

# ACADEMIC INTERNAL MEDICINE

# INSIGHT

## AAIM IN ACTION

### **AAIM Executive Vice President Update: Maximizing Your Membership**

AAIM Executive Vice President Bergitta E. Smith highlights some of AAIM's key strategic initiatives. Positioned by its founding member organizations, AAIM has emerged as a strong advocate for faculty, students, residents, fellows, and administrators in internal medicine. But the alliance needs your input to build the products and services you need.

## NEXT ACCREDITATION SYSTEM

### **Entrustable Professional Activities: The Minnesota Approach**

Milestones deconstruct understanding of "the good doctor" into the essential components. For medical educators, the challenge is understanding how to put the pieces back together. EPAs provide a framework for using milestones to assess learners, but it can be a challenge to move from the theoretical construct to implementation and assessment.

## WELLNESS

### **Balancing the Glass Balls as a Medical Educator**

It is important for clinician educators to take time to reflect on their successes and failures in balancing family, health, friends, and spiritual well-being as well as work. As the life cycle of program directors gets shorter, with the majority staying in the position for five years or less, it is critical to learn strategies that will enhance long-term satisfaction, decrease burnout, and support life balance.

## HEALTH CARE DISPARITIES

### **Role of Graduate Medical Education in Addressing Health Care Disparities: A Multi-Pronged Approach Is Needed**

Although surveys indicate that internal medicine program directors agree that knowledge about health care disparities is important, they also identify two major barriers to teaching effectively in this area: shortages of qualified faculty to teach about cultural competency and health care disparities and a lack of standardized curricula. Recommendations for improving systems to address disparities include collecting and reporting data about patient race and ethnicity, supporting language interpretation services, increasing awareness of health care disparities through education, and requiring cultural competency training for all health care professionals.

2

6

8

10

## *By the Numbers*

# 29%

Program directors who reported dissatisfaction with work-life balance

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# 23%

US seniors cited cultural/racial-ethnic/gender diversity as a deciding factor in selecting a residency program

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# 82.5%

Faculty surveyed who felt that milestones provide a truer assessment of housestaff

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## Maximizing Your Membership

As we prepare for a new year, I am pleased to share how AAIM is working on your behalf. As AAIM continues to grow with new members joining from all areas within departments of internal medicine (Figure 1), it is important to ensure you are aware of those efforts.

I hope you will consider taking advantage of some of AAIM's educational and faculty development offerings as those member services are an effective way for the alliance to meet your individual needs. AAIM is a fully merged, diverse member organization. Positioned by its founding member organizations, AAIM has emerged as a strong advocate for faculty, students, residents, fellows, and administrators in internal medicine.

### Collaborative Efforts Pay Off: Milestones and High Value Care

#### Milestones Update

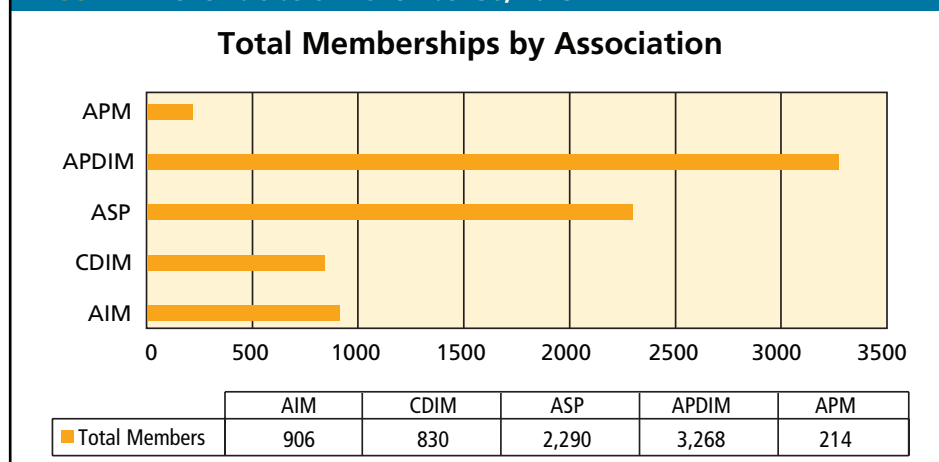
During 2013, the ASP Council leaders worked with other AAIM leaders, colleagues from the Accreditation Council for Graduate Medical Education (ACGME), the American Board of Internal Medicine (ABIM), and representatives from most of the internal medicine subspecialty societies (Figure 2) to develop reporting milestones for subspecialties. To that end, three summits were held in 2013 (Alexandria, VA, Philadelphia, PA, and Chicago, IL, respectively) to foster open dialogue and create opportunities for each of the subspecialties to bring ideas, concerns, and best-practices to the table.

In an effort to ensure a successful launch of these milestones on July 1, 2014, each of the subspecialty societies came to the table with their own ideas but a single objective—complete this important work so fellowship program directors and faculty will be ready to incorporate this new paradigm into the training, development, and support of subspecialty fellows.

The Internal Medicine Education Redesign Advisory Board led the initial work on the development of the reporting milestones for core internal medicine programs and assisted mightily in helping move the subspecialty discussion forward. As a result of the organizations represented on the advisory board and internal medicine subspecialty society leaders and executive staff, residency and fellowship programs will be prepared to embrace the Next Accreditation System (NAS) and effectively incorporate the reporting milestones.

In an ongoing effort to help our members prepare, AAIM will host three regional faculty development programs in late

**FIGURE 1. Renewals as of November 30, 2013**



**FIGURE 2. Subspecialty Society Participants in Fellowship Milestone Development**

American Academy of Hospice and Palliative Medicine
American Academy of Sleep Medicine
American Association for the Study of Liver Diseases
American Association of Clinical Endocrinologists
American College of Cardiology
American College of Chest Physicians
American College of Gastroenterology
American College of Physicians
American College of Rheumatology
American Gastroenterological Association
American Geriatrics Society
American Society of Clinical Oncology
American Society of Gastrointestinal Endoscopy
American Society of Hematology
American Society of Nephrology
American Society of Nuclear Cardiology
American Thoracic Society
Association of Pulmonary and Critical Care Medicine Program Directors
Infectious Disease Society of America
Society of Cardiac Angiography and Intervention
Society of Critical Care Medicine
The Endocrine Society

spring 2014 to ensure internal medicine fellowship training program directors are ready for the July 1 start of milestones reporting and NAS.

I also invite members to join us in Nashville for the 2014 APDIM Spring Conference where several workshops, plenaries, and breakout sessions will feature just-in-time learning for core and fellowship training program directors, associate program directors, and program coordinators.

### High Value Care

High value care (HVC) is one of AAIM's key strategic initiatives for fiscal year (FY) 2014. APM President Wendy Levinson, MD, is working closely with AAIM as the point person on the AAIM-ABIM-American College of Physicians HVC Advisory Group. Each of these groups has a vested interest in promoting HVC concepts.

Internally, AAIM has convened an HVC Work Group led by APDIM Councilor Lia S. Logio, MD, and CDIM President-Elect Valerie J. Lang, MD. This cross-organizational work group has four strategic areas of focus:

1. Embedding HVC concepts into internal medicine teaching environments.
2. Seeking ways to change the culture.
3. Articulating the need to enhance research and scholarship in the area of HVC.
4. Developing promotion pathways for faculty who embrace HVC concepts in their roles as teachers, patient care givers, and stewards.

The AAIM work group is composed of members representing the various constituents of AAIM and plans to work with program planning committees and external stakeholders to move the HVC agenda forward. For example, the APM leadership will lend its support to a subgroup that will develop promotion criteria for academic medicine. APDIM has earmarked seed grants for faculty development on HVC. The CDIM leadership is actively supporting efforts to promote HVC concepts, most notably a joint venture with MedU on an online curriculum to adapt elements of the AAIM-ACP HVC curriculum—visit <http://hvc.acponline.org/curriculum.html> to see the recently released version 2.0 of the curriculum—and assessment tools for students.

### Learn. Network. Grow.

The world of academic medicine continues to evolve rapidly. Our accrediting and certifying bodies have recently instituted changes that directly impact your career. Further change comes at us quickly from payers and the federal government. AAIM will continue to offer educational programs and products to foster professional development. Look for these opportunities by visiting [www.im.org/meetings](http://www.im.org/meetings) to find opportunities that fit your needs. AAIM wants to be your advocate and professional partner.

Thank you for your continued support. I wish everyone the very best new year possible! ☺

Sincerely,



Bergitta E. Smith  
Executive Vice President



Alliance for Academic Internal Medicine

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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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## Speaking with Leaders: AAIM Interviews Catherine R. Lucey, MD

*Catherine R. Lucey, MD, is Vice Dean for Education at University of California, San Francisco, School of Medicine. She was previously Vice Chair and Program Director in the Department of Medicine at Ohio State University School of Medicine. She served on the APDIM Council from 2004 to 2006*

*Her interviewer, Paul B. Aronowitz, MD, is APDIM Past President and Clerkship Director in the Department of Medicine at University of California, Davis, School of Medicine.*

### **Tell me about your current position at UCSF.**

My role is to oversee all educational activities, which includes undergraduate medical education, graduate medical education, continuing medical education, faculty development, and the infrastructure underneath that—educational technology and research and development in medical education. Anything that is involved in preparing people to be physicians and lifelong learners is my responsibility.

### **That sounds like a huge job—perhaps even several huge jobs?**

It is a big job. I love it because I think medical education needs to be considered a continuum and being in this position gives me the vantage point to allow me to see how things connect from the pre-medical world all the way to the practicing clinician.

### **What was your earliest leadership experience?**

My earliest, big leadership experience was as a chief medical resident at San Francisco General Hospital. It was a great formative experience for learning how to really be a teacher, not just doing the off-the-cuff things that you might do on rounds as a resident. It was about actually spending some time thinking about what makes good education and what makes a good teaching environment.

### **What was your biggest challenge during the chief resident year?**

Time management was huge for me. I also think it was the first time I realized that there are things you do in leadership positions that are not particularly fun or engaging, but you do them because you have the privilege of doing the other fun and engaging leadership things. There's nothing about scheduling people, managing jeopardy call, and calling people in that's fun or creative or interesting, but it's an enabler to allow you to work in an environment where there's a whole lot of other exciting things happening—great students, great residents, really interesting patients, and the opportunity to make a difference.

I think the other thing is that you get to see professionals at their best and professionals at their worst. It made me begin to think about why it was that people I really liked and admired would sometimes do dumb things. During that year,

I began to develop a different way of looking at people with problems and so began the work that I've done in terms of working with residents with challenging issues.

I think it was all embedded in that year, realizing that there are people who on the surface look really good and you trust but then they show up at work and are not that good. The trick is to try and figure out what we can do to help people show up at work every day in their best possible self.

### **Has it been hard giving up having a big role being the teacher at the bedside? Did you struggle with that?**

Yes, absolutely. For a long time I had a sticker on my computer that read, "Teach something every day." Now I realize that I'm still teaching—it's just in a different way. Being in the dean's office is about teaching in a totally different way. It's not about giving classroom lectures or demonstrating something at the bedside, it's about helping people learn a different set of skills that helps them be successful. It was hard giving up lots of direct learner contact, but somebody else is now doing it better than I could do. I think that's the other part of it. You have to be willing to let people go and celebrate when they transcend your wildest expectations.

### **What are your thoughts about studies published in recent years about the high turnover rates and burnout rates for internal medicine program directors, clerkship directors, and chairs of medicine?**

Job transition does not necessarily equal burnout. Sometimes being a program director prepares you to take on bigger and better roles and they are uniquely positioned to take on new leadership challenges. Turnover is not necessarily bad. Turnover in three years is probably too fast, but I think we have to be really cautious about thinking that people are burning out and leaving the educational fields. Sometimes, they have achieved what they wanted to achieve and they are going on to bigger and better things.

Personally, I espouse the idea that 10 years in any job is long enough tenure. Every five years I look around and ask: am I still excited about coming to work? Do I still think I'm making forward movement? Am I developing the people around me I need to develop? Are there other ways that I could use my talents? If you want to keep yourself

continuously learning and adopting, you should always be shooting for the next hill that you want to climb.

### **What about the fact that 40% of program directors nationally have been on the job three years or fewer?**

I think that it throws down the gauntlet for leaders to figure out how we are going to develop these people so that they view the job as a creative and adaptive opportunity as opposed to a checklist of rules.

I would argue that medicine is a very creative field because you're continuously confronting new problems for which you need to pull people together and research and then identify answers for. It's a very creative process. But people don't think about it this way—they think about art as being creative. Creative people need to be able to work toward purpose and toward mastery.

Our big challenge is to help people understand that their role as program directors is to do the tactical work to make sure the work hours are complied with and that the residents are assigned to their various rotations, but they should be thinking bigger and broader and about the interesting questions. Otherwise, they just default to, "How can I distribute the residents so that the rules are fulfilled?" These people are going to burn out.

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

We've put in place some strategies to make sure that every meeting has deliverables or outcomes. When we make a decision, we "ring the bell," which means that we've made a decision and now we're going to move on. Once we've made a decision, we decide who's responsible for following through on that decision and what the timeline is.

I think the thing that I have to be really careful about as a leader in meetings is that I'm a Meyers-Briggs extrovert. I "think by talking" but I'm very conscious of the fact that other people "think by thinking." I try and create some space for people to spend some time thinking quietly, particularly if they are contemplating things from a different perspective. I have to watch myself to make sure that I don't jump too quickly to a conclusion before letting contemplative people weigh in on things.

I ask people what they want from a meeting with me, particularly if they are bringing a problem. My instinct is to solve the problem—that's what problem solvers do. Over the years, I've learned to ask people how I can help with the problem. Is it something that they want me to listen to or to talk about it with me? Or do they want me to solve it? Do they want me to intervene? It's really a simple concept—if you ask people what they want out of a meeting, they'll usually tell you.

I try to make time for what I call "non-transactional conversations." When we're really busy and things are moving rapidly, we can get into this situation where all we ever do is try to solve problems. Sometimes it's nice to just have a conversation with someone about what's going on. It reminds

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you what you like about that person and why we're working together.

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

I would say the biggest leadership mistake I made was not moving somebody out of a position for which that person was clearly unsuited. It was someone who was clearly in the wrong position and clearly not capable of functioning in that environment. I had gotten human resources advice on how to handle this person, which was a very slow, progressive disciplinary focus and it just did not work out well and did not end well. It would have been more appropriate for me to be more direct and more decisive in removing that person.

That was my biggest leadership mistake but I made a bunch of them—we all do. You hire the wrong person or focus your energies on the wrong thing or don't ask the right questions or put too much trust in people who you shouldn't. I'm a big fan of the saying "good judgment comes from experience, and experience comes from bad judgment."

### **How do you give feedback?**

One of the things I really deeply believe is that the best advocacy for anyone is to give them feedback that they need to hear to get better and to give them a way that's clear, that makes it evident to them why a change is needed, and what the consequences of failing to change are. You can give that feedback directly and be tremendously supportive. I think we have this belief that if we are direct with people—tell them that if they don't change, something bad will happen—that that it means we are not supporting them.

You have to stay performance-based and your focus has to be on what are the problems, the consequences of failing to fix these problems, and the resources in the environment available to help them. The same is true when we deal with learners, residents, or faculty who are struggling. Our job is to make sure that the supportive but clear message has been delivered and to really make sure that the message was heard.

### **What are the secrets of being a great mentor?**

I think you have to care about people. For great mentors, it is their life. Every day is about supporting other people and moving their careers forward. These people see their responsibility first and foremost as advancing the careers of others. It feels as much a part of their daily work as anything else that they do.

*continued on page 7*



## Entrustable Professional Activities: The Minnesota Approach

Over the past two decades, medical schools and residency programs have been challenged to demonstrate that the physicians who graduate from their institutions are ready for independent practice. The first answer to this societal, regulatory, and internal challenge came in the form of the Accreditation Committee on Graduate Medical Education (ACGME) core competencies (1). These competencies can be seen as broadly describing the components of “the good doctor”—the archetypical physician. This effort has been further refined to curricular milestones, which allow medical educators to track a learner through the developmental stages of each of the subcompetencies (2–4).

Milestones deconstruct understanding of “the good doctor” into the essential components. For medical educators, the challenge is understanding how to put the pieces back together. Entrustable professional activities (EPAs) provide a framework for using milestones to assess learners (5). EPAs describe the day-to-day activities that physicians perform—from seeing a patient in clinic to admitting a patient to the hospital to performing a procedure. The way we deem a learner ready to practice these activities independently is through a process of entrustment (6). EPAs simply formalize this process by specifying the different levels of entrustment. Milestone language can then be used to describe the behaviors that an observer would need to see to formally entrust a learner.

There are currently many challenges with moving from the theoretical construct of an EPA toward implementation and assessment of these activities. One of the difficulties is that of scope—how broadly (or narrowly) are programs defining the EPAs they are developing? Broad EPAs are difficult to reliably assess, while narrow ones may have limited generalizability. In developing and implementing the initial EPAs at University of Minnesota, we took a practical approach, dividing each EPA into a planning and a development component. In the planning stage, we assessed institutional and learner needs, available resources to provide EPA infrastructure, and local expertise to support and assess our learner outcomes. Based on our local strengths, we created both handoff and procedural EPA assessments.

The model we used was to first assess where, when, and how these activities were learned and evaluated. For example, although handoffs occur at all of our affiliated institutions, the expertise and infrastructure (available chief residents, a hospitalist night shift, a fixed hand-off time and place) were focused at University of Minnesota Medical Center.

We broke the activities down into their constitutive tasks and adapted behavioral descriptors from Ten Cate and Scheele for each level of the EPA—from level one (“cannot perform”) to level five (“able to supervise junior trainees”) (7). Creating

the behavioral descriptors required finding a developmental framework that “fit” with the activities. The handoff EPA used the Dreyfus and Dreyfus model (8,9) and the American Board of Pediatrics Milestones document (2) as a conceptual framework and gestalt for each of the entrustment levels. These themes were carried through to describe the behaviors expected, using identified behaviors to distinguish between levels of entrustment.

For each EPA, the component tasks of the activity, the levels of entrustment, and the behavioral descriptors defining each level created a rubric, allowing for tracking of a learner’s progression to independent practice. We defined criteria for advancement between levels with the goal for each learner to advance to independent practice. For the procedural EPA, learners were advanced based on several criteria: 1) a knowledge component, 2) completion of a procedural checklist, 3) the need for “hands-on” or “verbal assistance” from faculty, and 4) faculty/learner confidence in performing the procedure independently. Learners were advanced to independent practice only if they met observer criteria, met a faculty global assessment, and felt confident performing that procedure independently.

The final step in the development of both the handoff and procedural EPAs was to map the curricular milestones to the behavioral descriptors. In this setting, the behavioral descriptors serve as “activity-specific” milestones, whereas the curricular milestones are more generalizable, serving as a guide for different assessment tools within the EPA structure.

Using this approach to EPA development allows the assessment of multiple subcompetencies and milestones across different skill sets. For example, a resident advancing to “independent practice” on the procedural EPA and handoff EPA would have been assessed in 45 curricular milestones. Additionally, two milestones were assessed on both the procedural and handoff EPAs, allowing for triangulation of that resident’s performance across different activities, which allows for a robust assessment with true “entrustment” for independent practice of the work of the physician.

We learned a number of lessons in the development of these two EPAs. Reducing a cognitive activity, such as a patient handoff, into discrete observable components was more difficult than developing a checklist for a procedural activity. Additionally, the procedural EPA had good learner and faculty compliance at the initial level of assessment that took place in the controlled environment of a simulation center. However, compliance decreased in the clinical environment, largely due to multiple hospital systems, many supervising attendings, and a lack of a centralized tracking system. The handoff EPA had the benefit of being performed in a highly structured setting

with a smaller group of evaluators, which resulted in ongoing observations of intern performance for the first six months of residency. Faculty and chief resident buy-in to the process were critical components of the handoff EPA.

Our next steps include refining our existing EPAs, using our model to create new EPAs, and developing faculty education materials around direct observation. Specifically, the focus of the procedural EPA will be to improve utilization of the checklists in the clinical setting. The handoff EPA will include an additional “morning after” assessment of the previous night’s handoff. Both EPAs will be incorporated into the residency program semi-annual review processes, and both will need to be validated against learner and clinical outcomes. In addition, several other EPAs are being developed using this model. We are creating faculty development materials to improve buy-in and the direct observation skills of faculty. As we develop more EPAs and train faculty on their assessment, we aim not only to show that our graduating residents can practice independently, but to improve their education in the process. 🌀

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### Who were the important mentors in your career?

I have had a series of mentors. I think I’m a good poster child for “it takes a village to build a career.” Cindy Mulrow was probably my first mentor. She helped me with my first meta-analysis. She was really effective in meetings. She had this way of listening carefully to what was going on at the meeting and then synthesizing it for everyone else in the meeting and was very, very successful. That’s a skill I learned from her and has been very useful for me—this ability to listen to a bunch of warring factions and say, “we’re all talking about the same thing and this might be a way forward.”

She also taught me something that I give as advice to other people: if an opportunity presents itself to you and you’re not ready for it, don’t fret about it—the opportunity will come around again. There are plenty of second chances. If you’re good enough to be considered once, you’ll be good enough to be considered again.

Kurt Kroenke was probably one of the most impactful people on me. He was a classic mentor at identifying the next step for people.

I’ve also had great bosses who were mentors. Len Wartofsky at Washington Hospital Center was a fantastically

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#### REFERENCES

1. Swing SR. The ACGME outcome project: retrospective and prospective. *Med Teach*. 2007;29(7):648–654.
2. Hicks PJ et al. Pediatrics milestone project: next steps toward meaningful outcomes assessment. *J Grad Med Educ*. 2010;2(4):577–584.
3. Green ML, Aagaard EM, Caverzagie KJ. Charting the road to competence: developmental milestones for internal medicine residency training. *J Grad Med Educ*. 2009;(Sept):5–20.
4. William Iobst et al. Internal medicine milestones. *J Grad Med Educ*. 2013;5(1)s1:14–23.
5. Ten Cate O. Entrustability of professional activities and competency-based training. *Med Educ*. 2005;39(12):1176–1177.
6. Ten Cate O. Trust, competence and the supervisor’s role in postgraduate training. *Brit Med J*. 2006;333:748–51.
7. Ten Cate O, Scheele F. Competency-based postgraduate training: can we bridge the gap between theory and clinical practice? *Acad Med*. 2007;82(6):542–547.
8. Dreyfus SE, Dreyfus HL. *A Five-Stage Model of the Mental Activities Involved in Directed Skill Acquisition*. No. ORC-80-2. University of California, Berkeley Operations Research Center: 1980.
9. Carraccio CL, Benson BJ, Nixon LJ, Derstine PL. From the educational bench to the clinical bedside: translating the Dreyfus developmental model to the learning of clinical skills. *Acad Med*. 2008;83(8):761–767.

skillful leader at delegating to others, turning them loose, but always being there in case there was a problem that needed to be fixed. He really taught me how to let go and let other people have fun doing the work, but backing them up as needed.

### As you’re putting together your ideal leadership team, what do you look for?

You need some other people who are going to balance out what you’re able to do. I look for people who complement me, not replicate me. I’m an outcomes-driven leader, meaning if I need an outcome I try hard to make sure that outcome happens. I look for “relationship people” because they balance my outcomes focus. I love analysts. Analytic people are like the budget people in a company. They can immediately see what the problem with the vision is.

I also look for “promoters”—somebody who just really gets the vision and is a positive thinker. I look for some introverts and some extroverts. I look for people who are more of the dreamers. I always try to find one or two people who I can count on to disagree with me and who are going to present a different viewpoint. That’s been very successful. 🌀

## Balancing the Glass Balls as a Medical Educator

Life as a clinician educator is a balancing act. Significant effort is expended to take care of learners, care for patients, support colleagues, confront “fires,” celebrate successes, follow rules, make rules, develop curriculum, mentor faculty. Then add personal concerns: feed the dog, spend time with family, keep healthy, drive the kids, seek personal career development, spend time with friends, eat ... the list is long and sometimes exhausting, if not overwhelming. It is daunting to take the time to balance the many balls being juggled. Prioritizing becomes critically important. Which of the balls will break if they drop at that moment? Which of the balls will bounce a bit if they fall? This concept was eloquently summarized by Brian Dyson, the Chief Executive Officer of The Coca-Cola Company.

*“Imagine life as a game in which you are juggling some five balls in the air. You name them—Work, Family, Health, Friends and Spirit and you’re keeping all of these in the air. You will soon understand that work is a rubber ball. If you drop it, it will bounce back. But the other four balls - Family, Health, Friends and Spirit—are made of glass. If you drop one of these; they will be irrevocably scuffed, marked, nicked, damaged or even shattered. They will never be the same. You must understand that and strive for it.”*

It is important for clinician educators to take time to reflect on their successes and failures in balancing family, health, friends, and spiritual well-being as well as work. As the life cycle of program directors gets shorter, with the majority staying in the position for five years or less, it is critical to learn strategies that will enhance long-term satisfaction, decrease burnout, and support life balance. Not surprisingly, these concepts can be applied to most professions. Take a moment to complete **Figure 1**, which allows reflection on your current state in five key areas.



Physicians have a higher rate of burnout than other professions. In a survey of job satisfaction and burnout, only 45% of internal medicine physicians reported adequate time with their families. Occupational medicine physicians reported the greatest satisfaction in the study, while general surgeons noted the least.

Data from the 2010 APDIM Survey suggested that 29% of internal medicine program directors felt dissatisfaction in their work-life balance. The ability to resolve conflicts in a manner

that allows one to meet both work and home responsibilities is important. Factors associated with burnout include long work hours, work-home conflict lasting more than three weeks, or resolution of the conflict always favoring work responsibilities. It is helpful to use the reflection from **Figure 1** to identify personal threats to work-life balance. Then the work of addressing balance can begin.

Signs of burnout can be subtle. Ask questions:

- Do you feel burned out from your work?
  - How often have you felt this way?: Never, a few times a year, once a month, a few times a month, once a week, a few times a week, once a day, more
- Have you become more calloused toward people since you took this job?
  - How often have you felt this way?: Never, a few times a year, once a month, a few times a month, once a week, a few times a week, once a day, more
- How often do you experience conflicts between work and other parts of your life?
  - How do you resolve these conflicts?: In favor of work, in favor of home, meeting both needs
- How often do you feel disinterested in your work?

Positive answers to any of these questions may be the first suggestion that balance may be lacking. In the 2011 APDIM Survey, only 4% of program director respondents reported never feeling burned out in their jobs. As we climb the professional ladder, raise families, try to stay healthy, enjoy other activities besides work, and take care of residents, students, and faculty, we often forget to take care of ourselves.

A first step in working toward balance is engaging in daily priority setting (**Figure 2**). Were the items identified in question 1 and question 2 on your most recent “to do” list? Why or why not? Are you making things that are important to you and to your quality of life at work and at home a priority in your daily activities? It is a major challenge for many professionals. Prioritizing the important things is hard, especially when you are surrounded by so many “urgent” calls for your attention and focus. However, it is critical to establishing a sense of well-being and accomplishment in your daily life.

Use **Figure 3** to label the items on your “to do” list that you reviewed in the reflection by the quadrant in which they belong based on urgency and importance. For many busy professionals, most of the items are in quadrants I and III. What about the items that you listed in the first two questions in Figure 1? Do they go into quadrant II? Many of us spend most of our time “putting out fires,” doing the urgent things as we should but often neglect the important items that relate to personal development, growth, health, relationship



development at work and outside of work (writing a paper or designing a study, hosting a dinner or team building activity, taking a class or working out daily). Recognizing that we spend a lot of time on things in quadrant III and working to rebalance and reprioritize is a key step in striving for balance in our daily activities. It can be done in many ways, including by just simply labeling the things that you put on your “to do” list each day, though more sophisticated coaching and prioritizing tools exist.

Once priorities are established, it is important to reassess them periodically and to learn to say no to requests that are not a priority for you, your development, or the community you serve. The energy expended in developing “work-arounds” to accomplish activities that are necessary, self-satisfying, and time-consuming can actively contribute to burnout. Health care providers are trained to always help others but not often taught how to help themselves. Taking care of identified needs can make us enjoy other responsibilities. Learning when and how to say no is important (**Figure 4**). One great tip is to

always say no first but that you will consider it and get back to the individual if you think that you can do whatever is asked, which provides time to consider the pros and cons--and then to truly be a winner if you come back and say yes later!

Other tips to establish work-life balance are actually part of the educator creed:

- Cultivate the positive.
- Work with your organization with flexibility.
- Organize: set deadlines and make a larger project into many smaller projects.
- Align work with your interests.
- Build resilience (and get enough sleep).
  - Make connections.
  - Avoid seeing crises as insurmountable problems.

*continued on page 18*

**FIGURE 2. Reflection on Priority Setting**

1. Think about a typical day at work. Identify two things that you currently are not doing regularly that, if you did do them regularly, would improve your quality of life at work (for example—my quality of life at work would be much better if I made sure that I checked in with my assistant regularly to keep up with signatures and schedules).
2. Think about a typical day outside of work. Identify two things that you are currently not doing that, if you did do them regularly, would improve your quality of life (for example—my quality of life would be better if I made the time to exercise daily).
3. Pull out your most recent “to do” list. Review the top 10 items on it.

**FIGURE 3. Urgency v. Importance**

		Urgency	
		High	Low
Importance	High	I	II
	Low	III	IV

**FIGURE 4. Learning to Say No**

	Say no to...	Say yes to...
Work	<ul style="list-style-type: none"> <li>• Micromanaging/instantly responding</li> <li>• Tasks or committees that used to be aligned with your goals but are no longer</li> <li>• Stuff you don't like to do that your supervisor says isn't important</li> </ul>	<ul style="list-style-type: none"> <li>• Mentoring</li> <li>• Assignments that align with your professional goals</li> </ul>
Family	<ul style="list-style-type: none"> <li>• Overscheduling</li> </ul>	<ul style="list-style-type: none"> <li>• Playing</li> <li>• Being present</li> </ul>
Health	<ul style="list-style-type: none"> <li>• Having candy or silly snacks around</li> <li>• Thinking you don't have time for appointments</li> <li>• Thinking you have to exercise for 60 minutes</li> </ul>	<ul style="list-style-type: none"> <li>• Nourishment</li> <li>• 10-minute exercises from home or a quick run</li> <li>• Scheduling annual appointments</li> </ul>
Friends		<ul style="list-style-type: none"> <li>• Scheduling time with friends</li> <li>• Being involved in a national organization where you connect with others</li> </ul>
Spirit	<ul style="list-style-type: none"> <li>• Negativity</li> </ul>	<ul style="list-style-type: none"> <li>• Expressing gratitude</li> <li>• Reframing</li> </ul>

## Role of Graduate Medical Education in Addressing Health Care Disparities: A Multi-Pronged Approach Is Needed

The most recent Agency for Healthcare Research and Quality *National Healthcare Disparities Report* reveals that while overall the quality of care is improving for all populations, access to health care is deteriorating (1). By the year 2050, it is estimated that 54% of the US population will be underrepresented minorities, the group most subject to the consequences of disparities in health care (2). Although surveys indicate that internal medicine program directors agree that knowledge about health care disparities is important, they also identify two major barriers to teaching effectively in this area: shortages of qualified faculty to teach about cultural competency and health care disparities and a lack of standardized curricula (3).

Academic medicine serves many roles in society. One significant role is to provide medical care to the uninsured and under-insured, and residents are at the front line of caring for patients who are affected by health care disparities. Recommendations for improving systems to address disparities include collecting and reporting data about patient race and ethnicity, supporting language interpretation services, increasing awareness of health care disparities through education, and requiring cultural competency training for all health care professionals (4).

Health care disparities faced include discrepancies in access to care and difficulty in obtaining specialty services among uninsured populations (5). Patients with limited English proficiency (LEP) experience the worst access to necessary medical care as well as to preventive services (6,7). However, there are insufficient data to indicate how much of the medical care delivered by residents is affected by patients with LEP.

There are several “centers of excellence” for health care disparities, but it appears that a significant percentage of residency programs may not have access to these resources and consequently are not addressing disparities in a meaningful fashion. Clearly, additional expertise will be necessary to train residents and faculty to identify and address cultural bias as they care for patients and to nurture the skills needed to practice culturally competent care.

Increased diversity in health professions may be a key factor to eliminating health care disparities. Presently, African Americans, Hispanics, and Native Americans comprise only 10% of the nation’s health care work force; it is estimated that by 2050, African Americans, Latinos, and Native Americans will comprise 54% of the US population (2). Importantly, physicians of color are more likely to practice in underserved areas and are typically more interested in serving the medically underserved. Applicants from underrepresented minorities to medical residency training programs place more emphasis

on the ethnic diversity of the city, patients, housestaff, and faculty, and are interested in an academic environment that supports ethnic minorities (8).

One of the objectives of a workshop “Choosing the Right Residency,” presented at a Student National Medical Association conference, was to consider implications for medical students of color in choosing the appropriate residency program depending on their specific needs. Results from a survey of workshop participants indicated that more than one-half identified faculty diversity and about one-third identified housestaff diversity as critical factors in evaluating residency programs. Participants who responded that they were unsatisfied with their ability to access information about aspects of residency programs that mattered to them were more likely to state that housestaff and faculty diversity were important to them. The results of the 2013 National Resident Matching Program Applicant Survey appear to support these findings (9). Of the applicants to internal medicine residency programs, 23% of US seniors and 43% of independent applicants cited cultural/racial-ethnic/gender diversity at the institution as a factor in selecting programs for which to apply. Of those candidates that cited this diversity as a deciding factor in choosing programs, the average rating of that factor was 4.6 (where five was rated as extremely important). No other factors exceeded this rating, and the only other factors that equaled it were whether the program in an university setting and housestaff morale.

Despite the wealth of information on residency programs available from resources such as FREIDA Online, there is very little accurate program-specific information on factors that may be of great importance to candidates from underrepresented groups for residency. For example, residency websites provide relevant data such as the availability of diversity councils or minority housestaff councils, but such information is rarely in one place, making access to the data inefficient. Developing a transparent “diversity scorecard” or a “diversity snapshot” for each residency program/institution would be enormously useful for residency candidates of color.

Based on the demographics of the US medical school graduates, it can be deduced that residents of color are typically in the minority at most internal medicine residency programs. Support systems that medical students of color had access to in undergraduate education are not uniformly available at residency programs, and when they are available, there is less time to access these resources. Residents of color often find they need to advocate for their patients and translate their patient behaviors/lifestyles for their colleagues and attending physicians. Accordingly, residents of color often

experience more stress as a result of their cultural background, yet may not receive the support that they need.


Limited research identifies discrimination and abuse in internal medicine residency programs (10). Nevertheless, qualitative research has identified the impact that race has on the professional lives of physicians of African descent (11) and has emphasized the stress of navigating the role of race in the professional workplace. An editorial that addressed this article (12) noted the need to “develop, mentor, and monitor the progress of minority physicians,” that it is important to acknowledge that race matters and that forums need to be established to mitigate the sense of isolation and stress that minority physicians experience.

Residency is stressful, and having to cope with the stress of acting as a “defender” along with assimilating the world of medicine can be overwhelming. It is difficult to know whom to trust, because the dominant culture of medicine can unwittingly minimize these feelings as being “too sensitive.” If we all agree that it is important to address and mitigate health care disparities and it is known that developing and nurturing a diverse health care workforce is one way to solve the problem, it is essential to provide meaningful data to medical students from underrepresented groups entering residency as well as provide the tools and support they require in their programs.

Clearly, a multipronged approach is needed to meaningfully address health care disparities. First, we must attract and retain medical students and residents of color. Second, we must nurture physicians in training who are often coping with bias and feelings of isolation, but need encouragement to become cultural brokers and advocates for their patients. To achieve these goals, it will be necessary for educators and role models to demonstrate sufficient knowledge, skills, and ability to care for a culturally diverse patient population and to devote substantive effort toward teaching health equity.

The issue of health care disparities has taken on increased significance for graduate medical education. One of the goals of the Clinical Learning Environment Review of the Next Accreditation System is to identify how sponsoring institutions engage residents in the use of data to improve systems of care, reduce health care disparities, and improve patient outcomes (13). This collaboration represents an opportunity for residents and their faculty to advocate for patients as well as become an important part of the strategic plan for institutions to address and mitigate health care disparities. However, before that conversation can begin, it will be important to have a clear idea of the present state in residency education as it relates to curricula and resident assessment in cultural competence and health care disparities. Moreover, a needs assessment of internal medicine program directors should be conducted to determine whether comprehensive education on the implications and importance of identifying and addressing health care disparities is warranted. Determining the stages of program engagement with their institutions around the area of quality improvement initiatives around health care

disparities will allow for information sharing and strategy development for programs to engage their institutions.

Performing an assessment of what residency programs need to graduate a generation of physicians firmly grounded in the principles of practicing culturally competent care and committed to the reduction of health care disparities is critical as we continue to move in the direction of the practice of equitable, cost-effective, and patient-centered care. Ultimately, additional research on the most effective educational system to achieve this goal is clearly indicated, and outcome studies will be needed to assess the effectiveness of such innovations. 

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#### REFERENCES

1. US Department of Health and Human Services. *National Healthcare Disparities Report 2012*. AHRQ Publication No. 13-0003. Online. [www.ahrq.gov/research/findings/nhqdr/index.html](http://www.ahrq.gov/research/findings/nhqdr/index.html).
2. Carrasquillo O, Lee-Rey ET. Diversifying the medical classroom. Is more evidence needed? *JAMA*. 2008;300(10):1203–1205.
3. Smith WR, Betancourt JR, Wynia MK, et al. Recommendations for teaching about racial and ethnic disparities in health and health care. *Ann Intern Med*. 2007;147:654–665.
4. Betancourt JR. Eliminating racial and ethnic disparities in health care: What is the role of academic medicine? *Acad Med*. 2006;81:788–792.
5. Simpson CM. Racial and ethnic disparities persist in health care access and quality. *Academic Internal Medicine Insight*. 2008;6(4):6–7.
6. Shi L, Lebrun LA, Tsai J. The influence of English proficiency on access to care. *Ethnicity & Health*. 2009;14(6):625–642.
7. Smith DL. Health care disparities for persons with limited English proficiency: Relationships from the 2006 medical expenditure panel survey. *Journal of Health Disparities Research and Practice*. 2010;3(3):57–67.
8. Aagaard EM, Julian K, Dedier J, et al. Factors affecting medical students' selection of an internal medicine residency program. *J National Med Assoc*. 2005;97(9):1264–1270.
9. National Resident Matching Program. Results of the 2013 NRMP Applicant Survey by Preferred Specialty and Applicant Type. September 2013. Online. <http://www.nrmp.org/match-data/about-match-data>. Accessed 12/9/2013.
10. vanNevelde C, Cook D, Kane S, et al. Discrimination and abuse in internal medicine residency. *J Gen Intern Med*. 1996;11:401–405.
11. Nunez-Smith M, Currey L, Bigby J, et al. Impact of race on the professional lives of physicians of African descent. *Ann Intern Med*. 2007;146:45–51.
12. Betancourt J, Reid A. Black physicians' experience with race: Should we be surprised? *Ann Intern Med*. 2007;146:69.
13. Clinical Learning Environment Review (CLER). Online. <http://www.acgme-nas.org/cler.html>.

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# The Reading List

## ***Thinking, Fast and Slow***

**Author:** Daniel Kahneman

### **RECOMMENDER**

Asher Tulskey, MD (Associate Program Director at University of Pittsburgh School of Medicine)

### **WHO SHOULD READ**

Anyone who teaches learners; directs programs, departments, or divisions; manages staff; or cares for patients will find much upon which to reflect and consider changing the way they do "usual business." If you think "I have always considered the evidence in what I do," don't kid yourself. Kahneman's research shows we are all subject to the biases.

### **WHY IT'S IMPORTANT**

Kahneman is a Nobel laureate in economics who describes his life's work on reasoning and decision making that simultaneously seems obvious and frequently ignored. He describes thought processes as two systems. System 1, (fast) is intuition, pattern recognition, or the immediate understanding of a situation based on learned associations. System 2 (slow) is a more analytic and deliberate system that requires effort and concentration. System 1 continuously sends suggestions to System 2, such as impressions, intentions, intuitions, and feelings, which System 2 turns into beliefs and voluntary actions, usually without modification. While Although System 1 generally works well and is efficient in familiar situations, it has biases that the "lazy" System 2 does not always pick up. It tends to make inferences and invent causes and intentions (e.g., residents care less about patients because of duty hour changes). Other biases include neglecting ambiguity and suppressing doubt, exaggerating emotional consistency (e.g., an affable resident is rated higher on knowledge and skills), and substituting an easier question for a harder one (the mental shotgun). When we are aware of these biases, we can make more appropriate decisions. Through a truly fascinating discussion of this area of research, Kahneman makes his points sensibly, clearly, and in an entertaining manner.

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# Using the Internal Medicine Milestones to Teach and Assess Resident Clinical Diagnostic Reasoning Skills

## Background

Clinical diagnostic reasoning is an essential skill for practicing physicians, yet the concept remains difficult to define. While there has been much discussion in the literature as to the “state” or “trait” nature of clinical diagnostic reasoning (1–5), it remains a largely unobservable, cognitive process that significantly contributes to excellent patient care. Due to its “invisible” nature, however, clinical diagnostic reasoning tends to be overlooked as a focus of formal teaching and assessment within the internal medicine curriculum, despite the fact that when a resident struggles with clinical diagnostic reasoning, it is readily apparent to teaching faculty. Lack of standardized teaching and assessment of clinical diagnostic reasoning within the internal medicine residency curriculum makes it difficult to pinpoint learners’ specific deficiencies and create focused, individualized feedback and remediation plans. As Bowen notes, “the

learner’s developmental level is often related more to the extent of clinical experience with the case at hand than to the year of training.”(6) In response to these challenges, over the course of 2012, West Virginia University School of Medicine Charleston Division program piloted the use of the narrative descriptions of the milestones to establish learning objectives and evaluation instruments.

## Methods

Because curricular and reporting internal medicine milestones incorporate elements of clinical diagnostic reasoning within their narrative descriptions, teaching faculty on the medicine service rotations are using these narratives to create developmental, clinical diagnostic reasoning benchmarks for learners across residency training (Figure 1). These benchmarks not only specify performance expectations for the learners, but also define a learner’s

**FIGURE 1. Sample Milestone-Based Clinical Diagnostic Skill Evaluation**

Attending Instructions: Your primary role as this resident’s attending physician is to document the behaviors you observe during your time supervising him/her. You are not asked to make a pass/fail determination. The Clinical Competency Committee will make that determination and award credit for this rotation. Should you feel the resident’s performance was substandard for their level of training, please document this in the comment box with as many specifics as possible.

### ACGME Internal Medicine Milestone (PC1)

**1. Gathers and synthesizes essential and accurate information to define each patient’s clinical problem(s).**

Resident is able to:	Completed	In Progress	Not Observed	Comments: (include date/s of observations/s.)
1. Take the patient's story and create a problem representation using semantic qualifiers and other appropriate medical terminology.				
2. Select appropriate illness scripts based on the patient's problem representation.				
3. Prioritize a differential diagnosis using appropriate tools (best-match, base rates, worst case scenarios)				
4. Identify high priority diagnosis and avoid additional work-ups.				
5. Perform a structured reanalysis of the initial diagnosis.				
Improvement Plan:				
I have met with my attending, reviewed my evaluation and developed a plan for improvement.				
Date:				
Resident Signature:			Attending Signature:	

language expectations by integrating terminology commonly seen in the medical diagnostic reasoning literature, such as “problem representations,” “semantic qualifiers,” and “illness scripts” (6,7). Curricular milestones are included in the inpatient medicine service evaluation form as well as the ambulatory semi-annual evaluation form. These milestones are likewise included on the intern evaluation forms to ensure a more consistent and holistic view of the learner. To further reinforce these concepts, clinical diagnostic reasoning terminology has been integrated into daily patient care rounds. Faculty are asked to determine whether the resident is able to consistently perform each milestone. For less than consistent performances, faculty describe the learner’s observed inconsistencies in the comment box, and then provide face-to-face feedback to the resident, specifying individual areas for improvement and providing guidance to the residents.

## Results


Preliminary anecdotal feedback from faculty indicates that using the milestones to guide teaching and assessment of clinical diagnostic reasoning has been instrumental in clarifying the specific curricular expectations for both teachers and learners. Faculty state that they are better able to focus their learner observations and report that they feel they are providing a much more consistent evaluation process for all of their learners. Also, faculty report that using the milestones as the foundation for teaching and assessment has helped to standardize the learning and remediation processes across rotations by creating a more defined series of steps for the development of clinical diagnostic reasoning skills. Residents have reported that they better understand the specific knowledge, skills, and attitudes they must demonstrate to be promoted and become competent, well-prepared practitioners for independent practice.

## Discussion

By using the milestones as a “skill-teaching framework,” (8) faculty are no longer required to make largely subjective, global assessments of a resident’s performance. Instead, they are better able to focus their observations based on the milestone narratives and document what they are observing. Additionally, the milestones provide for longitudinal development and evaluation of clinical diagnostic reasoning skills based on longitudinal observations, documentation, and feedback by teaching faculty, rather than random “snapshots” of residents’ performance. Using the milestones as a roadmap for resident performance helps to create consistency in the focus and assessment of resident performance, creating a more objective and consistent evaluation process. This process enables faculty to provide their learners with more detailed feedback on their performance and helps to create an evidence-based guide for an individualized remediation plan. Residents benefit

from gaining clearer learning objectives via the milestones and being provided with a more robust description of their own unique strengths and challenges in their individual development of clinical diagnostic reasoning skills. By using the milestones, both residents and faculty have a better understanding of learner performance and progress within defined clinical diagnostic reasoning expectations.

## Conclusion

Based on these preliminary data, the internal medicine milestones are useful in focusing the teaching and assessment of clinical diagnostic reasoning in residency training by clarifying performance expectations for both residents and teaching faculty. In addition, the milestones provide a guide for focused learner feedback and remediation through documentation of longitudinal learner observations. Using the milestones assists in the overall standardization of evaluation for all residents. Future directions include formalizing data collection for teaching faculty and residents to validate that the internal medicine milestones enhance teaching and assessment of clinical diagnostic reasoning through early identification of challenges in resident learners, more effective remediation outcomes, and a more standardized teaching and evaluation process. 

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## REFERENCES

1. Durning SJ, Artino AR, Schuwirth L, van der Vleuten C. Clarifying assumptions to enhance our understanding and assessment of clinical reasoning. *Acad Med.* 2013;88(4):442–448.
2. Schuwirth L. Is assessment of clinical reasoning still the Holy Grail? *Med Educ.* 2009;43:298–300.
3. Croskerry P. A universal model of diagnostic reasoning. *Acad Med.* 2009;84:1022–1028.
4. Elstein AS. Thinking about diagnostic thinking: A 30-year perspective. *Adv Health Sci Educ Theory Pract.* 2009;14:7–18.
5. Norman G. Research in clinical reasoning: Past history and current trends. *Med Educ.* 2005;39:418–427.
6. Bowen JL. Educational strategies to promote clinical diagnostic reasoning. *New Engl J Med.* 2006;355:2217–2225.
7. Kassirer JP. Teaching clinical reasoning: Case-based and coached. *Acad Med.* 2010;85:1118–1124.
8. Linn A, Khaw C, Kildea H. Clinical reasoning: A guide to improving teaching and practice. *Australian Family Physician.* 2012;41:18–20.

## Milestone-Based Assessment: One Program's Journey

In 2002, the Accreditation Council for Graduate Medical Education (ACGME) established, via the six core competencies, the domains in which resident progress was to be measured (1). The outcomes project left the specifics of measurement up to individual programs. In 2007, ACGME and the American Board of Internal Medicine convened to develop milestones for internal medicine residency training to better operationalize the competencies. "Charting the Road to Competence: Developmental Milestones for Internal Medicine Residency Training" was published in 2009 (2). It is not yet known how the transition from earlier models of resident assessment to a milestone model will affect the summative evaluations that programs must report in the Next Accreditation System (NAS). We aim to report one large internal medicine residency program's experience in competency-based assessment before and after a milestone model.

Prior to the 2011–2012 academic year, the residency program evaluated housestaff on a five-point end-of-rotation global rating form based on the Dreyfus model of independence and competency (1 = beginner, 2 = advanced beginner, 3 = approaching competency, 4 = competent, 5 = advanced competent). This five-point scale was applied to all six ACGME competencies for all rotations in the program.

In summer 2011, the residency program decided to transition to a milestone model of evaluation. Program leadership, including the program director and two site directors, individually read and interpreted each of the

146 published milestones, focusing on the time frame for milestone achievement. Discrepancies in opinion about time frames of all 146 milestones were adjudicated among the three reviewers until consensus was achieved. For the academic year 2011–2012, the end-of-rotation global rating form was changed to include the six competencies with the five-point scale based on milestone accomplishments by months of training (1 = 1 to 3 months, 2 = 6 months, 3 = 12 months, 4 = 18 to 24 months, 5 = 30 to 36 months). Each competency listed representative milestones by time frame. Evaluators were able to access a full review of the revised milestone document via a hyperlink at the top of the electronic evaluation form. The evaluation scale was kept at five points, leaving opportunity to compare housestaff end-of-rotation global rating scores to the original Dreyfus model, which was also five points.

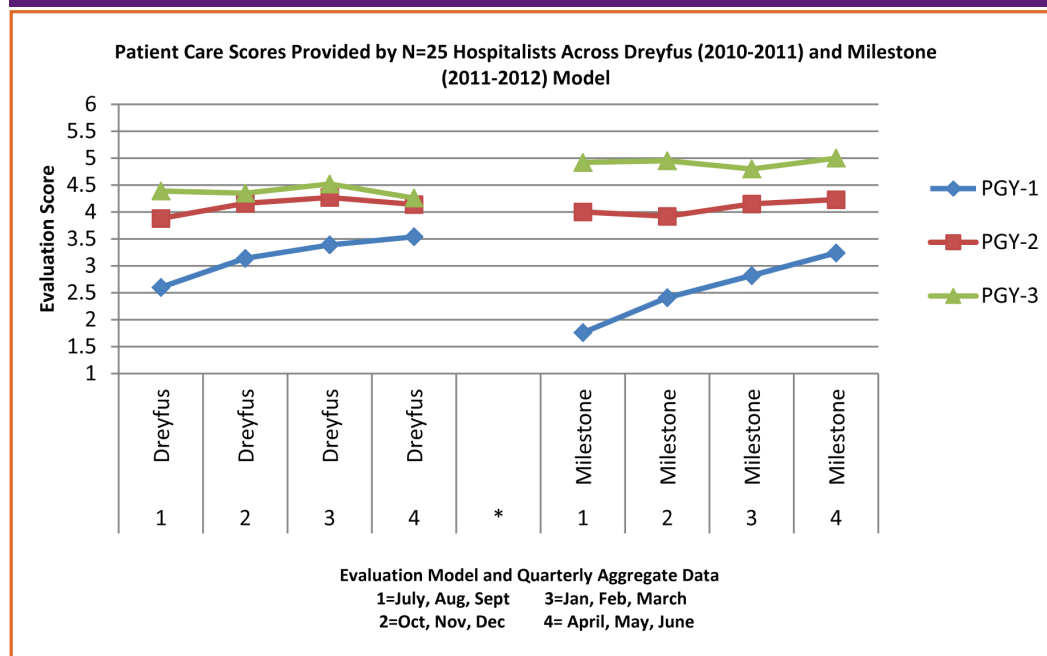
Faculty were trained on the new milestone evaluation method in two ways. The first effort included a two-hour faculty development workshop in September 2011, in which faculty learned about the milestone model and were able to practice reading and interpreting the milestones in groups. The second effort included sporadic and repeated training throughout the academic year at monthly evaluation meetings in which faculty provide feedback on resident performance.

Program leadership conducted an anonymous electronic survey of the faculty in March 2012. The survey provided an opportunity to understand how faculty were using the new end-of-rotation global rating form. In particular, the survey

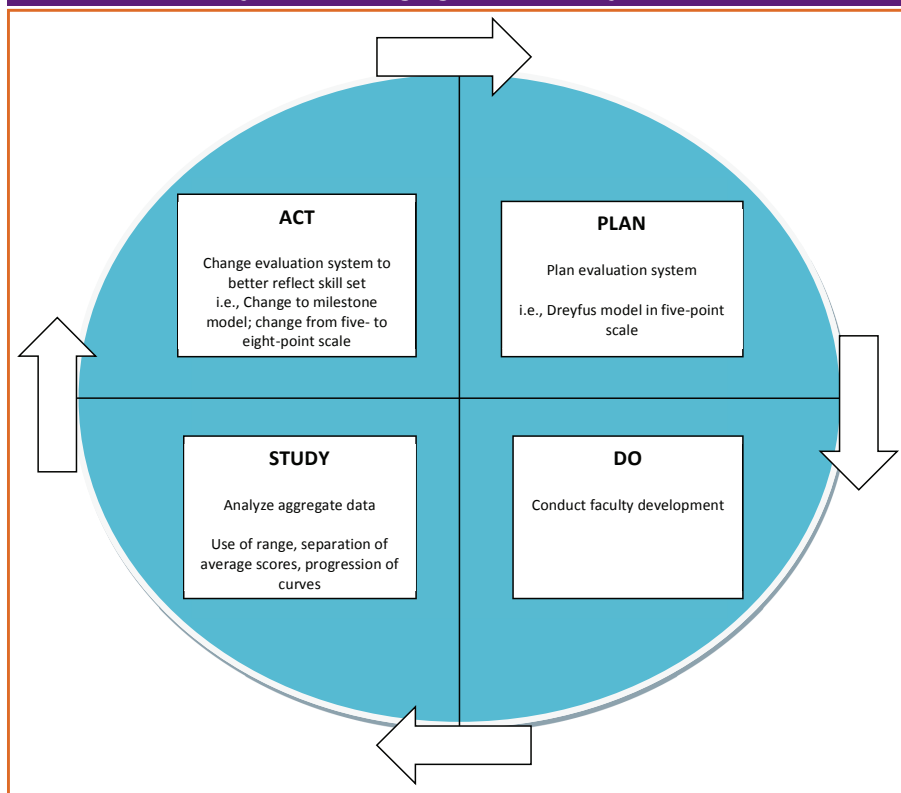
assessed if the evaluators were rating the housestaff based on knowledge of the number of months of training already completed or on actual milestones achieved. The survey also queried whether evaluators read the anchors associated with the five points on the scale and whether they had accessed the hyperlink for the full 146 milestones. Faculty surveyed were also asked which evaluation system better captured, reflected, or represented a more accurate assessment of the housestaff.

An analysis of aggregated data from the Dreyfus model versus the milestone evaluation model revealed some interesting findings. In the

**FIGURE 1. Aggregate Housestaff Evaluation Scores Across the Competency of Patient Care**



**FIGURE 2. PSDA Cycle for Changing Evaluation Systems**



Dreyfus model, there was little separation of scores between the postgraduate year (PGY)-2 and PGY-3 classes (**Figure 1**). This finding did not reflect a difference in clinical skills that the faculty and residency leadership believed actually existed between the classes. By changing to the milestone-based evaluation, a better separation in the classes was seen. In both models, no progression in skills acquisition in the PGY-2 and PGY-3 classes within a 12-month academic year was seen. While the PGY-1 class in both models had steep progression in their developmental curves, the curves for the PGY-2 and PGY-3 classes were flat. In the Dreyfus model, faculty were not using the full range of the five-point scale. In the milestone model, this range greatly improved and evaluators were more willing to use the extreme ends of the scale. Finally—likely as a result of the faculty’s willingness to use a wider range of the scale—in the milestone model, the average scores for the PGY-1 class were lower in July than in the Dreyfus model and the average score for the PGY-3 class was higher in the milestone model. The overwhelming majority (82.5%) of faculty surveyed felt the milestone model was a truer assessment of housestaff than the Dreyfus model. Two-thirds of survey respondents were heavily influenced by the milestones as opposed to knowledge of completed months of training at the time of evaluation.

We were pleased to improve the resident assessment with the change to a milestone evaluation system. In particular,

the new separation between the PGY-2 and PGY-3 classes and the wider use of the five-point range achieved goals to attain aggregate data that better reflected resident assessment. We were unsatisfied, however, with the flatness of plotted data that failed to show a progression of skills acquisition from PGY-2 to PGY-3 years of training. The program has transitioned to an eight-point scale to give faculty more choices when evaluating housestaff, especially the upper classes (1 = 3 months, 2 = 6 months, 3 = 9 months, 4 = 12 months, 5 = 18 months, 6 = 24 months, 7 = 30 months, 8 = 36 months).

To use milestones effectively, programs will have to perform a critical analysis of the aggregate data they are collecting about resident skill sets. Our two-year experience with the use of two different end-of-rotation global rating forms using a five-point Dreyfus versus a five-point milestone model is an example of a plan-do-study-act (PSDA) cycle (**Figure 2**). We planned our evaluation systems (Dreyfus and milestone), studied them (graphed resident progression over

time), and acted on the results (modified the tool used for assessment). Careful self-study of aggregate evaluation data will allow program directors to fulfill expectations mandated of them—reporting outcomes to assure stakeholders that graduating residents have “demonstrated readiness for independent practice and possess the attributes the public deem to be important in physicians.”(3) 🔄

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#### REFERENCES


1. Accreditation Council for Graduate Medical Education. Competency Language, Common Program Requirements. Effective July 1, 2007. Available at <http://www.acgme.org/outcome/comp/CompetencyStandards.21307.pdf>. Accessed 12/8/2013.
2. Green ML, Aagaard EM, Caverzagie KJ, et al. Charting the road to competence: developmental milestones for internal medicine residency training. *J Grad Med Educ*. 2009;1:5–20.
3. Nasca TJ, Phillibert I, Brigham T, Flynn TC. The next GME accreditation system. *N Engl J Med*. 2012;366:1051–1056.

## Internal Medicine Subspecialty Milestones Almost Complete—Are You Ready?

To address the final areas of consensus on fellowship milestones, AAIM, the American Board of Internal Medicine, and the Accreditation Council for Graduate Medical Education (ACGME) hosted the third Internal Medicine Subspecialty Reporting Milestones Summit November 11 in Chicago, IL. The meeting brought together 25 societies and stakeholders to hear the recommendations of the workgroups formed at the second summit (May 13) about scholarly activity components and aspirational and critical deficiency stages in the milestones as well as the perspectives of multispecialty groups and cardiology. Following the summit, stakeholders decided to merge the work of the groups. Final approved fellowship milestones are due to ACGME December 31, 2013.


AAIM is at the forefront of developing resources for fellowship programs as they prepare for the July 1 transition to the Next Accreditation System, including:

- Publishing the final milestones on [www.im.org](http://www.im.org)
- Sharing evaluation forms and other related documents already developed at institutions
- The 2014 ASP Accreditation Seminar will provide “hands on” approaches to preparing to manage milestones for fellows
- A new one-day meeting series that provides basic vocabulary, rationale, and a “train the trainer” approach to developing milestone-based assessments; to be launched in April 2014, the sessions will be offered in Chicago, IL, Dallas, TX, and Philadelphia, PA.

Learn more about fellowship milestones and NAS at [www.im.org/academicaaffairs!](http://www.im.org/academicaaffairs!) 

*continued from page 9*

- Accept that change is a part of living.
- Move toward your goals.
- Take decisive actions.
- Look for opportunities for self-discovery.
- Nurture a positive view of yourself.
- Keep things in perspective.
- Maintain a hopeful outlook.
- Take care of yourself.

Life as a clinician educator is incredibly rewarding, enjoyable, and fulfilling. It is also demanding, challenging, and exhausting. Working toward work-life health and avoiding work-life conflicts (or building resilience so that you can better meet work-life conflicts) are the keys to a successful and sustained career. 

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## ***“Tune In” to What’s Happening at the 2014 APDIM Spring Conference***

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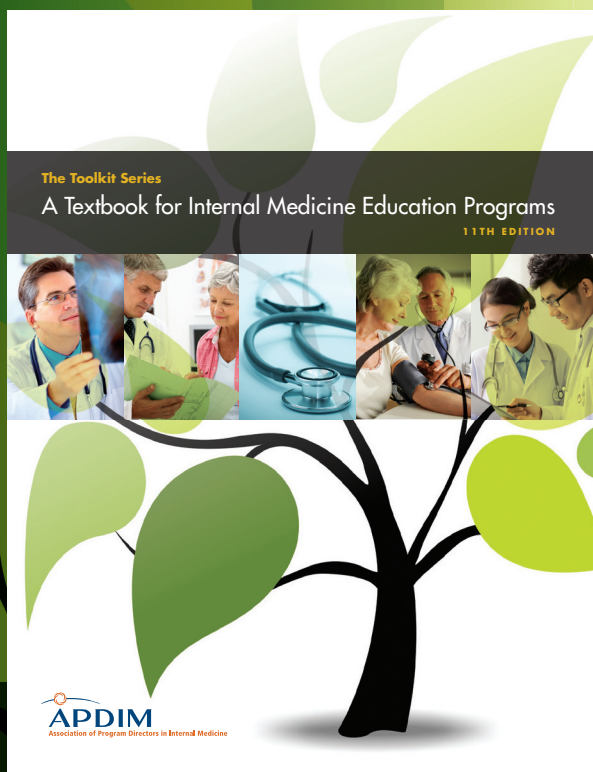
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