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ACADEMIC INTERNAL MEDICINE INSIGHT

AAIM IN ACTION

AAIM President Update: The Feedback Loop 2

AAIM President D. Craig Brater, MD, highlights two recent AAIM initiatives to collect feedback about the performance of the alliance: the AAIM Board of Directors Self-Assessment and the AAIM Member Needs Assessment Survey.

HIGH VALUE CARE

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Recent evidence indicates that ability to provide appropriately conservative management correlates with the environment in which physicians trained. Programs may consider three novel ways of offering high value care training designed to occur within existing educational time slots: narrative medicine, local competition, and an ambulatory M&M.

WELLNESS

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A resident wellness initiative is an organized approach to foster personal wellness during medical training. Ideally, the concepts and strategies that are introduced and reinforced will have both immediate and long-lasting effects. The initiative incorporates activities from several domains of wellness, including physical activity, nutrition, health maintenance, mental and emotional health, financial and occupational health, and social health.

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Because attitudes and values form the foundation of professionalism, medical educators are often faced with making challenging, value-based decisions regarding what action to take when a resident demonstrates a lapse in this essential domain of medical practice. A structured framework for approaching lapses in professionalism may be useful for individuals or committees that need to make the best decisions for the resident and for society.

FACULTY DEVELOPMENT

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Despite the clear need for faculty development, identified barriers include engaging faculty to prioritize such activities, a perceived institutional "hidden curriculum," lack of time or resources, challenges creating faculty development programs, and difficulty engaging faculty. A community-based medical school tailored a faculty development initiative to develop an efficient, evidence-based, and interactive format: the "snippet."

By the Numbers

76.9%

"Problem learners" who are deficient in more than one competency

Page 8

300

Number of hits daily for the UW chief residents blog

Page 10

5%

Outpatient encounters that involve diagnostic error

Page 22

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AAIM President's Update: The Feedback Loop

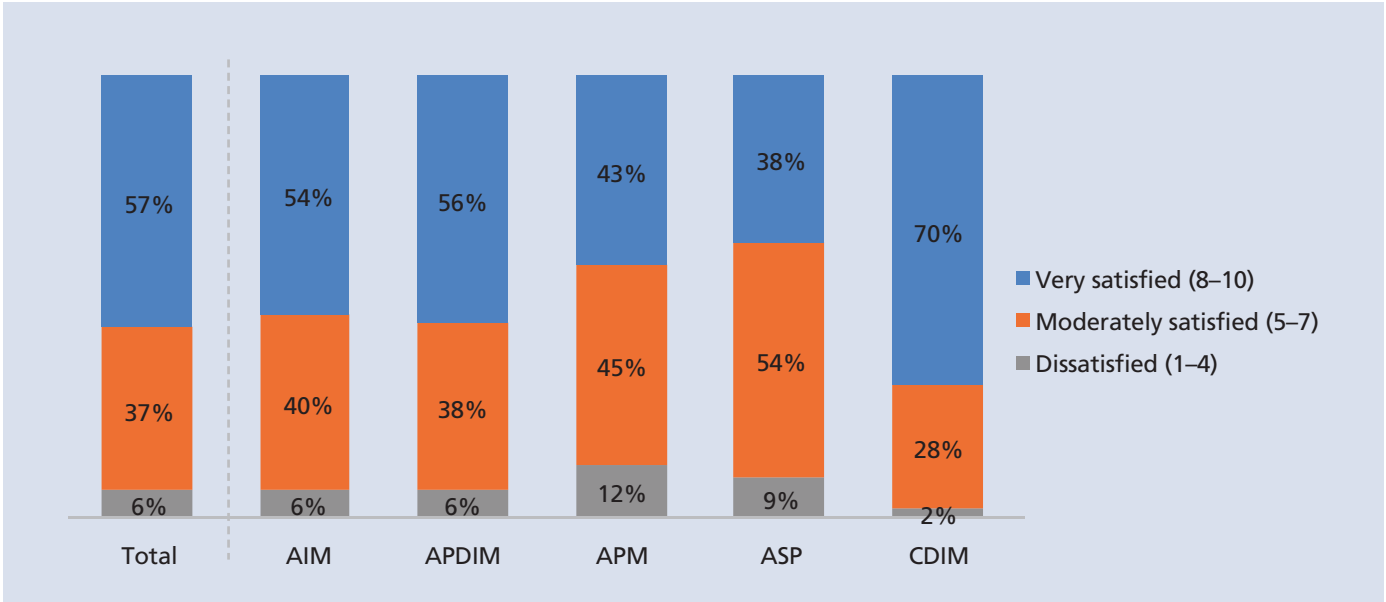
AAIM recently conducted two surveys, the results of which I think you will find interesting. One was an assessment of how the AAIM Board of Directors stacks up against similar boards. If you are like me, it is a surprise such an evaluation even exists. The survey looks at issues such as board member engagement and commitment plus important functions of a board such as strategic planning, fiscal management, and evaluation of senior staff (including me!). The survey sought input from board members themselves as well as all council members and senior staff. At 77%, our response rate was very high. I am proud to report that your board performed very well—well above average in all relevant measures. This success is particularly noteworthy in view of the fact that we are a young organization.

Think about what these results mean. It means members of your board are committed; they prepare for discussion by studying all the pre-meeting materials; they are diligent in attending meetings and conference calls; and during those meetings, they are engaged. They actively engage with councils and others in strategic planning and they make sure they have exercised their fiduciary responsibility by scrutinizing adherence to the budget and monitoring the performance of senior staff. The bottom line is you can feel comfortable that AAIM has good governance. We intend to repeat this survey on a regular basis to make sure the AAIM Board continues to perform at the highest level.

The other survey we conducted was a member needs survey. Step back a moment and think about the big picture of what AAIM was formed to do. Simplistically, AAIM has two general foci. We focus on the "outside world" to interface with organizations such as the American College of Physicians, the American Board of Internal Medicine, and the Accreditation Council for Graduate Medical Education as well as with governmental entities such the Medicare Payment Advisory Commission (MedPAC) to collaborate on programs, develop beneficial policy, and express collective opinion. On the other hand, AAIM has an "inward" focus, striving to develop initiatives and design meetings that best meet the needs of individual members and their daily responsibilities—to try to make your professional life a little easier, whether adapting to the Next Accreditation System or finding data and innovations at similar institutions. While it is a tall task, I am sure you agree it is a worthy goal.

The needs of members of AAIM are brought forward by your respective councils (**Figure 1**) but we want to make sure we are accurately representing you and designing products to meet individual needs. We designed a survey with input from each council and then sent it to every individual member of AAIM. We did not reach the response level we hoped—only 10.5%. However, our survey consultants assure us that this response rate is sufficient to be reliable. It is a response rate similar to what they see in surveys in organizations similar to ours. Importantly, the percentage of individuals responding was similar across all organizations with the possible exception of ASP.

FIGURE 1. Member Satisfaction



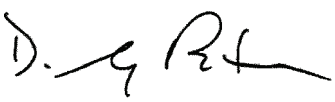
What Did We Learn?

- You highly value meetings. You prefer face-to-face meetings to any other form of disseminating learning materials. One reason for this preference is not only the content of the meetings but the opportunity they provide for networking. We currently have a task force to advise our educational programming; these data are very important to their deliberations.
- You identify yourself in terms of your constituent organization. This discovery means that despite the recognition, influence, and brand recognition AAIM has attained with its interface with stakeholders and regulatory agencies, from the perspective of our inward focus, the frame of reference is the constituent organization with which you as an individual best fit. It reinforces the importance of AAIM's attention to both foci.
- Said in another fashion, we merged the constituent organizations to form AAIM so we would have more influence in areas that affect our discipline(s); we have accomplished that. But, if we solely focus on these external relationships and are inattentive to your needs, we have failed as an organization. The converse is also true. From a branding perspective, it means we are in the enviable position wherein not only our parent brand, AAIM has recognition but also each of our constituent organizations are readily recognized. This is something we need to preserve.
- You don't have a good understanding of many of the things AAIM does in terms of its external focus. As a result, we have sought a consultant to specifically advise us how we can keep individuals better informed about AAIM's activities. In this era of information overload, we will try to keep it edifying and not intrusive.
- You prefer receiving information by email as opposed to other social media. Of course, this preference may be a surrogate measure of the average age of individual members and will possibly change over time! But we need to receive this kind of information from you on a periodic basis so that you can guide us as to how to serve you best.

Results from other areas of the survey have been parsed out among AAIM committees, constituent work groups, and the staff for development of appropriate products, initiatives, and recommendations for change.

From a broad perspective, what these two surveys represent is the philosophy and commitment of AAIM to make sure we serve our members well and that we are governing ourselves equally well. We will continue to conduct such surveys. My main message to you is that we care. For us to serve you well, we need your input. I ask that you respond knowing our promise to take your feedback and input seriously.

Sincerely,



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Speaking with Leaders: AAIM Interviews Paul A. Hemmer, MD

Paul A. Hemmer, MD, is Vice Chair for Education in the Department of Medicine at F. Edward Hebert School of Medicine of the Uniformed Services University of the Health Sciences. A retired Colonel in the US Air Force, he was previously clerkship director at that institution. He is a former president of CDIM.

His interviewer, Paul B. Aronowitz, MD, is Clerkship Director in the Department of Medicine at University of California, Davis, School of Medicine and a past president of APDIM.

What was your earliest leadership experience?

I was a student council representative in seventh grade. I also ran cross country in high school. I wasn't a great runner, but I loved to run. I liked to mentor the younger guys on the team, so I'd run their training sessions and help them develop as much as I could. For these efforts, I got the "Mr. Cross Country Award" in high school. I was also a chief medical resident after residency.

What were your earliest leadership lessons?

I've learned that there are things that I sometimes do—that I don't think twice about—but that have an important effect on other people. For example, one of our current faculty was previously a medical student and resident with us. He likes to recall an occasion when he was a resident (that I have absolutely no recollection of) when he had an injured leg and was on crutches. Apparently, when he came into morning report, I got up and offered him my chair. He apparently said, "No, no, no, you're an attending—you don't need to get up for me." I made him sit down in my chair; years later, he told me that this gesture made a big and long-lasting impression on him. I'm sure I just noticed that someone had a need that I should fulfill, but he saw it as something very different. I think it was more that I was showing him the respect that he deserved and that was probably what impressed him so much. To me it was a small thing, but to him it was much bigger.

I also think that early on I learned to be as mindful as possible when I'm meeting with people who report to me.

Can you give me an example of being mindful in these meetings?

It's a question of thinking constantly about how I can help them get to that next level or figure out how to help them think through a difficult decision. When they're struggling with a difficult decision, I'm constantly thinking about where they're trying to get to and how I can get them there—even if it sometimes means losing people to other organizations.

If I were a young, emerging leader, what advice would you have for me about how to become a successful leader?

I've always felt lucky to be surrounded by really great people—people who I can emulate. I didn't get anywhere in my life without other people around to help me out along the way. It's sort of like being a resident—that it's OK to ask for help when you need it. You have to recognize the things you don't know.

You also have to learn from your mistakes. Learning to manage other people is a whole other skill set. The higher you rise, the more management of people you have.

What's the biggest mistake you've made in a leadership role?

It was failing to recognize when something wasn't working out right. I realized that I wasn't being effective with the problem because I didn't have the skill set to deal with it. It went on over a prolonged period of time, and I was losing the faith of people around me because I wasn't effectively dealing with it.

Was it a personnel issue?

Yes, exactly. Now I try and impart the skill set to people who work for me so that they can better deal with these types of issues. Most physicians are not trained to be managers. Being a physician leader is more than just taking care of patients, and there's a growing realization that we need to be better trained as managers.

It may be as simple as taking courses—no matter how dry they may seem. But to be a manager, you have to know how to do performance reviews, to counsel people, and so forth.

Speaking of people management, there is this "syndrome" of physician leaders not wanting to be the "bad guy" in a leadership role. What are your thoughts on this?

I agree. This issue was the mistake I mentioned. I was avoiding being the "bad guy." In managing personnel, you cannot avoid those circumstances. Nothing good comes of avoiding these situations—you lose the confidence of people around you and above you if you can't solve these issues just because you don't want to be the "bad guy."

What leadership books would you recommend?

Any of Jim Collins' books. I also like Malcolm Gladwell's books because they provide a perspective outside of what we do and what we know in medicine. In the Collins books, I really like the concept of the "not to do list"—the things

you have to take off your list so that you can do the things you need to or want to do. My chair of medicine [Louis N. Pangaro, MD] reminds me of this concept when I'm enthusiastically talking about doing something new. He always says, "That's fine, Paul, but what are you going to move to your 'not to do list' so that you can do this?" Like Lou, I also try and teach the concept of the "not to do list" to people who report to me.

What are you reading now?

I'm reading *The Citadel* by A.J. Cronin. I'm enjoying it because it's fiction but much of it is autobiographical and based on his experience as a physician in the 1920s in Wales at the beginning of the National Health Care System. It's about how dysfunctional the health care system was at that time as well as about various occupation-related diseases of Welsh workers. There are a lot of interesting parallels to our society in that story.

You also have to learn from your mistakes. Learning to manage other people is a whole other skill set. The higher you rise, the more management of people you have.

What are two or three key features of great mentors?

A great mentor is someone who really cares about you. He's interested in what is important to you and not necessarily what's important to him. She has to be willing to listen to you to figure out what's important to you as well as to figure out what your goals are. Sometimes helping to facilitate a mentee get to where he or she wants to go is about knowing the next step along that path, but sometimes it's about the mentor knowing that he can't help the mentee and needs to refer him or her to someone who can help.

A great mentor also helps set expectations and creates plans for moving the person along the path. Sometimes it is as simple as setting deadlines. Most of us need deadlines for getting things done, and the mentor can help establish these deadlines. Similarly, a mentor may set deadlines for things she is doing for the mentee so that her mentee knows when those things will be ready for delivery from the mentor side.

I also think it's important for role modeling that the mentee sees what the mentor's weaknesses are. I like my mentees to see what things I've failed at and am working on getting better at. In my role as a mentor, my message is frequently, "don't make the same mistakes I made." Look at where I fell short and what I'm trying to do to change.

What are your favorite interview questions for faculty or administrative positions?

I ask applicants to tell me about a failure they've had and how they've dealt with it. Amazingly, I've had people tell me that they haven't had any failures, which I simply never believe. This question is about being willing to be open about failures. We've all failed in the professional realm. How did they cope with it, and what did they learn from it?

I also like to ask them about successes they've had and how they've dealt with them. We tend not to want to talk about our successes, and I can learn a lot about applicants as they describe a success and how the success came about.

What's it like being in a meeting that you're running?

This issue is something I'm still working on. I try and make sure everyone has a chance to be heard—that their concerns are listened to. The down side is that I don't have strict control over the meeting. I'm not that person who comes into a meeting, takes his watch off, and puts it down in front of him to keep track of the time. I'm conscious of the time and of respecting the time of the group, but I don't just march through the meeting—I have a more democratic style. I also try not to call a meeting if I don't have an agenda. If there's not an agenda for a meeting that I'm in charge of, I need to cancel the meeting. If there's no agenda, I don't want to have meetings to brainstorm an agenda—that's not fair or respectful of the meeting attendees.

You've been around a lot of leaders both in the Air Force and in your current position—what do you think is the most important distinguishing trait of the best leaders you've worked with?

Number one is having respect for the people they are leading. I've also always liked the inverted pyramid model of leadership. Are we working for them or are they working for us? For example, for department chairs, the chair is at the bottom of the inverted pyramid—the chair supports everyone else. This model simply equates to valuing, supporting, and respecting everyone who works for the chair, not to doing anything anyone wants.

Any other tips for leaders?

Don't be afraid to ask for help. This desirable trait in our residents—knowing limitations and when to ask for help—is just as important a skill in our leaders. Asking for help is not a sign of weakness—it's having the wisdom to ask others to help you get better as a leader.

Another tip is not to be afraid of opportunities. New opportunities and challenges can sometimes be a threat, but with new opportunities come growth. Don't be afraid to move new things onto your "to do list" and move others onto your "not to do list."

How to Incorporate High Value Care Curricula into Existing Educational Conferences

Medical overuse is increasingly recognized by clinician leaders as a serious problem (1), though existing curricula on teaching high value care concepts to internal medicine learners are insufficient (2). Recent evidence indicates that ability to provide appropriately conservative management correlates with the environment in which physicians trained, suggesting an opportunity to shape clinician behavior during the formative years of residency (3).

Recognizing the urgency of this problem and the need to bridge an important educational gap, AAIM and the American College of Physicians (ACP) launched the High Value Care Curriculum in 2012 (4). This program develops resident knowledge in improving value and reducing harm in six one-hour interactive sessions. The curriculum is easily tailored to the unique needs of an individual program. It may be presented as grand rounds or within any curricular niche in which case-based learning opportunities exist.

Programs may consider other novel ways of offering high value care training. To provide medical educators maximum flexibility in implementing new curricula, we describe three initiatives dedicated to teaching value that are designed to occur within existing educational time slots.

Narrative Medicine

The Do No Harm Project uses narrative medicine to help residents recognize medical overuse and reflect more deeply on their own clinical practice (5). This program was founded at University of Colorado School of Medicine in 2012 to promote doing "as much as possible for the patient and as little as possible to the patient" (6) and has been recognized as a novel approach to help residents around the country reduce medical overuse and improve patient care (7,8).

After a brief introduction to the concepts of high value care, internal medicine residents on an outpatient rotation are asked to reflect on a patient they cared for who had suffered harm or near harm from medical overuse. Interested residents submit a brief case description—a "one liner"—to the local "project champion." Cases deemed appropriate are approved for a writing day free from clinical responsibilities, arranged by the chief medical resident. Participants receive support from the local project champion through the process, including advice on related evidence and critical revisions. All vignettes are posted online for review by peers and are entered into a quarterly competition for best case as judged by clinicians from the ACP Colorado Chapter.

Since project inception, residents have submitted 50 high-quality clinical vignettes, 10 of which have been accepted for publication in *JAMA Internal Medicine* Teachable Moments series, a new section inspired by the Do No Harm Project (9).

Though the writing day serves as important space for reflection and writing, this program is meant to be opportunistic, allowing any interested resident a chance to carefully consider the potential effects of well-intended care that nevertheless may have been unneeded or unwanted. Preliminary findings from a recently completed qualitative evaluation of the impact of this program are positive, suggesting it may improve awareness of overuse among residents and lead to meaningful behavioral change in the future.

The curriculum is easily tailored to the unique needs of an individual program. It may be presented as grand rounds or within any curricular niche in which case-based learning opportunities exist.

Local Competition

In response to the "Teaching Value and Choosing Wisely Competition" (7)—a recent call for high value care educational innovations around the country—program directors in internal medicine and family medicine at Banner Good Samaritan Medical Center initiated a local competition among housestaff. The competition sought to educate residents and fellows about high-value care and engage them in quality improvement activities. Program leaders asked the medical staff to donate money toward a cash prize. The competition was advertised widely throughout residency training programs in the hospital. Resources such as the Institute for Healthcare Improvement's "Open School" (10) were provided to housestaff.

Submitted ideas were judged by faculty and local leaders in health care and selected on the basis of educational impact and potential to improve patient care. Other factors included feasibility, scalability, and alignment with the Choosing Wisely campaign (11) and Banner Health strategic objectives. The inaugural year of the competition resulted in 46 entries from 11 programs within the institution. Winners received $2,500, an opportunity to design and implement their idea with an interdisciplinary team, and travel funds to present at national meetings. Protected time for participating residents was allotted during an existing scholarly activity curriculum, and results of these projects were presented at a "Quality and Safety Day."

Ambulatory M&M

To enhance high value care education, specific recommendations from the Choosing Wisely Campaign (12) were added to an existing morbidity and mortality ambulatory morning report (ambulatory M&M) at Baystate Medical Center. This ambulatory M&M applies a conceptual framework assessing patient care in terms of aims for improvement from the Institute of Medicine and core competencies from accreditation (13,14). Residents use a matrix tool to identify and reflect on and then present personal instances of misuse, underuse, or overuse from their continuity clinics (15). The top row of the matrix are care-related categories: safe, timely, effective, efficient, equitable, and patient-centered. Within these categories, residents connect a competency with the instance of inappropriate care, including medical knowledge, communication, professionalism, or systems. For example, if a resident prescribed a medication that was not ultimately filled, the communication competency and timeliness could be considered as one point on the matrix. Delays in diagnosis, untimely follow-up of abnormal test results, underuse of appropriate screening tests, and medication prescribing errors were commonly cited, though instances of overuse were rarely mentioned. To prompt residents to think more carefully about potential harms from overuse, we encouraged them to review the Choosing Wisely recommendations before choosing a self-reflection case. By adding Choosing Wisely to ambulatory M&M, we prompted greater attention to medical overuse and promoted it as an opportunity for process improvement.

Conclusion

In summary, while many educators agree that teaching high value care is an important topic, implementation of new curricula can be daunting. Fortunately, a growing number of widely accessible resources exist to teach the next generation of physicians important concepts around reducing harm and improving value in patient care. Many of them can be locally adapted in a number of formats to work within existing curricular structures.

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Look on the Bright Side: Case Studies in Successful Remediation of Problem Learners

Introduction

Resident remediation carries a negative connotation in graduate medical education. Remediation requires resources including trained faculty, time, and increased documentation, and these interventions do not always lead to improvement in specific deficiencies. Dupras et al found that the prevalence of problem learners was 3.5 to 6.9% in US internal medicine residency programs. Of the problem learners, 76.9% had deficiencies in more than one competency. In this article, the authors highlight cases of successful remediation for problem learners at three US internal medicine residency programs. The key steps in successful remediation are identification of the issue (competency based), multiple sources of learner assessment, early feedback and intervention, resident reflection, specific remediation goals with outlined consequences for failure to meet goals, and thorough documentation. The cases illustrate remediation plans that utilize these key steps and lead to successful remediation.

Successful Remediation Cases

Case 1: Resident LR

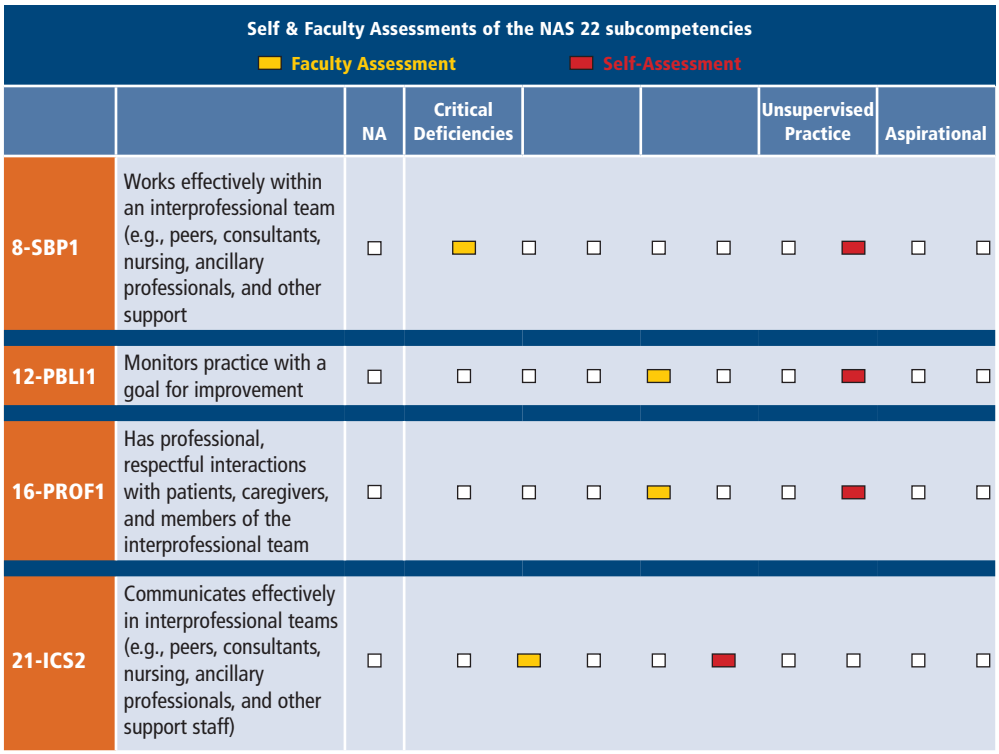
"LR" transferred from a non-internal medicine program into a categorical internal medicine residency at the postgraduate year (PGY)-2 resident level. Initially, concerns about fund of knowledge, rigidity, and resistance to feedback were attributed to adjustment to a new institution. Near the end of his PGY-2 year, there were concerns about rigidity as well as inadequate supervision of interns leading to poor patient outcomes. Medical knowledge was also deficient based on repeatedly low in-training exam scores. Shortly after being promoted to his PGY-3 year, he was reportedly argumentative with an attending and continued to demonstrate inadequate supervision of junior residents, which compromised patient safety.

LR was discussed by our clinical competency committee (CCC), who felt that he was deficient in the several core competencies: patient care, medical knowledge, professionalism, interpersonal and communication skills, and practice-based learning and improvement. Based on his failure to respond to prior interventions, the CCC placed him on academic warning with an understanding that failure to remediate would result in further disciplinary action, including probation.

LR was asked to self-evaluate his performance using the Next Accreditation System subcompetencies. Simultaneously, CCC leadership also evaluated LR's performance using the same tool (**Figure 1**). Results were reviewed with LR; the discrepancies between the two sets of evaluations significantly increased LR's level of insight into his multiple deficiencies.

The remediation plan included a reading study program with a detailed timeline for completion. Also, LR was asked to create a written diary and give specific examples of incorporating feedback into his patient care, soliciting feedback about his communication style from faculty, emulating behaviors of role model attendings, and setting expectations of junior learners and providing them with constructive feedback.

FIGURE 1. Comparison of Self-Assessment and Faculty Assessments in Subcompetencies



One of the expectations of the remediation program was a monthly meeting with program leadership to review his progress. As time went on, the resident became more engaged in the process and no further instances of poor performance were reported. Successful remediation is attributed to active resident participation and insight, regularly scheduled meetings with faculty, and clear, documented expectations of the consequences of failing to adhere to the remediation plan.

Case 2: Resident SD

"SD" was a PGY-3 internal medicine resident who had a quiet demeanor and was very respectful of his supervising attendings. SD was born outside of the United States, but all of his formal education occurred in this country. At the beginning of his PGY-3 year, multiple deficiencies were identified, including gaps in medical knowledge with a low score on the in-training exam, low scores on faculty evaluations in medical knowledge, and reports of poor efficiency in clinical settings. SD's self-assessment was congruent with his faculty evaluations. SD had insight into his deficiencies and he wanted to improve on them, but he lacked confidence and direction.

A remediation plan was created for SD by his academic advisor, who also served as his remediation mentor. A reading plan was developed with goals regarding time of completion, material reviewed, and testing of knowledge with assigned questions. SD presented short, topic-based lectures to his mentor to improve his confidence in giving oral presentations. Because of SD's low faculty evaluations on critical rotations, SD was required to complete a PGY-4 year. A customized PGY-4 schedule was created for SD including rotations during which he engaged one on one with faculty attendings.

SD had all satisfactory evaluations during his PGY-4 year, with specific improvements in medical knowledge and patient care. He retook the in-training exam with an improved score. SD successfully completed his residency, began an outpatient medicine career, and passed his boards on the first attempt. Successful remediation is attributed to time-intensive mentoring, resident insight and motivation to improve, and an additional year to augment the resident's knowledge and skill set.

Case 3: Resident X

"X" was an internal medical graduate who entered our residency training program as a PGY-2. Early evaluations from faculty reported him as hard working, responsive to feedback, and adjusting to the complexity of our electronic medical records with only minor communication problems related to English as a second language. There were no concerns about his professionalism or issues raised by allied health or peers.

Four months into his residency, a supervising faculty raised concerns related to his performance. The resident was unprepared for rounds, late for required educational activities, did not answer pages from nursing staff, and did not revise a clinical note in response to direct feedback. The faculty gave the resident feedback and indicated that his performance was below expectations, which was documented, and asked the resident if he was having any outside problems. The resident denied that any issues or concerns were impacting his performance.

Resident remediation carries a negative connotation in graduate medical education. Remediation requires resources including trained faculty, time, and increased documentation, and these interventions do not always lead to improvement in specific deficiencies.

The resident met with a chief medical resident and residency leadership, who again asked if any outside issues were impacting his performance. He again denied that there were other factors. A follow-up meeting was scheduled for one month later. His performance improved, and there were no further problems. At the follow-up meeting, he was asked again to reflect on what happened during the rotation that resulted in his poor performance. At this third meeting, we learned a very close family member died in his home country during the given time period. This news affected him emotionally and required many late-night phone calls, resulting in limited sleep and extreme fatigue, which contributed to his poor performance. The resident declined an offer for counseling when this emotional stressor was identified.

Unexpected poor performance of a resident previously doing well should be investigated to determine if outside factors are impacting performance. These outside factors could include emotional stressors, distractions, sleep deprivation, and drug or alcohol use. In this case, the resident successfully completed the residency program without further issue.

Conclusions

Implementing resident remediation plans can be time- and resource-intensive. However, these remediation plans can also be quite rewarding when a resident improves and achieves success in the program. Remediation plans should include self-assessment, be specific to the identified

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Creating a Fun and Innovative New Teaching Tool for Residents

Electronic media are increasingly prevalent in the medical community for resource dissemination and direct instruction; medical learners have shown interest in programs that include e-learning as part of the larger education plan (1). To supplement regular teaching conferences at a large, university based internal medicine residency program—morning reports utilizing a whiteboard and noon conferences with traditional PowerPoint slides—we developed a web-based teaching resource during the 2013-2014 academic year. As the chief residents across three inpatient sites, we conducted conferences and teaching sessions each day, so we cultivated a blog-style website. Updated daily with relevant, high-yield content from our teaching sessions and other resources, the blog quickly became popular with our training program, garnering up to 300 hits daily. We believe a similar model could work well at other programs.

How tech-savvy do I need to be to create and maintain a blog?

Not very. None of us has any more than an average mastery of computers, and no one has programming experience. We successfully used a free blog platform called WordPress; there are plenty of other popular ones (Blogger, Tumblr, Google+, etc.) for people who want to share their content but aren't tech geniuses.

How do I set up a blog?

The first step is to identify the key components of your teaching website and then find a blogging platform that will help you present your desired material. Some of these platforms offer some amount of server space, but your institution may prefer you use an institution-specific website behind a firewall. (Check with your IT support. You can use the account options in your blogging platform to configure your blog to be hosted on your institution's site.) Once the site is up, create the skeleton of the blog, such as headers and links you want to include for everyone who visits the blog. Then you can start to add entries under any of your headings. Each blog platform has instructions on how to post within the headings.

What kind of content do you post on the blog?

The fun part! We opted to post information from almost every teaching session we led: interesting clinical facts and diagnoses from morning report cases as well as PowerPoint slides from noon conferences. We also had updates from outpatient clinics, links to seminal articles, challenge cases, and more. This much content often meant several posts per day, given our multi-site institution, but you can choose to blog however frequently you want. Other potential posts include journal club discussions, accolades for residents, and info about upcoming program events. Anything that is relevant to the residents in your program could appear on your blog. Entries may be as long or as short as you like.

How do you draw the residents in and get them to visit the blog?

Sell it. Don't be shy about mentioning the website and how useful you think it is. Solicit feedback for ways to add or improve content. Spend time making sure the content is actually clear and useful. Tell the faculty about the website, since they can use it themselves, and also encourage residents to use it as a resource. Possibly most important, pick a web address that everyone can remember easily. Consider buying a catchy web address—ours is uwmedchiefs.com—for $11 per year through a site like GoDaddy or NameCheap. This address can easily forward visitors automatically to your institution-based website. Timing is also crucial: be prepared to launch a blog publicity blitz as soon as the new interns arrive each June. Tell them to make the blog their homepage to integrate the blog with their daily lives from day one.

Do you post patient information on the blog?

We post de-identified patient information similar to what is in published case vignettes. Our blog is behind an institutional firewall so that only people with an institutional log-in can access the site. Check with your compliance officer to see what is permissible at your institution.

Do you allow comments on the blog from your readers?

Yes, there is a function where people can comment on the blog posts.

How much time does the blog take?

Getting the blog operational will probably take up to 20 to 30 hours, depending on how particular you are about the look and layout. After that, the time spent depends on how frequently you post. Most of the time, we took five to 10 minutes per post, depending on how in-depth the posts were, but the process does require commitment. Your blog will only be successful if you post regularly to continually offer new content for learners. Additionally, someone from the program leadership team—a chief resident or administrative leader—will likely need to serve as an informal webmaster, occasionally addressing routine site and server maintenance issues and helping to troubleshoot when issues arise.

How easy is handing the reins over to someone else who wants to run the blog?

Easy. Having completed our chief resident year, we transferred blog ownership to the new chiefs, who are

now continuing the efforts. It simply requires switching the domain name account ownership to a new person and giving the new blogmasters administrator access to the platform.

Why would I maintain a blog instead of just using that time to work on something else?

We found our blog valuable for many reasons. First, since our program is a multi-site program, it was a great way to share our learning content with the whole program, rather than just residents rotating at our individual sites. Second, the ability to see content written on the blog after hearing about it at conference reinforced the material and better cemented it in the minds of the learners. Third, the permanence and "searchability" of this medium mean that both educators and residents can access important teaching information any time they want, even months later. (This aspect turned out to be a great way for us to share some teaching methods and materials among ourselves.) Finally, the blog was a fun morale booster for us and for the residents.

We have enjoyed growing and maintaining the blog; we found it extremely useful, both for us as educators and for the learners. We hope other programs and institutions will consider employing similar methods to enhance their teaching for residents.

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deficiencies, and have clear outlined consequences if goals are not met. Lessons learned (**Figure 2**) involved in these cases can help other programs achieve success with their remediation plans.

FIGURE 2. Lessons Learned for Successful Remediation

Focus on the pattern of deficiencies rather than the individual events (link to competencies).
Develop specific remediation plans.
Get resident "buy in" to the remediation plan.
Have frequent follow-ups with the resident regarding progress of the remediation plan.
Remediation plans require group work; they cannot rely on one individual.

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Beyond Burnout: Strategies for Implementing a Resident Wellness Initiative

Do you know how many of your residents feel well rested, have established care with a primary care physician, meet US Preventive Services Task Force (USPSTF) physical activity goals, know their body mass index (BMI), or feel burned out? Six years ago, we became concerned that while residents were so focused on the health of their patients, they were often not in tune with their own health needs.

We established a resident wellness initiative to address burnout. Burnout is defined by the International Classification of Diseases (ICD)-10 as "a state of vital exhaustion" (1) and can be measured in three dimensions on the Maslach Burnout Inventory: emotional exhaustion from overwhelming work demands, de-personalization, and a perceived lack of personal accomplishment. Burnout has become a well-recognized problem among physicians in training (1–3), and studies have reported rates in the range of 51-76% among internal medicine residents (3–5). While our original aim was to address resident burnout, an expanded approach that incorporated teaching, engaging, and supporting all aspects of wellness in our residents was most effective.

Intervention—Developing a Resident Wellness Initiative

A resident wellness initiative is an organized approach to foster personal wellness during medical training. Ideally, the concepts and strategies that are introduced and reinforced will have both immediate and long-lasting effects. Our initiative incorporates activities from several domains of wellness, including physical activity, nutrition, health maintenance, mental and emotional health, financial and occupational health, and social health. A strategic approach to developing a resident wellness initiative can provide direction and help ensure success.

Implementation—Incorporating a Resident Wellness Initiative into a Residency Program

Step 1: Form a Resident Wellness Committee

A resident wellness committee plans, implements, and provides oversight of the various activities of the resident wellness initiatives. Ideally, the committee includes a mix of energetic interns and residents who are interested in wellness and in tune with the interests of the residency group as a whole. Committee size should correspond with size of the residency program and the goals of the resident wellness initiative. Residents can volunteer or be appointed to the committee based on their interests or past experiences. Leadership for the committee should be provided by a chief resident or a faculty advisor. Our resident wellness committee first convened in 2009. We typically have 10-15 residents who are elected to serve on the committee and represent the interests of our 105 internal medicine house officers. The committee is led by a designated "wellness chief resident" who also serves on the committee as a resident. A faculty advisor provides continuity over the years and also assists with logistics and implementation of the ideas put forth by the resident wellness committee.

Physician burnout is a significant problem that peaks during medical training. It can negatively affect resident health and patient care as well as residency program morale.

Step 2: Gather Data and Evaluate Wellness Needs

Once a committee is formed, it is useful to determine what assets or resources can be capitalized to support the initiative and whether financial support for the program exists. It is also useful to perform a formal assessment of essential areas for improvement and interest in specific wellness topics through a simple survey or needs assessment. These data can help prioritize wellness initiatives, ensure the activities match the needs and interests of the residents, and be used to measure effectiveness of the wellness initiative. Our initial needs assessment survey was electronic, but we found that the yield was improved (50% response rate) when paper copies were distributed to residents after morning report. Results indicated 48% of respondents felt well rested, 52% had established care with a primary care physician, 38% met USPSTF physical activity goals, 68% knew their BMI, and 48% felt burned out.

Step 3: Establish Structure

Determine how often the committee will meet, how many activities the wellness program will host throughout the year, and how the selection and planning of the activities will be performed. Our committee meets quarterly. During the first meeting of the year, our committee begins planning three to four wellness initiatives for the year. The initiatives address different domains of wellness and include both an in-house seminar and a corresponding outside activity. Examples of our wellness seminars and outside events are provided in **Figure 1**.

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FIGURE 1: Examples of Wellness Seminars and Interactive Activities

Wellness Domain	Seminar	Accompanying Activities
Physical Activity	• Lunch trivia competition at a local restaurant using evidence-based questions on benefits of exercise • Field day • Group walk using hospital walking maps	• Local 5K run • Raffle for free gym memberships • Pedometer competition
Nutrition	• Interactive PowerPoint with multiple choice questions about diet • "Eat This, Not That" game using common foods from the cafeteria • Sharing healthy snack recipes • Nutrition seminar where residents cooked a similar meal based on either diabetic, renal, low fat, or low sodium versions of a diet	• Residents held a progressive dinner where different classes were responsible for portions of a healthy meal • Lunch revolution: residents reviewed the current lunches provided by residency and developed a menu of restaurants with healthier options
Mental/Emotional Health	• Halloween activity • Mindful meditation seminar • Laughing yoga • Seminar on the impaired physician or physician with addiction	• Group went to a minor league baseball game • Website developed with information regarding wellness, such as local PCPs, dentists, and gyms
Social Health and Service	• Stuffed welcome bags for a local charity	• Group volunteered at a community garden at one of the continuity clinic practices

FIGURE 2: Budget-Friendly Wellness Ideas

Encourage residents to walk a specific location and log individual miles for incentive prizes.
Develop walking maps around your facility. Measure the distance in halls and around the building to help employees set walking goals.
Start a running or biking club.
Have a goal for the week or month. Keep a chart of weekly or monthly exercise goals and individuals' progress.
Hold recipe contests.
Hold healthy food cooking demonstrations.
Place "Choose My Plate" charts in resident workrooms and cafeterias.
Have office water coolers readily available.
Email computer "break tips."
Get involved with community volunteer activities.
Set up displays in the lobby or around resident work areas with healthy suggestions.
Provide health information focused on monthly or seasonal events, as well as fact sheets.
Develop a brainstorming team for ideas and to help with wellness activities.
Recognize residents' birthdays and other special events.
Obtain company discounts (one-month gym passes, etc.).
Develop a wellness website.
Ask your vending machine company to add healthy foods.
Develop a weekly newsletter with wellness tips.
Provide health information such as local dentists, yoga studios, and gyms.
Petition for a water cooler or more microwaves so residents can bring healthy lunches from home.

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Step 4: Anticipate Barriers

Barriers to implementing a resident wellness initiative will vary from one program to another. However, some common challenges include financial constraints, limited time among residents and faculty, and conflicting priorities such as patient care and other educational opportunities. With some forethought and creativity, many different activities and initiatives are possible (**Figure 2**). Local professional societies and private companies may be willing to fund grants for various wellness education and initiatives.

Step 5: Implement Your Wellness Initiative

Once activities are planned, committee members volunteer to advertise, organize, and implement the initiatives. We ask faculty to hold our resident pagers during the wellness seminars so that they can fully engage in the activity. We have found that residents are usually excited to come together, take a break from work, and have fun.

Step 6: Measure Your Progress

After a resident wellness initiative has been instituted, feedback should be obtained and progress assessed. After our program had been in place for two years, a majority of our residents reported an increased awareness of their personal wellness. Eighty-five percent reported a positive influence on their own wellness and 96% reported that they enjoyed the wellness activities.

Discussion

Physician burnout is a significant problem that peaks during medical training (6). It can negatively affect resident health and patient care as well as residency program morale. Our residency program's wellness initiative utilizes several strategies to help avoid burnout during the demanding and challenging years of residency. Our approach is simple, yet organized, and could be incorporated into any internal medicine residency training program.

After our program had been in place for two years, a majority of our residents reported an increased awareness of their personal wellness. Eighty-five percent reported a positive influence on their own wellness and 96% reported that they enjoyed the wellness activities.

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The Last Lecture? Uniting Resident Preferences and Principles of Adult Learning to Improve the Noon Conference Lecture Series

Background

The Accreditation Council for Graduate Medical Education mandates that US residency programs contain "regularly scheduled didactic sessions" (1). The lecture remains the main way to fulfill this mandate for residency education (2). Studies of using lectures to teach residents have shown little evidence of impact on long-term knowledge retention and variable effects on in-training exam scores (3–7). This evidence has prompted attempts to improve active participation in resident conferences, including using small group sessions, problem-based learning, and team-based learning (8–10). While these formats are effective for teaching residents, they involve a lot of resources, including faculty time and development, and require considerable changes to the structure of the residency program (11).

Specific Aims

We implemented a complete cycle of curriculum development and evaluation (12) to achieve the two aims: identify the intersection between ideal teaching methods and the learning preferences and develop a structured format that is easy to implement and will enhance active participation in resident noon conference, which will improve resident satisfaction and knowledge acquisition.

Step 1: Targeted Needs Assessment

We conducted seven focus groups with 41 internal medicine residents to discuss the noon conference format for teaching residents (13). We outlined resident' perspectives on the topics of motivations for participation, appropriate content, effective teaching methods, and active participation. Our residents wanted shorter learning sessions with three to five clearly defined learning points. They considered sessions centered on clinical cases and management questions to be the most engaging. Residents were motivated by learning, but also attended lectures to take a break from their clinical duties and eat lunch.

We also conducted three focus groups with 20 core residency faculty, identifying areas of divergence between residents and faculty and barriers to active teaching (14). While residents desire a limited amount of information, faculty feel the need to provide comprehensive information in their lectures. Residents desire active engagement in a safe environment, while faculty members feel getting residents to engage in lectures is difficult. Key barriers include physical barriers (large auditorium, configuration of chairs, residents sitting in the back), faculty-specific barriers (formulating good questions, relinquishing control, established lectures, faculty development), and resident barriers (resident buy-in, residency culture).

Step 2: Educational Strategy—Active Learning Format

Using the data from the focus groups, we created a structured but easy to implement format to engage residents during a one-hour conference (**Figure 1**) (15). It is centered on three to five high-yield learning points, using cases, clinical questions, and small-group breakout discussion to highlight the learning points. With each learning point, a clinical question is posed to the audience for discussion within each group, then a group representative holds up one of five 8½- by 11-inch cards with the letters A through E to present their answer to the question. This system provides more accountability for participation than an anonymous audience response system. To make things safe for participation, residents discuss the question and answers in a small group before having to discuss it in the larger group. The format also allows for repetition and summarization of key learning points after each question and at the end of the conference.

Step 3: Implementation

To assess if the format corresponded with residents' stated learning preferences, we piloted the format with four lectures on women's health topics. Residents rated the conferences highly on a survey distributed after each conference, and did not feel that the format was more stressful than a usual lecture.

We designed a controlled study to investigate the effects of the active learning format on learner satisfaction, initial knowledge gains, and knowledge retention. In January 2013, we evaluated the use of the active learning format with four cardiology lectures. A champion in the division of cardiology recruited four participants to give a lecture in two separate formats. We gave a one-hour faculty development session on the active learning format, which included short video clips of a lecture from the pilot. After the lecturer developed his or her standard lecture, a study team member spent one hour with each lecturer to develop the lecture in the new format. The initial survey was administered in person and online, and the final assessment was administered online four to six weeks after study completion.

Step 4: Evaluation and Feedback

When comparing the active learning format to the standard lecture, there were significant increases in perceived engagement and clearer learning with the active learning format, with the improvements in perceived engagement remaining significant four to six weeks after the lecture series. Improvements in initial knowledge were gained using the active learning format, with a trend toward improvement

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in knowledge retention. In discussing the format with the participating lecturers, we learned that they enjoyed using the new format and felt that the residents were more engaged in the conference. They also felt that with the faculty development they received, they could continue to use the format for teaching without further assistance.

In evaluating the success of our intervention, we found several strengths and challenges to our approach.

Strengths

Involving residents in focus groups gave them the opportunity to provide their input and garnered excitement for the change. Piloting the format change ensured that it fit resident learning preferences appropriately. We also videotaped these sessions to use in subsequent faculty development sessions. By involving a champion in the division of cardiology, we were able to recruit and motivate faculty to participate in the format change. By collecting survey data, we were able to present data to the entire residency faculty to gain further interest in wider dissemination of the format for use in our residency. The resource commitment was reasonable. To develop four new lectures, it took a total of five hours of faculty development time, a one-hour session with all of the faculty members, and a one-hour individual session with each faculty member.

Challenges

The nature of resident education makes performing rigorous evaluation in a controlled manner difficult. In implementing the format, we identified that the biggest challenge is developing good questions that foster discussion. We found that management-style questions that have more than one correct answer stimulated the most discussion. We were challenged to identify the optimal way to debrief the group after each question. The strength of the card system for answering questions is that the facilitator can easily see the spread of answers and choose how to debrief the question and teach the learning point. The best way to debrief each group was by asking questions of each group, not of any one individual.

Conclusions

Residents desire conferences that are relevant, practical, and evidence-based; conferences should be shorter, focused on key learning points, and case-based with questions. Using data from focus groups, we developed a structure to overcome barriers to active participation in conferences, which improved learner engagement and knowledge gains. The format is easy to implement, with little cost in faculty development or change in residency structure.

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Lapses in Professionalism During Residency Training: A Suggested Approach

Teaching and evaluating the core competency of professionalism is a requirement of every graduate medical education training program. Because attitudes and values form the foundation of professionalism, medical educators are often faced with making challenging, value-based decisions regarding what action to take when a resident demonstrates a lapse in this essential domain of medical practice. In many instances, it is necessary to balance a resident's future career potential against the imperatives of patient safety and public trust.

However, the assessment of professionalism poses several specific challenges that may be less apparent in the assessment of the other Accreditation Council for Graduate Medical Education (ACGME) competencies (1). In spite of the consensus definitions provided by ACGME and others, there is often significantly less agreement on what constitutes professional (or unprofessional) conduct (2,3). These differences may be grounded in an individual's sociocultural background or based on generational or contextual differences. Our mental model of medical professionalism deeply influences assessment of unprofessional conduct, yet this model may not be shared among faculty, residents, and patients (2). For example, texting during rounds may seem acceptable to a 27-year-old medical resident, but it may seem inappropriate and unprofessional to a senior faculty member. Advancing technology has clearly added a new dimension to the professionalism landscape by introducing new and previously unanticipated opportunities for lapses in professional conduct (4).

Currently, well-validated interventions do not exist to improve professional competency across the wide spectrum of possible lapses in professionalism (5). Furthermore, depending on the nature of the lapse, the legal system, the department of human resources, mental health services, or rehabilitation programs may need to be involved. While the involvement of these external agencies may be necessary, it may also delay or supplant the training program's own procedures.

Another challenge associated with the competency of professionalism is the question of the training program's role and responsibility in the remediation process. Assuming remediation is possible, it is not always clear that the responsibility for that remediation lies with the training program. The teaching of certain fundamental tenets of professional conduct may not be within the scope of the learning environment. As Richard and colleagues bluntly state, "Honesty is not part of the curriculum that residency programs are expected to teach" (6).

Most cases of unprofessional conduct will benefit from being presented to the program's clinical competency committee or to the institution's graduate medical education committee. Committee discussion can minimize the impact of individual biases and facilitate objective decision-making regarding remediation or academic or disciplinary action (7). We suggest a structured framework for approaching lapses in professionalism, which may be useful for individuals or committees that need to make the best decisions for the resident and for society.

In light of the many challenges associated with the competency of professionalism, having a structured framework for organizing the necessary evaluation of the situation when a lapse in this core competency occurs is helpful.

Suggested Approach to Lapses in Professionalism: The PACC Framework

In light of the many challenges associated with the competency of professionalism, having a structured framework for organizing the necessary evaluation of the situation when a lapse in this core competency occurs is helpful. In his description of the four essential elements of the moral life, the renowned ethicist Edmund Pellegrino includes agent, act, circumstance, and consequence (8). This description has been reframed into a practical construct ("Person, Act, Circumstances, Consequences" or PACC) that can be used to evaluate a lapse in professionalism. This approach facilitates an explicit, integrated assessment of the four elements of the incident that has occurred; the examination of each overlapping domain serves to illuminate the others. **Figure 1** provides examples of questions that may be asked within this framework to understand and evaluate a lapse in professionalism. The PACC framework ensures decision makers explicitly explore the key elements and are cognitively aware of how key elements are impacting the decision-making process.

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FIGURE 1. The PACC Framework (8)

	Person	Act (Committed)	Circumstances	Consequences
Questions to Ask	What is the knowledge, skill, and experience of the person? Was there (intended) self-gain or self-gratification? What are the expectations for the type of person whom this person aspires to become (e.g., attending physician)? Is there a track record of lapses of this kind? Or is this an isolated event for this person? Is there remorse? Ownership of error? Desire or attempt to make amends? Is there insight into why this was a problem?	What duty, rule, policy, or procedure was violated? Did the person know and understand the duty, rule, policy, or procedure? How well established is the duty, rule, policy, or procedure that was violated? How often does this violation occur in this community?	What competing or compelling factors were involved? Are there systems issues that provoked or precipitated this event? What are the expectations for a person in this position (e.g., intern, resident, fellow)? Are there cultural, generational, or societal factors to consider? Are there mental health or medical issues that might impact conduct? ("Ds")	Was there risk or harm to others? To patients?

Academic Deficiency v. Misconduct

One of the most important distinctions to make with a lapse of professionalism is to differentiate an academic deficiency from willful misconduct (**Figure 2**). While they may overlap, an academic deficiency typically occurs because of a lack of education or deficiency in required knowledge, judgment, skill, or experience; misconduct indicates a lack of moral will, meaning the individual knows that what he or she is doing is wrong, but the voluntary decision is made to do it. Using the PACC framework, this observation would be within the element of the "person" and it deserves significant normative weight in the decision-making process. The distinction is important because academic deficiencies are at least potentially remediable and may be addressed with academic action. Misconduct, on the other hand, is generally not remediable and it is often best addressed with disciplinary action. The PACC framework may guide educators tasked with distinguishing academic deficiency from misconduct.

In their discussion of professionalism, Lucey and Souba propose that, at least in certain contexts, professionalism should be considered analogously to the other ACGME competencies. They propose that professionalism be considered on a developmental curve from beginner to expert, rather than as a dichotomous, intrinsic quality (9). In this model, certain lapses in professionalism should be addressed pedagogically, rather than punitively. These authors also implicate systems issues ("circumstances" in the PACC framework) as the precipitant in at least certain lapses of professionalism. By presenting the resident with certain irreconcilable conflicts, the system may set the stage for actions or attitudes that are subsequently viewed as unprofessional.

FIGURE 2. Academic Deficiency and Misconduct

Academic Deficiency	Misconduct
Lack of education • Deficiency in knowledge, skill, or experience	Lack of moral will • Individual knows that what he or she is doing is wrong, but voluntarily does it regardless
Potentially remediable	Non-remediable
Address with academic action	Address with disciplinary action
Consider addressing first offenses with a remediation plan	Even first offenses may warrant adverse, reportable actions such as probation, termination, or non-renewal of contract

FIGURE 3. The Underlying issues to Consider

Issue	Examples
Distraction	Family, social, financial
Deprivation	Sleep (e.g., obstructive sleep apnea)
Disease	Thyroid dysfunction
Depression	Affective disorders, bipolar disorder
Drugs	Adverse reactions or overuse of prescribed or over the counter preparations, Illegal drug use
Disability	Learning disability Attention deficit/hyperactivity disorder
Disorders	Personality disorder
Denial	May occur on the part of the resident or the educator

Differential Diagnosis: The "Ds"

In any instance of unprofessional conduct, particularly if the action seems unexpected or out of character, it is necessary to consider underlying precipitants that may be the cause. **Figure 3** provides a list of the "Ds" (10), a simple mnemonic to recall common precipitating factors that fall within the element of "circumstances" in the PACC framework. The role of the medical educator in such cases is not to diagnose nor to treat the underlying problem, but to recommend the resident seek support, therapy, or assistance. Finding a specific precipitant does not excuse the action nor absolve the resident; it simply provides a context and may offer the possibility of treatment or other intervention.

Conclusion

In summary, lapses in professionalism present unique challenges to medical educators. Professional conduct is inherently value-laden, so educators must necessarily make difficult value judgments in the assessment of unprofessional conduct, which may breach moral, ethical, or legal boundaries. We suggest the PACC framework as a means of comprehensive assessment of the key domains to be considered in an instance of unprofessionalism. We have oriented our discussion toward the resident environment, but the framework also has applicability in other settings, such as undergraduate medical education. In each instance, the PACC framework enables medical educators to define and describe their evaluations of unprofessional conduct and justify any academic or disciplinary action they subsequently choose to take.

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Snippets: Effective, Efficient Faculty Development

Introduction

Faculty development is essential for academic institutions to advance in an ever-changing landscape of medical education (1). The aims of faculty development programs include advancing and improving teaching skills, scholarship (such as curriculum design or research skills), and leadership skills; providing tools for career advancement; and cultivating faculty to implement faculty development at their home institutions (2). With recent changes in the residency accreditation process, it becomes increasingly clear that program and departmental leadership must find ways to keep their faculty apprised of what is expected. In addition, the Accreditation Council for Graduate Medical Education (ACGME) common program requirements state that training programs must monitor and track faculty development to improve educator skills.

Previously described faculty development programs include workshops as a single experience or in a series as part of a longitudinal program, short courses, fellowship programs, direct observations in the workplace, peer writing groups, mentorship programs, site visits, and independent study (2,3). All of these types of faculty development require resources and investment of faculty time as well as compete with other priorities.

Despite the clear need for faculty development, there are many barriers to effective implementation. Identified barriers include engaging faculty to prioritize such activities, a perceived institutional "hidden curriculum," lack of time or resources, challenges creating faculty development programs, and difficulty engaging faculty because of the volunteer nature of faculty development (4,5). In a 2011 national survey of internal medicine program directors, only 36% of respondents were somewhat or very satisfied with their faculty development programs (5). At University of Nevada School of Medicine, a community-based medical school, a faculty development initiative sought to overcome these obstacles and meet accreditation requirements. Tailoring faculty development to an efficient, evidence-based, and interactive format was crucial. This need led to the creation of the "snippet."

Principle of the Snippet

A snippet is defined as a "small piece." The snippet initiative is not meant to replace more in-depth faculty development programs, but rather to supplement. Snippets are most frequently delivered as part of the agenda of a required activity, such as a monthly faculty meeting. One of this model's many benefits is the ability to reach faculty who may not traditionally attend a more extensive faculty development session on a voluntary basis.

A snippet by definition must be short in length. An effective snippet should be no longer than 20 to 30 minutes in total and should focus on a single overriding communication objective (SOCO). Some topics may seem too vast for this format but a concept map can divide the subject into its essential components. The identified concepts may themselves be sufficient to become a topic as part of a series of snippets. Snippets should be very structured. If presentation software (PowerPoint or Prezi) is utilized, no more than 10 slides should be included. Finally, establish that the educational offering is grounded by the literature.

Despite the clear need for faculty development, there are many barriers to effective implementation. Identified barriers include engaging faculty to prioritize such activities, a perceived institutional "hidden curriculum," lack of time or resources, challenges creating faculty development programs, and difficulty engaging faculty because of the volunteer nature of faculty development.

Anatomy and Development of a Snippet

The standard snippet format should include six elements:

1. Title
2. Clearly stated learning objectives
3. A mini-didactic that provides up to five key evidence-based points
4. An interactive activity to reinforce the principles discussed. (Instructions should be clear for maximal impact and to maintain efficiency. Examples include a role play, review of a video clip, application of a checklist, or a Q-sort activity.)
5. Time to discuss, debrief, and reflect after the activity to ensure that the principles are reinforced
6. Summary slide listing the take-home points

When developing a snippet, mindfulness of the time limitation and efficiency required is essential. The impact of this learning opportunity will be limited if it cannot be delivered during the allocated period. We advise practicing the snippet prior to presentation to assess timing.

Implementation

Snippets at University of Nevada School of Medicine were introduced in 2007 by the associate dean for graduate medical education (GME). Most recently, at an institutional program director retreat, fellowship and residency program leadership created a series of snippets. The developed snippets were placed on the institutional intranet so that programs across disciplines could share ideas and use the developed products for their own faculty. Some institutions offer partial continuing medical education credit for faculty attending snippet presentations delivered at department meetings or other required faculty activities (6).

One goal is to develop a repository of snippets to be shared. Faculty development in certain topics can easily be adapted across disciplines and institutions and should be done to increase likelihood of delivery. Finding an appropriate location has been a challenge owing to the need to find an appropriate open platform for contributors to access without being open to the public. In addition, appropriate peer review is key to ensuring that the snippets include high quality evidence and best educational practices (6).

There are limitations to the snippet framework. A single exposure is unlikely adequate to change practice—deliberate practice, including feedback and reflection, are necessary components for a lasting and meaningful change in behaviors and skill level (2,7,8). A snippet is meant to provide faculty with exposure to certain principles. Because it is an adjunct to in-depth faculty development, educators and participants should be aware that further training in certain areas of interest might be warranted. Developing a SOCO may challenge some faculty. However, it is likely that many presenters would be more comfortable presenting a focused principle rather than a comprehensive review of a topic. Finally, the snippet model has not been formally evaluated for its effectiveness.

Discussion

Snippets are not intended to replace traditional faculty development. Ultimately, effective faculty development requires institutional support, including incentives for faculty to participate and providing resources for faculty development (9). The progression to developing excellent clinical teachers can start at any level, such as a subspecialty division, a department, or institution-wide (10). Given the call to enlarge the scope for faculty development (11), incorporating snippets as an additional tool may be a way to augment educational offerings.

An effective snippet should be no longer than 20 to 30 minutes in total and should focus on a single overriding communication objective.

A repository of snippets can serve the community of educators to meet their faculty development needs and accreditation requirements. Snippets are efficient and effective in imparting "bite-sized" information and skills while capturing an audience.

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Teaching About Cognitive Error in Medical Education

Diagnostic Error Is Common and Important

An estimated 10-15% of inpatient diagnoses (1) and 5% of outpatient encounters (2) involve diagnostic error, defined as a missed, delayed, or incorrect diagnosis. Given the prevalence of diagnostic errors, medical educators have a duty to address them as part of their quality improvement and patient safety curricula. The Institute of Medicine is due to release a report on diagnostic error in 2015, which may have an impact similar to the landmark report *To Err Is Human* (3,4). Educators in internal medicine are well-positioned to address this topic, given our emphasis on diagnosis.

Diagnostic errors are categorized as no-fault errors, system errors, and cognitive errors (5). "No-fault errors" describe a situation in which a clinician did not have a reasonable opportunity to make a diagnosis, such as an extremely rare condition or a patient who concealed clinical information. "System errors" arise from problems with the system in which a clinician is working, such as a technical problem with a laboratory test or a lack of communication between providers. "Cognitive errors" reflect suboptimal diagnosis making, including problems with data gathering, data synthesis, or (infrequently) knowledge deficits. Most cases of diagnostic error involve both system and cognitive factors.

To meet this educational need in our residency programs, we have created a curriculum that can be condensed to an afternoon session, delivered over a series of conferences, or implemented longitudinally over a three-year residency program. We presented a version of our curriculum at the 2014 APDIM Chief Residents Meeting that focused on strategies for teaching about decision making and error. Through the creation and refinement of this curriculum, we identified features that make the curriculum effective, impactful, and implementable.

Tips for Developing and Implementing a Curriculum about Cognitive Error

Make Case Analysis Authentic

To be accurate and effective in analyzing cognitive error, understanding the decision-making process of the clinician is necessary. Although complete knowledge of the thought process of another person is difficult, if not impossible, to acquire, facilitating introspection and constantly focusing learners with questions such as "What are you thinking at this point?" and "Why are you thinking that?" allow learners to delve into their own decision making. In conducting this type of case analysis, the thought process must be true to life, not a post hoc rearrangement of events. Cases should be discussed in a similar order to the actual sequence of events and the ambient conditions influencing the clinicians that made decisions in the case must be acknowledged. These efforts minimize hindsight bias and allow learners to begin to develop real-time error analysis skills applicable to practice. Cases for formal discussions should be written in the second person, present tense (e.g., "You are the resident caring for") with contextual information (e.g., "This is your fifth admission on a busy night") that allows for authentic analysis.

Help Learners Own the Error

Overconfidence is a major contributor to diagnostic error (6). Learners—and faculty—see the errors of others more easily than their own. Cases from preexisting curricula should be adapted with local and relevant facility names and details to allow learners to be introspective about "our error" instead of criticizing the "outside hospital." Using cases the learners were actually involved in fosters ownership and salience, although it also requires additional time and comfort with vulnerability. We found a faculty panel openly discussing their own cognitive errors a particularly effective activity to help "own our errors."

Avoid the "Second Victim" Effect

Unlike the analysis of system errors, which is relatively analytic, impersonal, and dispassionate, cognitive error is much more personal for clinicians, especially learners (7). When a cognitive error occurs, clinicians are at high risk of suffering from the "second victim" phenomenon, in which a medical error adversely affects their psyche (8). Given the emotional nature of cognitive error, any curricular intervention addressing the topic must ensure emotional safety for participants. Normalization of the process of cognitive error analysis and open discussion and modeling by respected, experienced faculty about their own cognitive errors are strategies to create a safe environment for these discussions.

Focus on Thinking

Faculty facilitating discussions in cognitive error-focused workshops must explicitly be encouraged to avoid generic and nonspecific feedback such as "see more cases" or "read more." Faculty must also be encouraged and equipped to discuss the decision-making process in a case rather than just the medical knowledge content it contains. Meeting with faculty prior to the session is important to help them understand the objectives and the desired tenor of the session. During the early stages of the curriculum or when faculty less experienced in error analysis facilitate sessions, we found well-prepared facilitator guides that contained discussion prompts helpful.

Integrate into Daily Workflow

Feedback about decision making and error should be integrated into clinical workflow and be a standard part of clinical practice. Attending physicians should be encouraged to empower learners to identify potential errors in the attending's decision making and talk openly about it on rounds. Brief "meta-moments" to discuss why a certain decision was made create opportunity for focused discussion about decision making and error. All clinicians should be encouraged to seek frequent feedback about their decision making after care transitions (e.g., between hospitalists,

between discharging teams and primary care physicians, or between the emergency department to the inpatient ward). As residents see their clinical mentors seeking and receiving consistent feedback, the practice becomes a normal part of clinical care.

Conclusion

Medical decision making and diagnostic error need to be addressed in medical education. Effective curricula must provide opportunity for authentic analysis of error, encourage open discussions about errors while ensuring emotional safety, and be integrated into daily practice. As we develop the next generation of diagnosticians, we must give them the tools to constantly analyze and improve the diagnostic process.

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