessment opportunities throughout the internal medicine education spectrum. These professional standards can be utilized by interested faculty when requesting resources and time for interprofessional education at their institutions. Physician training is not alone in mandating interprofessional opportunities. Nursing, pharmacy, physical therapy, and others have educational standards related to collaborative learning and practice.

One of the barriers often faced by internal medicine clerkships when incorporating interprofessional education into the curriculum is a lack of other professional learners. Even then, the spectrum of undergraduate and graduate medical education is ripe with opportunities for interprofessional education. Internal medicine clerkships and residencies afford many easy opportunities to collaborate with other health care professionals and learners to intentionally teach and evaluate using the core competencies of interprofessionalism. For example, settings without any other professional learners can utilize the professional staff (nursing, physical therapy, and the rest) to create an interprofessional experience. Interprofessional activity can be incorporated into patient care or activities in a classroom or simulation lab.

When designing interprofessional learning and assessment activities, it is helpful to utilize the four competencies published in *Core Competencies for Interprofessional Collaborative Practice*, updated in 2016 by the Interprofessional Education Collaborative (1).

Roles and Responsibilities

The most basic of the four core competencies is roles and responsibilities within the health care team. An individual must learn his or her own and the rest of his or her teammates' roles before engaging in collaborative practice.

Communication

The most obvious and frequently utilized of the competencies is interprofessional communication, which can be taught via workshops and reinforced in simulation or real-world clinical scenarios. This competency is also ripe for evaluation of advanced learners (subinternship and resident level) via 360-degree evaluations including the nursing staff and other professions.

Values and Ethics

The third competency, interprofessional values and ethics, regards learning mutual respect for other professions and shared values in patient care and teamwork. This competency can be underscored in debrief sessions and other discussions where learners can share their experiences in interprofessional teams and learn more about their teammates.

Teams and Teamwork

The final competency of teamwork allows learners to develop team skills, resulting in the provision of safe and effective patient care. Teamwork can be taught in many different ways, including workshops, simulation, or team-based problem solving. Team skills can be evaluated using validated tools such as the *Jefferson Interprofessional Observation Guide* (2); this tool and other helpful resources are available at the NEXUS website (nexusipe.org).

Finding Opportunities

The first step in designing interprofessional learning and assessment opportunities is reaching out and learning more from faculty members in other professions in the institution. Often, these meetings result in finding many common learning objectives that can be easily combined into interprofessional activities. Since training in internal medicine benefits from ample patient care opportunities, real-world scenarios are easily used when designing curriculum or assessment plans.

Some competencies, such as acutely ill patient care or code-based teamwork framing the debrief periods, are best taught and evaluated in a simulated environment to underscore the four competencies. Classroom-based workshops and problem-solving sessions bringing together learners from multiple professions allow more exploration of values, ethics, and communication skills. Educators can use ethical discussions, patient safety root cause analyses, or simply discussion of the learner training as tools in the classroom. Finally, one of the simplest ways to allow for interprofessional learning is exploration of other professions roles and responsibilities through shadowing on the wards (for example, following a physical therapist for a few hours) followed by deliberate reflection. Incorporating simple interprofessional education and assessment opportunities into our curriculum will allow for a richer learning environment providing our learners the opportunity to grow and excel as they progress into their own interprofessional collaborative practice.

Take-Home Points

Many opportunities exist for incorporation of interprofessional education and assessment into both undergraduate- and graduate-level internal medicine training.

Utilize the four core objectives in *Interprofessional Collaborative Practice* (roles and responsibilities, communication, values and ethics, teams and teamwork) when designing curriculum and assessment tools.

Interprofessional activities can take many different forms and all start with forming relationships and sharing objectives with faculty in other professions at one's institution.

AUTHORS

Christopher Bruti, MD
Associate Program Director
Department of Internal Medicine
Rush Medical College of Rush University Medical Center

Diane L. Levine, MD
Clerkship Director
Department of Internal Medicine
Wayne State University School of Medicine

Michael McNeal, MD
Associate Clerkship Director
Department of Medicine
Texas A&M Health Science Center College of Medicine

Christiana Renner, MD
Assistant Professor
Department of Internal Medicine
University of Texas Southwestern Medical Center at Dallas, Southwestern Medical School

Amy Blatt, MD
Assistant Program Director
Department of Internal Medicine and Pediatrics
University of Rochester School of Medicine and Dentistry

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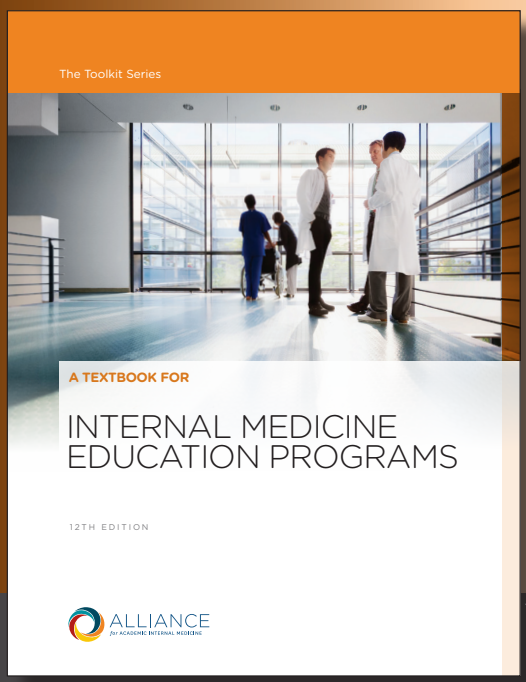

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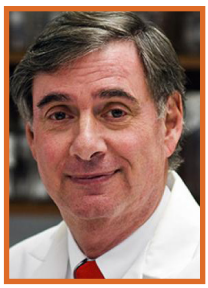
COMING SOON . . .

AAIM Interviews Lee Goldman, MD, MPH



A former APM President, Lee Goldman, MD, MPH, is Dean of the Faculty of Health Sciences and Medicine at Columbia University School of Medicine and Chief Executive at Columbia University Medical Center. His interviewer is Paul B. Aronowitz, MD, Clerkship Director in the Department of Medicine at University of California-Davis School of Medicine. He is a past president of APDIM.

What was your earliest leadership experience?

As an undergraduate at Yale University, I ended up getting a job helping to run a student agency that was in charge of the student laundry—doing the books, making sure the laundry got picked up, and so forth. That was really my first leadership role because as sophomores we supervised the freshman and as juniors we supervised the sophomores and freshman.

My first leadership role in academia came during my second year on faculty at the Brigham. Harvard was starting a general medicine fellowship after receiving a grant from the Kaiser Foundation. Though quite junior on the faculty, I ended up running the fellowship program and I quickly learned that one could be very generous in helping people develop their own careers while also benefiting from the fact that a large number of fellows were working with me doing research.

What were some of your earliest lessons in leadership?

It's easy to lead but it's hard to get people to follow. You have to create an environment where those being led see that following is beneficial to them. I learned early on that it has to be a two-way street. You have to create an environment where those being led feel like you're trying to help them succeed. If it looks like a leader is trying to "feather his or her own cap," that leader doesn't get very far.

What word or words best encompasses your leadership style?

Optimism closely followed by the word competence. It's very important for people to believe that those leading have a certain level of competence. It's also very important for people to believe that things are always going to get better, that people are succeeding, and that everyone will succeed together. You can't be a "glass-half-empty person" because that view will pervade the entire institution that you're leading.

What's your favorite part of your current job?

Growing up, I always thought the best job in the world would be to be the general manager of a Major League Baseball team—recruiting and grooming talent. And that's the aspect I enjoy most about my job—recruiting people and providing enough of what they need so that they can be really successful. I strive to create a culture in which people want to come to my institution because they know they can realize their dreams here.

What do you look for in people you're recruiting to your institution?

It sort of depends upon the position, but it's usually about finding people whom I believe have the energy, commitment, and skills to be successful. If we're recruiting for a researcher, that person has to be able to get grants. If we're recruiting a clinician, that person has to be able to bring in patients regionally and maybe even nationally. If that person is an educator, that person has to have the skills to inspire learners.

Do you have any favorite interview questions that you like to ask?

I feel like I'm a pretty good interviewer but I learned a long time ago that the value of the interview is dwarfed by the calls that I make to people who know the applicant better than I do. I've met people who were terrific in the interview but that was their only high point. I've also met people who were consistently underestimated in their interviews because they lacked pizzazz, but their substance was noted to be really extraordinary when I started calling around to people that knew them. What helps me the most is making these phone calls to as many and as diverse a group of people that know applicants as possible. One shouldn't overly rely on the interview for getting to the substance of an applicant. Intuition about people will only get you so far.

For interview questions, I like to ask people what accomplishment they are most proud of, what their greatest career disappointment has been, and I ask them to tell me about the people they have mentored. I'm always looking for people that can help others develop their careers; I'm always skeptical about people that haven't helped to mentor and develop other people's careers.

What's the least favorite part of your current position?

My least favorite part of any leadership job I've ever had is saying "no." You've got to be able to say no. It's really fun to say yes, but saying no is hard. Ultimately, the way one influences any organization is by making choices. Hopefully, you're right more than you're wrong. If all your responses are "yes," you will not have used your judgment at all and you and the organization you run will not succeed.

What's the greatest misperception that people have about you?

My reputation is that I'm not warm and fuzzy. But not being warm and fuzzy doesn't mean I don't care deeply about people.

What thing in your career are you most proud of?

I'm most proud of the success of people who either trained under me or that I helped to develop their careers. I'm also very proud of one of the fields I helped develop: clinical epidemiology, now called outcomes research. The people I trained helped move outcomes research into the mainstream of medicine.

Of all the things you have participated in during your career, to which do you feel like you contributed the most?

There are a few areas, including the creation of the clinical effectiveness program at Harvard, which has trained thousands of people in epidemiology and health services research. It has had a tremendous impact on the field of medicine. I also think my desire to bring health services research into cardiology and make it mainstream was quite important. There was also the creation of the first academic hospitalist program in the United States at University of California, San Francisco—it has had a huge impact on how medicine is practiced at almost every hospital in the country.

How do you make sure you're staying in touch with what's happening in the "trenches" in the medical school and the clinical arena?

It's hard because a medical school is so diffuse. I like to get out of my office and go meet with the department chairs once each year. The delicate balance is to get out there and meet with people—faculty, chairs, students—but without undermining the authority of the people that report to me. I can't ask someone to be responsible for something but not give them the authority to run it. I have to be very careful not to micromanage the talent in my organization. I'm dealing with people who know a lot more about their specific areas than I do. I'm there to help these talented people with common sense areas but not interfere with their pure content knowledge.

For interview questions, I like to ask people what accomplishment they are most proud of, what their greatest career disappointment has been, and I ask them to tell me about the people they have mentored. I'm always looking for people that can help others develop their careers.

What's it like getting feedback from you?

I think people who get feedback from me have to have enough ego strength and thick enough skin that they don't think every suggestion is a threat to their being. I can't help people if I don't give them feedback. Hopefully, I'm supportive and helpful and they know I want them to succeed.

What are you passionate about?

I love it when the organization is successful. Whether it's moving toward a 16-month preclinical curriculum or instituting mandatory scholarly projects, I love being part of these successes. Seeing someone get their first grant and how thrilled they are at getting that grant. I most enjoy seeing people with talent meet and exceed expectations.

What words of advice do you have for junior faculty who aspire to be leaders?

I would say what I say to people all the time—leadership roles tend to come to people who are seen as having achieved something and helped people. Those are the people that tend to get asked to take on leadership roles. I would advise against starting off a career saying, "I want to run stuff." My advice is for people to follow their dreams, do what they do well, and then if these actions catch their supervisors' attentions, they then will be asked to get involved in leadership positions.

Internal Medicine Primary Care Training: Time to Change

Introduction

The practice of medicine and the role of primary care (PC) are expected to change dramatically over the next decade. PC physicians will have unprecedented opportunities to lead the redesign of health care systems toward improving individual and population health, but the field faces a shortage of providers (1-3). Internal medicine PC training programs can play a crucial role in addressing projected shortages and filling the need for internists with skills in population management, interdisciplinary teamwork, and quality improvement. By nurturing the growth of future PC internists, educators can influence the short- and long-term choices made by learners. At this time of great opportunity, however, we must change our fundamental approach to training future PC internists or risk obsolescence.

PC Drift

Over the past 30 years, medical students and residents have drifted away from PC careers (4-5). Contributing factors include negative perceptions toward PC, increasing salaries for specialists, the growth of hospitalist practices, and greater focus on quality of life by trainees. We often hear of the hidden curriculum (bias) against PC that permeates many medical schools and residencies. Instances like Warm and Goetz's story of a medical student being told that he was "too smart for primary care" could happen anywhere (6). This bias originates for many reasons, including pay differentials between specialists and PC providers, possible work-life balance issues, and perceived prestige of specialty choices. Learners at all levels quickly pick up on cues and viewpoints from students, residents, and attending physicians. Even a passing comment can leave a lasting impact on the career decisions of our residents.

Within residency training programs, fewer residents are choosing PC. In 1998, 54% of internal medicine residents were planning PC careers compared with 21.5% in 2011 (5). Even within PC tracks, the numbers of residents choosing to practice ambulatory care after graduation vary from program to program. A recent study of PC training program alumni found only 54% spent most of their time in outpatient settings (7). At a time when more Americans have access to PC and the role of the general internist in health care redesign is growing, our pipeline is threatened. One study estimates that the United States needs to increase its PC resident production by 21% to meet the expected need for 44,000 PC physicians in 2035 (2). As alluded, the absolute number is but one issue; whether we can meet this goal, we must also ensure that our graduates are prepared to practice and lead in redesigning health systems.

At a time when more Americans have access to PC and the role of the general internist in health care redesign is growing, our pipeline is threatened.

Joy in Practice (Higher-Functioning Resident Clinics)

Outpatient training experiences significantly impact residents' interest in a PC career. Stanley et al found that 88% of the internal medicine PC alumni across three programs lost interest in PC during residency, reportedly due to negative ambulatory experiences (7). Peccoralo et al reported that residents were 28% less likely to enter general internal medicine careers based on their clinic experience versus 11% of residents who were more likely to enter general internal medicine careers based on these experiences. Residents who were very satisfied with continuity patient relationships and the number of patients seen, and who were interested in general internal medicine careers prior to residency were more likely to consider a career in general internal medicine as their residency progressed (8). This focus echoes a broader body of literature suggesting that transforming PC clinics is a necessary and attainable goal in attracting and retaining PC physicians (9).

A clinic that is disorganized and lacks appropriate provider support (for example, interprofessional teams that communicate well and a high-quality electronic medical record) can sour the PC experience for students and residents alike. While anecdotally many PC residency educators noted greater enthusiasm among medical students in the wake of the patient centered medical home movement, that interest can quickly fade when reality strikes. Resident clinics often provide care to many underinsured patients who have complex medical and socioeconomic issues. Despite the stress of being responsible for managing these complexities, most residency clinics are not designed to allow trainees to learn to practice in a highly functioning team environment. Furthermore, as institutions transition to an accountable care organization (ACO) model, residents may have a minor role—particularly in the outpatient setting. As educators, we should advocate to our institutions to 1) invest in a highly functioning resident clinic as an investment in the future of PC and 2) consider residents as future leaders in the successful transition to an ACO model.

Training PC Specialists

Since 2009, the Accreditation Council for Graduate Medical Education (ACGME) has mandated that internal medicine residents spend one-third of their time in ambulatory medicine and that programs reduce the tension between inpatient and outpatient experiences (10). To fulfill both components of this mandate, many programs moved to innovative scheduling systems that increase and protect ambulatory time (for example, a long ambulatory block, "X+Y" scheduling, or a hybrid of these models) (11-15). Many PC programs offer residents additional protected outpatient time above and beyond that of their categorical counterparts.

Despite these innovations, institutional service needs still drive the majority of the training of PC internists, making it difficult for programs to prepare the next generation of providers. Family medicine residencies, which prioritize outpatient continuity clinic, mandate that residents must complete at least 1,650 clinic visits during their three years of training (16). In contrast, internal medicine residents must have a minimum of only 130 continuity clinic sessions over their three years of training (10). Even if residents averaged six patients each session (which is unlikely over three years), it would total only 780 clinic visits, fewer than one-half of what a family medicine resident performs. It may not be enough dwell time to learn to diagnose and manage complex chronic diseases, care for musculoskeletal complaints in an evidenced-based manner, manage populations, work effectively in interdisciplinary outpatient teams, engage in quality improvement endeavors, and perform PC procedures. Similar to what family medicine has done, internal medicine needs to prioritize ambulatory PC training for its residents. To have the additional time required to train the PC internists of the future, the amount of time residents spend on inpatient services must decrease. This reprioritization of resident education will undoubtedly be at odds with institutional inpatient service needs. To help ease this conflict, educators should call on ACGME and the Council of Medical Societies (CMS) to restructure the institutional incentives for internal medicine programs to reward programs and institutions that graduate more PC physicians. Such incentives may influence institutions to permit more flexible scheduling and allow for the design of outpatient curricula that truly prepare the PC specialist for practice.

Increasing the Pipeline: Proud to Be a General Internist

Many creative responses to increasing the pipeline have emerged in recent years. Some medical schools have tied a PC residency to medical school admission, theoretically capitalizing on students' early interest and providing supportive role modeling and skills to build a successful PC career from the beginning. The #ProudtobeGIM campaign of the Society of General Internal Medicine seeks to provide this exposure and raise the positive profile of general internal medicine among medical students by increasing mentorship and building a positive "brand" for PC (17). These efforts are effectively hands-on mentoring models that require time and support. Funding for opportunities such as advising, leading small group discussions, and shadowing should be considered for academic PC providers to maximize their exposure to medical students. For students who are truly undecided, more curricula are needed that expose early medical students to the various opportunities and career choices in PC.

Some medical schools have tied a PC residency to medical school admission, theoretically capitalizing on students' early interest and providing supportive role modeling and skills to build a successful PC career from the beginning.

Conclusion

Our role as educators of future PC physicians situates us at an important crossroads. To respond to the societal need for more and more appropriately trained PC internists, we need new approaches to recruitment and training. We must transform our residency clinics to reflect the highly functioning environments that we expect our residents to work in when they graduate (9). Recognizing that the training to become a PC specialist has never been more complicated and therefore deserving of a dedicated curriculum and clinical experiences, we must leverage additional curricular time to train this new generation of PC specialists. We must advocate for our stakeholders and funders to revise requirements and reimbursement structures to reward programs and institutions whose graduates go on to practice PC.

AUTHORS

Catherine Rich, MD
Associate Program Director
Department of Internal Medicine
Boston University School of Medicine

Craig Noronha, MD
Associate Program Director
Department of Internal Medicine
Boston University School of Medicine

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Margaret Baylson, MD, MPH
Residency Program Director
Department of Family Medicine and Community Health
Raymond and Ruth Perelman School of Medicine
at the University of Pennsylvania

Marc Shalaby, MD
Program Director, Internal Medicine Primary Care Residency
Department of Medicine
Raymond and Ruth Perelman School of Medicine
at the University of Pennsylvania

Peter F. Cronholm, MD, MSCE
Associate Professor
Department of Family Medicine and Community Health
Raymond and Ruth Perelman School of Medicine
at the University of Pennsylvania

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Book Review: Dying and Living in the Neighborhood

Dying and Living in the Neighborhood: A Street-Level View of America's Healthcare Promise by Prabhjot Singh, Johns Hopkins University Press, 2016

As we approach a period of unprecedented ambiguity in the design and financing of health care, *Dying and Living in the Neighborhood: A Street-Level View of America's Healthcare Promise* offers a detailed look into the design, implementation, and sustainability of a high-value, accountable health care system. The author recognizes how the existing system continues to fail many Americans, despite incorporating medical technologies that are the envy of the world. While physicians, politicians, and others struggle to understand how accountable care organizations (ACOs) can redirect the United States toward a more efficient and safer health care system, Dr. Singh proposes how we might surpass what the ACO model has or could accomplish. According to his analysis, both the Patient Protection and Affordable Care Act and ACOs it helped spawn were limited before implementation by their underlying design-structure: the top-down design and disease-centric model do not support the development of multiple small individualized health systems that are necessary to create and maintain health at the community level.

The author analyzes the available components that underpin a health system and considers how components might be rearranged to create more effective alternatives for choosing and creating health in our nation. He takes us

with him as he explores and re-imagines each component (e.g., communities/patients, health care providers, hospitals, other organizations that impact health, public health systems, financing, governance). I found it fascinating that an innovator in Internet development is now part of a health-related entrepreneurial startup, and how such a career path makes perfect sense. I loved learning how a Nobel laureate's work in economics relates to managing health care resources and was enlightened by the history of Medicare/Medicaid and how they have fostered a disease-centric health care perspective. I even found myself entertained by a story relating how systems-engineers, stumped by how to create consensus in sophisticated networks, incorporated methods developed by the Quaker Community of Friends to solve the problem. In the end, he demonstrates that the health care system is no system at all and that its fundamental structure interferes with the defining of value and assignment of accountability.

The premise of the book is that a health system is best designed as a coherent network of provider groups organized to meet the aims of a geographic area (neighborhood). It is informed by three facts relevant to health care in the United States: tremendous health disparities exist within communities; the current health care system is disease-centric and designed to funnel increasing resource dollars based on prevalence of disease; and traditional health care plays an integral but limited role in the health of a nation (the other major determinants of health are social circumstance, behavioral patterns, environmental exposures, and genetics). Recent conceptualizations, such as ACOs, are organized around amalgams of hospitals and physicians, with the aim of treating disease in selected subpopulations (e.g., Medicare beneficiaries).

Dr. Singh contends that a system designed for health must be organized around the "aims" of small footprint neighborhoods. The neighborhood citizenry, both informed and participatory, must establish the aims, noting that the price of community health is citizen participation. He advocates a "bottom-up" approach as an effective and sustainable process to empower people to create the healthy neighborhoods they want. He points out that aims are value judgments and that the local community is in the best position to define its aims. He proposes that health care dollars (currently one-fifth of the gross domestic product) be directed to any organization demonstrating the ability to improve defined health outcomes derived from community-level aims. This concept introduces the possibility of the allocation of health care dollars to organizations that would not traditionally qualify for such support: social services, public health systems, public education, and a variety of community based organizations. Health outcomes are measured at the community level, helping to ensure that disparities in subgroups are taken into account. Additionally, a governance involving citizenry brings local feedback into the boardroom, promoting re-allocation of resources when it is observed that a funded organization is not contributing to community health (i.e., decisions based upon accountability).

While physicians, politicians, and others struggle to understand how accountable care organizations (ACOs) can redirect the United States toward a more efficient and safer health care system, Dr. Singh proposes how we might surpass what the ACO model has or could accomplish.

Dr. Singh holds a medical degree and a doctorate in systems analysis, networks, and information theory from Cornell. He is a leader in global and population health at Mount Sinai Health System in New York. Born in Michigan, he spent part of his childhood in sub-Saharan Africa, and returned later for post-doctoral work in sustainable development in low-income countries. Both his systems background and his experiences in Africa appear to have prepared him to approach problem-solving using minimalist strategies. He writes in an informal style, but the language of value, quality, health regulations, and many other related topics is dense, and I found myself searching for a glossary that wasn't there. Additionally, the concepts he discusses are at times difficult to tease out from the written word. While several useful tables are included, a few charts would help the reader visualize the relationship of key concepts.

I recommend the book as a must-read for anyone interested in thinking creatively about health care reform. While I did not find sufficient evidence presented to demonstrate that such a bottom-up approach to redesign would be effective and sustainable, I did find the work compelling. It opens up the question of who should define value in relation to health and shifts the frame of reference from the treatment of disease to the creation of healthy communities.

This book is recommended by the AAIM Diversity and Inclusion Committee for individuals wishing to learn more about empowering communities to create health.

AUTHOR

Lucien J. Cardinal, MD
Vice Chair, AAIM Diversity and Inclusion Committee
Program Director, Department of Internal Medicine
SUNY at Stony Brook/Mather Hospital

AAIM
Alliance for Academic Internal Medicine
330 John Carlyle Street
Suite 610
Alexandria, VA 22314

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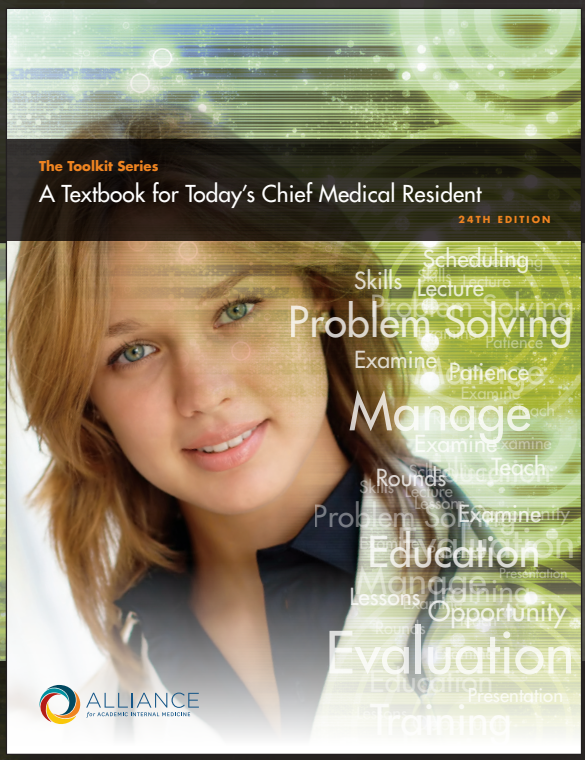

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