

# ACADEMIC INTERNAL MEDICINE

# INSIGHT

## AAIM IN ACTION

### AAIM Deputy Chief Executive Officer Update

AAIM Deputy Chief Executive Officer and EVP Bergitta E. Cotroneo highlights some AAIM strategic initiatives that will be the focus of fiscal year 2015, including the efforts in high value care, the AAIM Innovations Center, and the AAIM Research Committee, and AAIM Consensus Conference on Physician-Scientists. AAIM and the founding organizations are committed to building initiatives and services to support the members.

## QUALITY

### Field Notes: Can We Teach Documentation Quality?

Physician documentation has been variable in content, quality, and purpose for more than a century. With the growth of EHRs, both medical students and residents must develop proficiency in using them to achieve learning objectives related to effective oral and written communication. This article describes efforts to develop a teaching and assessment tool to encourage responsible electronic documentation.

## PLANNING

### Maintaining Educational Programs After Natural Disasters

Hurricane Katrina and Hurricane Sandy caused loss of life, devastation to infrastructure, and billions of dollars in damage. This article reviews the storms' impact on undergraduate and graduate medical educational programs at two major medical centers and offers suggestions to other institutions faced with similar natural disasters.

## CLINICAL REASONING

### Teaching Clinical Reasoning: A Little Theory and Practice

The dual process theory of reasoning should inform the approach to teaching clinical reasoning in conferences and on the wards. Students should be encouraged to use intuition and pattern recognition and then apply analytic reasoning, but they may initially struggle with the intuitive component of combined reasoning because they lack knowledge about disease manifestations. The most critical task is to help students build mental models, or "illness scripts," of typical presentations of common diseases.

## WRITING AND PUBLICATION

### GeriScope Interdisciplinary Writers Initiative

The Writers Initiative was established to address publication requirements and the simple fact that writing is challenging: faculty members cited lack of time, competing demands, being unsure of how to get started, and lack of resources as challenges to their writing. The purpose of the Writers Initiative was three-fold: increase the quantity and quality of geriatric-focused publications, bring faculty together, and support faculty members and promote faculty collaboration.

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## By the Numbers

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Average perceived confidence in providing feedback after training (five-point Likert)

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Number of AAIM and founding member committees, task forces, and work groups in FY 2015

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## Here's to You!

If you've visited the AAIM website, logged on to a discussion board in AAIM Connect, or read the updates posted in *AAIM Connection* lately, you've probably noticed the robust activity happening at the alliance. We've just closed another successful fiscal year: outperforming budgeted revenue and expense expectations; adding new staff leaders; and revamping key volunteer leadership groups to promulgate the educational programs, advocacy, and research important to you, our most valuable asset!

In fiscal year (FY) 2013, AAIM began the tough work of merging complimentary, yet diverse, member cultures to emerge as a leading voice in the academic internal medicine community. Throughout FY 2014, the AAIM Board of Directors, councils, and staff focused on developing AAIM's mission and strategic focus, and articulating the vision for our dynamic organization. The board approved the new AAIM mission and vision statement at its June 2014 meeting (**Figure 1**).

### AAIM Strategic Initiatives

#### High Value Care Advisory Board

The Internal Medicine High Value Care (HVC) Advisory Board, led by APM Past President Wendy L. Levinson, MD, is an ongoing collaborative effort between AAIM, the American College of Physicians (ACP), the American Board of Internal Medicine (ABIM), and the American Board of Internal Medicine Foundation (ABIMF). Its key projects are detailed in **Figure 2**.

#### AAIM HVC Work Group

In addition to working with external stakeholders on HVC initiatives, the AAIM Board has also prioritized HVC as a key strategic area internally. The AAIM HVC Work Group (**Figure 3**)

has been resourced to develop and execute several projects (started in FY 2014) that will carry forward into FY 2015, including a medical student interactive curriculum, fellowship curriculum, white paper on cost transparency, online repository, faculty development, educational programming, and assessment.

#### AAIM Innovation Center

In FY 2013, the AAIM Board approved expenditure of funds to develop concepts related to creation of an AAIM Innovation Center. At its June 2014 meeting, the board approved recommendations from a task force to move forward with establishing the center.

This center will fall under the leadership of the AAIM Innovation Oversight Committee (**Figure 4**). Made up of volunteer leaders from the founding member councils to ensure it supports as broad a constituent group as possible, the committee will use the AAIM strategic plan as a filter for review and funding recommendations for future innovations projects and activities. AAIM will recruit an Innovation Center Manager to manage grant writing and grants administration of the center.

Several successful projects already under way will be housed in the AAIM Innovation Center. In addition to the HVC work, the APDIM Seed Grants Program and further development of learning collaboratives (innovative learning communities) will move to the innovation center. Both the seed grants program and learning collaboratives initiatives have been expanded to reach a broader member audience and provide opportunities for all AAIM member groups to contribute. The learning collaboratives will be modeled after the Educational Innovations Project (EIP).

**FIGURE 1. AAIM Mission and Vision Statements**

<b>Mission</b>
AAIM fosters the advancement of learning, discovery, and caring by enhancing the professional growth of academic internal medicine faculty, administrators, and physicians-in-training.
<b>Vision</b>
Academic internal medicine, as the home of medical education and research, is the generator of innovation for health care, now and for the future.

**FIGURE 3. AAIM HVC Work Group**

Donna J. Astiz, MD	Lia S. Logio, MD, <i>Chair</i>
Melvin Blanchard, MD	Jonathan D. Meyer
Michael S. Bronze, MD	Jason A. Post, MD
Alisa Duran, MD	Eileen E. Reynolds, MD
Mindy J. Fain, MD	Chittur A. Sivaram, MD
Sara B. Fazio, MD	Bindu K. Swaroop, MD
Heather E. Harrell, MD	Kimberly Tartaglia, MD
Timothy J. Heffer	Abraham Thomas, MD
Valerie J. Lang, MD, <i>Vice Chair</i>	Chad Vokoun, MD
Wendy S. Levinson, MD	Mark L. Zeidel, MD

**FIGURE 2. High Value Care Advisory Board**

Activity	Organizational Lead
<b>Faculty Development</b> – HVC Academy (“teach the teacher”) and Practice Improvement Model for HVC	ACP with AAIM support
<b>Fellowship Curriculum</b> – Based on the AAIM-ACP Resident HVC Curriculum; consider the ACP Pertinent Data sets and the ABIMF Choosing Wisely lists.	ASP, ACP, and support from subspecialty societies
<b>Learning Community</b> – Webinars, a resource room, document sharing capability, and online chat.	ABIMF

## Research Initiatives

The AAIM Research Committee is charged to develop ways to enhance the connection between the US medical research enterprise (biomedical and health services) and departments of internal medicine; advocate and promote opportunities for medical education research (in collaboration with the Innovation Center and AAIM Education Committee); focus on ways to increase public and private support for basic, clinical, and health services research; and create practical materials to promote research in departments of internal medicine. This work includes managing the AAIM Physician-Scientist Initiative and activities related to integrating geriatrics into the specialties of internal medicine. The committee is focused on several projects, most notably planning the 2015 Consensus Conference on the Physician Investigator Workforce. This conference will be held in fall 2015 in Washington, DC.

## A Few Last Words

The projects discussed reflect a portion of AAIM's areas of strategic focus. Our goal is to provide member value and continuously improve your membership experience. AAIM also has several working committees to support member needs across the continuum. Each of these committees has faculty and administrative volunteers representing the five main constituent groups leading the way to ensure your needs are met. In addition to the committees in **Figure 5**, there are more than 20 active committees across APM, APDIM, ASP, CDIM, and AIM working to support you.

On behalf of the AAIM Board of Directors, founding member councils, and AAIM staff, please know we value your loyalty and will continue to work diligently to provide opportunities for professional growth and development, networking, and education.

I look forward to another successful year. Here's to you!

Sincerely,



Bergitta Smith Cotroneo  
Deputy Chief Executive Officer and EVP

**FIGURE 4. AAIM Innovation Center Oversight Committee**

Donna J. Astiz, MD	G. Dodd Denton, II, MD	James D. Marsh, MD
Lisa M. Bellini, MD, <i>Chair</i>	Mark W. Geraci, MD	Diana B. McNeill, MD
Michael S. Bronze, MD	John Joseph Gough	Lauren Meade, MD
Stephanie A. Call, MD	Karen E. Hauer, MD	Kerri Palamara, MD
Kelly J. Caverzagie, MD		

**FIGURE 5. AAIM Committee Leadership**

Committee	Committee Chair
Advocacy Committee	Susan Lane, MD
Communications Committee	Asher Tulskey, MD
Diversity and Inclusion Committee	Ethan D. Fried, MD
Education Committee	Kelly Caverzagie, MD
E-Learning Committee	John D. Myers, MD
Member Services Committee	Donald R. Bordley, MD
Medical Student to Resident Interface Committee	T. Robert Vu, MD
Resident to Fellow Interface Committee	Elaine Muchmore, MD
Research Committee	Robert Salata, MD

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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.

# Power in Numbers: Using Group Interviewing Techniques in Ranking for the Match List

## Background

One of the most exciting yet stressful times in a residency program is the interview season. The anticipation of a new group of residents can be overshadowed by the logistics of coordinating, interviewing, and evaluating numerous applicants. Balancing day-to-day program obligations with interviewing can become overwhelming. Our program of 110 residents interviews approximately 300 candidates annually for 42 positions over 30 interview days, averaging 12 to 16 candidates per day. Under a conventional one-on-one interview format, difficulties arose, including last-minute cancellations, scoring and grading inconsistency, and burnout among interviewers as the season progressed. These challenges necessitated a change and our program adopted a panel interview modeled after other successful programs. This article will discuss how the program put the panel interview in place for the 2012–2013 interview season.

## Advantages of Group Interviewing

### For Applicants

To applicants, a group interview may seem intimidating; however, well-designed interview cohorts can quickly allay these anxieties. The group interview offers fewer individual interview sessions, making the day less repetitive for the applicant. Not only do applicants present themselves simultaneously to multiple faculty members, but also they answer common questions only once, increasing efficiency and lessening repetition. Another benefit is that having applicants interact with a greater number of faculty members ensures that they will directly observe collegiality among faculty.

### For Interviewers

The group dynamic is not only logistically efficient; it also provides a more robust means of ranking applicants. Teamwork guarantees that less time and energy are required to review applications and having several independent reviewers decreases the likelihood of overlooking important details. The group dynamic is also advantageous as a way to appeal to candidates of varying personality types. Having a variety of personalities in the room can lead to a more conversational approach and interviewer cohorts can “play off one another” to better understand candidates. A beneficial side effect is that interviewers across many medicine subspecialties have a chance to become better acquainted with each other. Colleagues who might not have the chance to interact can talk to each other, which may also increase satisfaction among faculty interviewers and help combat interview fatigue as the season progresses. Finally, collaboration can lead to greater consistency when ranking applicants; assessing candidates on paper, discussing initial impressions, and then comparing interview observations maintains a thorough analysis of candidates.

## Group Interviewing

### Preplanning

The first task to consider is the number of interviews that need to occur on a given day to ensure enough applicants are interviewed to generate an adequate rank list. That number is determined by assessing both the total number of available interview days and the total number of applicants. Keeping in mind that each interview should last approximately 15 to 20

**FIGURE 1.** Sample Group Interview Schedule

	Candidate number					
	1	2	3	4	5	6
9:00–9:20	Group Interview	Break	PD/Chair Interview			
9:20–9:40	PD/Chair Interview	Group Interview	Break			
9:40–10:00	Break	PD/Chair Interview	Group Interview			
10:00–10:20				Group Interview	Break	PD/Chair Interview
10:20–10:40				PD/Chair Interview	Group Interview	Break
10:40–11:00				Break	PD/Chair Interview	Group Interview

minutes—and that interviews occur over a two-hour period—a cohort can conduct three to four interviews an hour. To determine the number of interview cohorts, the total number of applicants for the day is divided by the number of meetings per hour. The daily schedule allows for interviews with groups, a short meeting with the program director or chair, and a campus tour (Figure 1).

The next task is to determine the specific composition of the interview cohorts. Each cohort consisted of three to five faculty members, depending on their availability. The cohorts were balanced demographically in terms of sex and age; diversity helps to guarantee a less-intimidating panel interview. The panel consists of an associate program director, a core faculty member, and a subspecialist or teaching attending. Occasionally, chief residents were included in the cohorts. This approach allowed cohorts a good degree of flexibility and ensured stability in the event an individual interviewer canceled.

Finally, it is important to create a friendly, comfortable space. Tables and chairs are arranged in a close-set circle, with the candidate seated within it. This arrangement fosters a more comfortable setting by communicating inclusiveness.

### Preparing Groups and Interviewing

It is important to prepare the interviewers to ensure faculty buy-in. At an orientation session, the logistics of the group interview process and interviewer expectations are explained. With files from the Electronic Residency Application Service, interviewers are given a standardized tool for assessing the candidate's application before the interview. Groups are

instructed to meet briefly to discuss initial perceptions of the candidates prior to the start of the interview day. This meeting determines each cohort's approach during the interview with each candidate. Interviewers are given clearly defined roles for recurrent interview tasks to increase efficiency (Figure 2). One member is the designated greeter and introduces the candidate to the group, while another is the designated timekeeper to see that interviews remain on time. A third member serves as scribe and takes general notes about the candidate during the interview. After each interview, the group discusses the candidate and helps the scribe complete a standardized post-interview assessment form to arrive at a composite grade.

### Discussion

Our program's experience of converting to group interviews was overwhelmingly positive for both interviewers and candidates. Interviewing faculty members were surveyed at the end of the 2012–2013 season to gauge satisfaction. To assess the candidate perspective, a series of new questions were included in the 2012–2013 post-match survey (sent to the residents who did not select our program). Additionally, responses to key "satisfaction with interview day" questions were compared between the 2012–2013 and the 2011–2012 season (when conventional interviews were conducted).

Our faculty responded in an overwhelmingly positive manner. Although our 30 respondents had considerable experience in interviewing candidates, this experience with group interviews was the first for the majority of them (75%). Ninety-seven percent indicated that they "enjoyed the experience," 90% felt that they had enough time to form an

## FIGURE 2. Helpful Hints for Effective Group Interviews

Equation for determining the optimum number of interview days:

Equation for calculating groups needed per interview day:

Schedule an interviewer orientation session before the start of the season.

Develop and distribute a common evaluation tool.

Select friendly interview spaces (with groups arrayed in a circles or semicircles to communicate inclusiveness).

Each group should have a core of one to two interviewers who remain together throughout the interview season.

Each group member should be assigned a role:

- Greeter
- Time-keeper
- Scribe


Allot time for a pre-interview huddle to discuss candidate applications and how to approach the interview.

Allot time for a post-interview wrap-up session to discuss and grade candidates.



accurate assessment of the candidate, and 93% felt that they were able to ask candidates all of their questions during the session. Of faculty with prior group-interview experience, 87% felt that the selection process was easier with the group and 70% felt that the group interview was more enjoyable than a conventional interview (with an additional 15% indicating a neutral response). No respondents indicated discomfort with the process.

Likewise, candidates looked favorably on the group interview. When asked to rate their interview experience, the results from the 2012–2013 cohort were significantly improved over the cohort from the previous year (**Figure 3**). When asked directly about the group interview, 61% of 51 respondents indicated that they were either “comfortable” or “extremely comfortable” with the group interview (with 16% responding neutrally). When asked which style of interview they preferred, 53% of respondents indicated that they preferred the group interview (with an additional 12% responding “N/A”). Overall, candidates experiencing the group interview expressed a favorable response. A shared theme in write-in comments was that while many found it initially uncomfortable, the majority felt that the group interview was an overwhelmingly positive experience.

Changing the fundamental way an internal medicine program approaches recruiting can be daunting. Because of the difficulties and frustration program directors and administrators faced each year, our program realized it needed to change its approach. The group interview presented an opportunity to address some of the deficiencies of the traditional one-on-one approach while offering some unforeseen benefits that served to highlight and individualize our program to prospective candidates. Our experience with this new format enabled us to better assess candidates and form a more internally standardized rank list aligned with our program goals. 

*Collaboration can lead to greater consistency when ranking applicants, assessing candidates on paper, discussing initial impressions, and comparing interview observations.*

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**FIGURE 3.** Post-Match Survey Results

"Compared to other programs visited, how would you rate...."	2011–2012 (individual)	2012–2013 (group)
Overall quality of the interview day	77% very good or excellent	90% very good or excellent
Format of the interview day	73% very good or excellent	85% very good or excellent
Felt something missing during the interview day	40%*	2%
Interactions with faculty	75% very good or excellent	83% very good or excellent
Atmosphere	70% very good or excellent	85% very good or excellent

# Creating a Brand for Your Division

**W**hen we think of marketing and branding, why does no one think of their divisions or departments the same way that we think of every day products? When we think of coffee, we think of Starbucks; when we think of French fries, we think of McDonald's. These companies are just two that surround us every day with effective marketing and branding. The goal of this article is to explain the differences between marketing and branding; share the 10 steps for implementing an effective marketing plan; and describe how to use technology and social media to achieve your division's or department's marketing and branding goals.

## Marketing v. Branding

What is the difference between marketing and branding? The Tronvig Group describes marketing as actively promoting a product or service, whereas branding is the expression of the essential truth or value of an organization, product, or service. Marketing can be thought of as a pushing tactical approach and branding as a pulling strategic approach (1). These two concepts form the backbone of every kind of advertising today. When you see a billboard or commercial dedicated to a product, the company is aiming to market that product to you. When companies use branding, they are creating a way of life with that product, pulling you toward it. The goal of branding is to establish a bond between you and a specific brand name product. For instance, people often refer to all painkillers as Tylenol, rather than acetaminophen or ibuprofen.

Is it possible to use marketing and branding to push a product on your customers or, in health care, our patients? As the Division Administrator for Nephrology at University of Florida Health System, one of my first actions was to discuss with the division chief his vision and strategic plan. The goal was to grow business, improve patient access, and provide high-quality care but when I joined there was no marketing for the division. How could we let everyone know that we offer outstanding care? To create an effective marketing and branding campaign, we set up a strategic plan and initiative using 10 steps.

## Getting Started

### Step 1: Analyze the Situation

Define your product or service and communicate to your customers its intrinsic benefit or value. In the division's case, highlighting its world-renowned faculty who specialize in dozens of highly complex areas was a key point of the strategy.

### Step 2: Conduct a Marketing Overview

Establish your target audience. We wanted to market to the physicians who send us patient referrals, such as family practitioners, urologists, and other private practice nephrologists.

### Step 3: Complete a Competitive Review

Determine how high to set the bar. Two types of goals can be set: quantitative or qualitative. With a quantitative goal, set a measurable target to reach. With a qualitative goal, reach the goal of bringing increased value, such as improving image or visibility. For the division, I took a combination approach: I wanted to increase patient referrals (quantitative) and I wanted to improve our visibility locally and nationally (qualitative).

### Step 4: Describe the Product or Service

Define the brand for your product or service. Create a clear and concise message. Highlight three or four key points that emphasize what the direct benefits are to your patients.

### Step 5: Conduct a SWOT Analysis

Determine the strengths, weaknesses, opportunities, and threats (SWOT) of your organization and your competition. A well considered, planned, and executed SWOT analysis avoids duplication of efforts.

### Step 6: Determine Goals and Objectives

Start by establishing a marketing budget. Set aside a specific dollar amount, either per quarter or per year, adequate to achieve your goal. You need to make the best marketing decisions possible to maximize the return on your investment. Evaluate marketing decisions, such as advertising in the phone directory or conducting a public relations program. Track each initiative and evaluate what worked and what did not.

### Step 7: Identify Strategies: Positioning, Product, Distribution, and Promotion

The strategy could include advertising, public relations, direct marketing, promotions, and events. Select the strategies that work best for what you wish to achieve. Look into traditional media, such as newspaper ads, TV, and billboards. Explore nontraditional options, such as sponsorships, ad specialties, shows/events, electronic media, and the Internet. Be creative. Do not rule anything out.

### Step 8: Utilize the Marketing Budget

Determine tactics and list specific action steps needed to achieve each strategy, including deadlines.

### Step 9: Establish Timing

Establish a specific timetable for each tactic in your strategic plan. Implementing a tactic at the wrong time could result in failing to meet your marketing objective.

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### Step 10: Conduct an Evaluation

Measure the results of marketing efforts on an ongoing basis, using devices like ad codes, call-in logs, and reply cards (if the budget allows). Evaluate at the end of the year to see if the results matched your stated goals (2).

### Approach

For the division, we did not have the money to start a huge ad campaign or to run TV commercials, but we could create an online presence unlike any other at University of Florida Health System. The goal of the strategic plan was to get our product and services out to patients, referring physicians, future fellows, and potential faculty through a website and social media.

### Social Media

When I asked my division chief for permission to create a social media campaign, his reply was, “Why in the world would you want to do that?” but he agreed. Our division’s marketing team developed a social media enterprise. Our marketing team set up a Google Hit Search. We sent a list of key words to Google to guarantee that our website would be featured on the first page of the search. The goal of your website should be to entice patients, faculty, colleagues, and future fellows and faculty with useful information about the program. Once we established our new website, we then expanded to all of the available social media outlets. You can find University of Florida Nephrology on Facebook, Twitter, LinkedIn, Instagram, and Pinterest. We post on each of these sites with information about our division every day.

### Insignia

The next marketing piece I implemented was more challenging. During my time in the military, I was around rank insignia and patches that everyone proudly displayed on their uniforms. My goal was to draw from that military tradition and create a patch that all of my faculty could display proudly on their white coats. It was not easy convincing the faculty to put a patch on their coats, but once we did we immediately saw a greater camaraderie among faculty, mid-levels, and fellows.

### Collateral

The final marketing strategy implemented was a first from any division at University of Florida Health System. I took a look at how many guests and candidates came through our doors each year. Between visiting professors, guest speakers for grand rounds, faculty candidates, fellowship candidates, and guests, we had approximately 80 visitors every year. I created a gift bag filled with nephrology-branded swag that we created ourselves: T-shirts, water bottles, pens, markers, lanyards, and information about our outstanding program and amazing city. Now these candidates or guests take a little piece of marketing with them. Whenever they wear the shirt out—

*...marketing as actively promoting a product or service, whereas branding is the expression of the essential truth or value of an organization, product, or service. Marketing can be thought of as a pushing tactical approach and branding as a pulling strategic approach.*

even if it’s just to the gym—these individuals are the division’s marketing outlet.

### Results

What did these marketing initiatives accomplish? For fiscal year 2013, nephrology moved up four spots in the national rankings; we finished in first place in the department of internal medicine financially; our new patients increased by 26%; in 2014, we matched all four of our nephrology fellowship spots after interviewing only 12 candidates, and moved up nine more spots in the national rankings to put our division in 25th place in the nation and second in the state of Florida. We are an ever-growing division: We hired two new faculty members this year, and my chief and I have set forth an aggressive plan with six new expansion initiatives that we hope will take our division to the next level. Our great team has done an outstanding job; however, there is still a tremendous amount that can be done at many levels. 🌀

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# Field Notes: Can We Teach Documentation Quality?

## Introduction

Undoubtedly, many advantages to physician documentation in an electronic health record (EHR) exist. We are no longer squinting over illegible scrawls nor hunting in vain for the paper chart that absconded with the intern. Yet there have been voices of caution (1,2) and criticism (3,4) in response to the many potential pitfalls of electronic documentation, such as copy-paste errors, automatic importing of physical findings, and excessive data elements (2,5,6). This tension should come as no surprise. As described by Siegler, physician documentation has been variable in content, quality, and purpose for more than a century—essentially, since we began consistently writing notes to document patient progress (7). As medical professionals, we continue to struggle with defining what makes a quality note (8, 9); it follows that it would be even more challenging to teach documentation quality.

Resident physicians, who compose the bulk of clinical notes in the EHR at most teaching hospitals today, have certainly fallen prey to the hazards of EHR note writing (6), and those behaviors likely began in medical school (5,10). Once physicians have finished residency training, changing learned behaviors becomes much more challenging.

The Association of Medical American Colleges (AAMC) cites effective oral and written communication as a learning objective (11), and the Accreditation Council of Graduate Medical Education (ACGME) defines this skill as a professional milestone (12). With the growth of EHRs, both medical students and residents must develop proficiency in using them to achieve these learning objectives (13,14). To that end, researchers have called for the promotion of responsible electronic documentation early in training, but the relevant literature on specific educational activities in the area of learner note writing is sparse (15,16). Currently, only one validated tool in the literature focuses on evaluating note quality (9). The very limited literature on teaching clinical documentation centers on diagnosis and acuity for accurate coding (17,18) and not on the note as communication platform.

In response to an anticipated proliferation of EHRs and the paucity of literature on the impact of EHRs on the medical learner—or on validated methods to assess quality documentation—several educators at Northwestern University Feinberg School of Medicine and University of Kentucky College of Medicine have been developing a teaching and assessment tool to encourage responsible electronic documentation by medical students and residents. We describe our efforts in developing educational interventions to improve documentation quality and we will make recommendations in addressing this challenge.

## Conducting a Needs Assessment

As part of a needs assessment for a curriculum designed to achieve higher quality note writing among students, we performed a study to determine the observations, practices, and attitudes of Feinberg students regarding their current EHR documentation. We used a confidential, self-reported survey, which confirmed that EHR use to document notes is nearly ubiquitous among third-year students. Students very commonly write notes via efficiency tools, including auto-inserted data, templates, and the copy-paste function (10). Furthermore, our study demonstrated that students witness potentially worrisome behaviors by their supervisors, including copying other provider notes and asking students to document while signed in under a supervisor's name. The strong correlation between student observations and their behaviors suggests that students mirror what they witness on the wards. To make a strong impact, it seemed that a system-wide intervention that targeted attending and resident physicians would need to occur. We began to develop an instrument to evaluate the quality of inpatient progress notes, with a focus on the responsible use of these efficiency tools.

## Early Development of the Note Assessment Tool and Preliminary Curricula

Subsequently, we conducted focus groups with attending physicians to determine how they define quality in EHR documentation, their common practices regarding efficiency tools—including the copy-paste function—and how they define “responsible use” of these tools. The salient themes extracted from this qualitative study included the notion that a quality note must be trustworthy, concise, reasoned, and up-to-date.

We also developed a small-scale pilot curriculum with third-year medical students. It included deliberate practice and pre- and post-intervention assessment with a self-developed rubric to assess daily progress notes. The results of this initial pilot did not reveal significant improvement in student note writing pre- and post-intervention.

We also turned attention to resident education in note writing at University of Kentucky College of Medicine, where we designed and implemented pilot curricula to improve resident documentation. We used our evolving progress note assessment tool as well as the validated Physician Documentation Quality Instrument 9 (PDQI-9) (9). We conducted didactic sessions in both lecture and small group formats and gave individual feedback on progress notes. Though this project is ongoing, preliminary results have not suggested measurable change in the quality of physician documentation, but they continue to inform the assessment tool.


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*Physician documentation has been variable in content, quality, and purpose for more than a century—essentially, since we began consistently writing notes to document patient progress.*

### Iterative Process

We have subsequently revised our progress note assessment tool based on the themes extracted from the focus groups, preliminary curricula, and feedback from medical educators across the country; we are now embarking on a study to validate the rubric. Despite our early challenges in effecting measurable improvements in the quality of medical students and resident notes, we feel it is important to have validated tools available to perform direct observation and feedback to our learners. Our rubric will add to the note evaluation toolbox begun by PDQI-9, in that it includes elements to assess copy-paste and may be used by evaluators who are not familiar with the patients discussed in the notes.

### Recommendations and Next Steps

Drawing on our experience of the past three years defining, evaluating, and teaching the concept of documentation quality in EHR, we recommend heightened attention to and consensus on how note writing is taught to provide learners the tools to write trustworthy, concise, reasoned, and up-to-date notes. Furthermore, the medical education community needs additional research on the most effective way to deliver documentation curricula to medical students and residents, and we continue in these efforts. We suspect that faculty development, ongoing direct feedback, and, perhaps, institutional oversight will be essential to effect this change. 

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## Teaching Medical Students to Reflect “Deeper”

For the past decade, accrediting organizations—including the Liaison Committee on Medical Education and Accreditation Council for Graduate Medical Education—have increasingly recognized the role of reflective practices in professional growth, lifelong learning, and improved patient safety. Critical reflection can be defined as the “process of analyzing, questioning, and reframing an experience in order to make an assessment for purposes of learning” (1). It integrates a learner’s personal beliefs, values, and attitudes to bring clarity to the emotive experiences of patient care with the goal of shaping future behavior. The reflective process has been described as the bridge between theory and practice (2).

In response, medical educators have increasingly added reflective activities into the curriculum for medical students, residents, and physicians seeking recertification and continuing medical education. Such experiential learning has been associated with fewer diagnostic errors, increased use and acceptance of feedback, fostered professional behaviors, and improved therapeutic relations (3–5); however, little empiric research exists on the optimal ways to teach and build reflective capacity. So, we developed a 90-minute interactive workshop to enhance junior medical students’ written reflections. This innovation was given to all junior medical students at the start of their required 10-week internal medicine clerkship. Based on the theoretical framework underlying the metacognitive process of reflection, key components of this new curriculum included:

1. A four-minute video from the popular TV show *Scrubs* that depicts a young physician’s reflective experience of a patient facing death.
2. A large group discussion of the key concepts and core components of critical reflection: Why reflect? What is reflection? How do we reflect?
3. A small student group interactive exercise that compares and contrasts three essays portraying different levels of reflection (6).
4. A faculty presenter who shared a personal reflection that was critical to her own professional development (7).
5. Two reflection papers from each student about a clinical experience during their 10-week internal medicine clerkship.

To evaluate the effectiveness of this newly introduced curriculum, we compared the levels of written reflection using a previously validated assessment tool, the Reflection Evaluation for Learners’ Enhanced Competencies Tool (REFLECT) rubric (8). Starting in June 2012, this curriculum was introduced to the entire junior medical student class and was taught at the beginning of every 10-week clerkship rotation. For the previous 10 years, junior medical students were given a written reflective assignment—but without any

specific instructions or explanation of the concept of critical reflection. We used a comparative pre- and post-study design using historical controls from the prior two academic years before the new curriculum was introduced. Four faculty reviewers independently graded each reflection paper using the REFLECT rubric as (1) non-reflective, (2) thoughtful action (without reflection), (3) reflection, and (4) critical reflection. Reviewers were blinded to the names of students and to the month and year each paper was written. Grading discrepancies were resolved by consensus. The primary outcome of our study was the number of papers achieving level 4, or “critical reflection” before and after the new curriculum was introduced. Nonparametric tests, including the Mann-Whitney U and Kruskal-Wallis tests, were used to assess the primary outcome. To assess the inter-rater reliability of the four faculty reviewers, a weighted kappa statistic for multilevel graders was used. The study was approved by the Loma Linda University Institutional Review Board.

A total of 310 written reflection papers to the same prompt were collected and analyzed over three academic years—155 after the new reflection curriculum had been introduced and 155 matched to the same calendar month from the immediate two prior academic years. Our primary outcome, the number of papers achieving a level 4, significantly increased from 15% to 47% after the 90-minute educational intervention ( $p < 0.0001$ ; **Figure 1**). To assess the blinding procedure’s effectiveness, 110 papers were taken from the second and third 10-week block rotations and the faculty graders were asked to indicate whether they thought the papers had been written prior to or after the curriculum was introduced. The overall 59% agreement was not statistically significant compared with the 50% agreement expected from chance ( $p = 0.21$ ). Finally, the inter-rater reliability of the assigned scores by the four faculty graders was measured using the kappa statistic and ranged from 0.27 to 0.38 throughout the five 10-week block rotations.


These results suggest that students who were exposed to the newly introduced 90-minute workshop improved their written ability to reflect “deeper.” Although many studies have reported on a variety of reflective activities, this work is specifically designed to teach students how to enhance their written reflective capacity (9). The strengths of our study include the large sample size, the blinding of the four faculty graders, use of a comparison group, and the simplicity of the design of the curricular intervention based on the theoretical framework underlying the process of critical reflection.

Potential limitations of this study could restrict its applicability. The curriculum was introduced at a single institution and may not necessarily generalize to other medical schools or internal medicine clerkships. The inter-rater reliability was much lower than that described in the original

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paper (8). Our educational intervention was done only once for each medical student during his or her 10-week clerkship, regardless of whether the results sustained require further follow-up. Finally, our study specifically looked at only written reflection but other methods of reflection have been reported to promote reflective thinking (10).

In conclusion, we demonstrated that teaching junior medical students about reflection enhanced their ability to reflect “deeper.” Through a 90-minute workshop that focused on informing students about reflection, demonstrating its components and role modeling its importance in clinical practice, more of our students were able to demonstrate “critical reflection” as measured by the REFLECT rubric than had previous students not exposed to this teaching. This curricular intervention could be adapted easily to other institutions interested in promoting critical reflection. 

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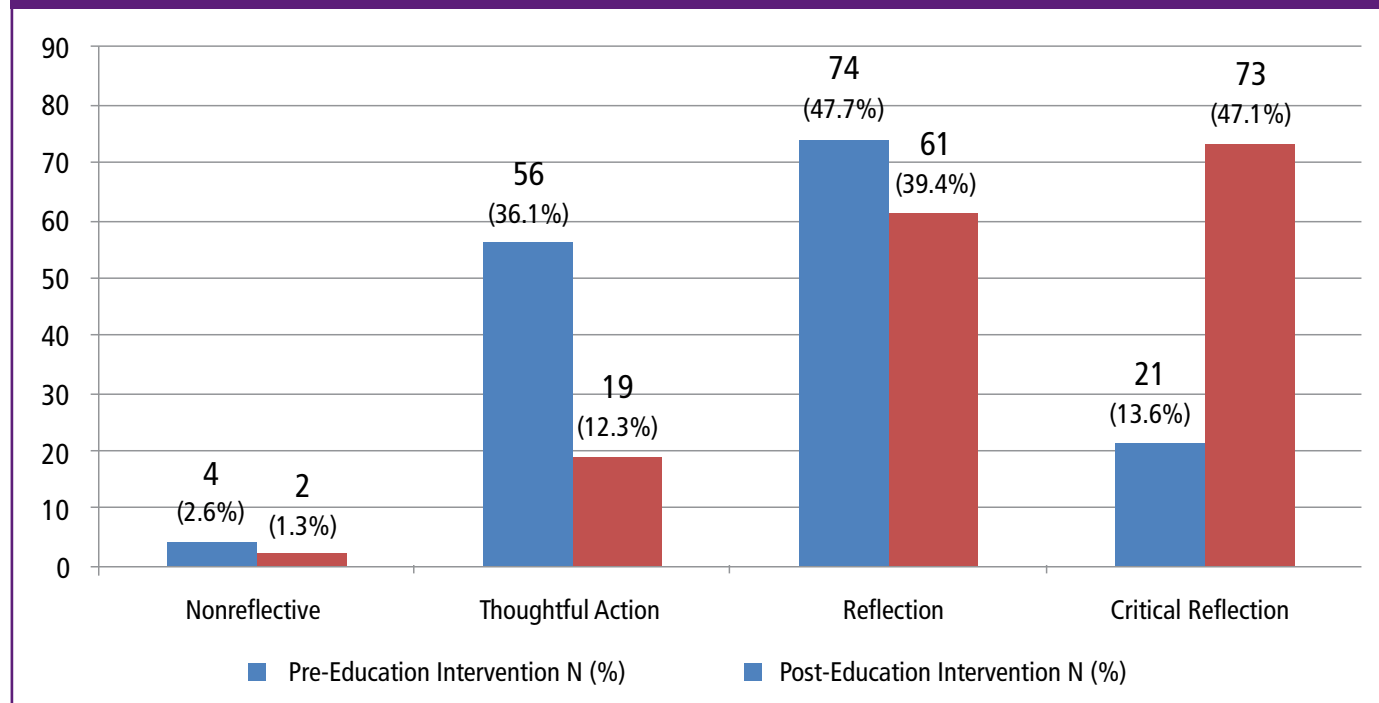
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**FIGURE 1. Levels of Written Reflection Prior to and After Educational Intervention**



# Maintaining Educational Programs After Natural Disasters

**H**urricane Katrina (2005) and Hurricane Sandy (2012) caused loss of life, devastation to infrastructure, and billions of dollars in damage. This essay reviews the storms' impact on specific undergraduate and graduate medical educational programs at two major medical centers and offers suggestions for other institutions faced with similar natural disasters.

## Background and Observations

### Hurricane Katrina

The Tulane University internal medicine resident, fellow, and student training programs were concentrated at Tulane Hospital, the Medical Center of Louisiana–New Orleans, and the New Orleans Veterans Administration (VA) Medical Center in downtown New Orleans. On August 29, 2005, all three facilities sustained catastrophic flood damage from Hurricane Katrina, leaving Tulane without any training sites. Only key personnel for patient care—including some residents and faculty—remained after New Orleans was subject to a mandatory evacuation.

The damaged infrastructure and loss of electronic communication placed additional stress on an already challenging situation. The physical damage to classrooms, administrative offices, hospitals, and clinics—combined with an unknown time frame for their recovery—forced Tulane to relocate to Baylor College of Medicine in Houston, TX. A core group of faculty from Tulane taught at Baylor while clinical clerks rotated with students from Baylor. Most fourth-year students spent much of the year doing “away” rotations at other institutions. Medical school interviews continued as usual but at Baylor with Tulane faculty.

Internal medicine residents were also widely dispersed. With the university email accounts unusable, text messaging was the initial communication method of choice. As it quickly became clear that getting crucial information to nearly 100 residents via texting was inefficient, a Yahoo! chat room was created as a communications hub. A plan to minimize the disruption in training was developed; it relied heavily on colleagues at other institutions. Until New Orleans hospitals were restored, 20% of residents trained at Baylor College of Medicine, 30% at VA-affiliated and Medical Center of Louisiana-affiliated hospitals in Alexandria, LA, 20% returned to their home medical schools, and 30% returned to New Orleans to care for the remaining citizens of New Orleans.

### Hurricane Sandy

Many components comprise the New York University (NYU)-Langone Medical Center and its major affiliates; primary among them are the NYU School of Medicine, Tisch Hospital, Bellevue Hospital Center, and the Manhattan campus of the VA New York Harbor Healthcare System. This entire medical community is located on 11 low-lying city blocks between First Avenue and the East River. Hurricane Sandy made landfall on

*The medical center leadership faces simultaneous, interdependent challenges, the most pressing of which are ensuring student and faculty well-being, maintaining educational programs, addressing financial concerns, minimizing the impact on the community, and reconstructing the physical facilities.*

the New Jersey coast just south of New York City on October 29, 2012. As Sandy made its way up the eastern coastline, it caused extensive flood damage to all three major hospitals, the medical school, and much of the surrounding community.

Clinical clerks assigned to medicine when the storm struck were temporarily placed at neighboring institutions, including NYU Hospital for Joint Disease, Brooklyn VA Hospital, and affiliates of the Hofstra University School of Medicine (Lenox Hill, Long Island Jewish, and North Shore hospitals) until NYU's hospitals reopened several months later. Senior students performed “away” clerkships at a neighboring hospital; others postponed some clinical activities during the interview season.

Clinical faculty and residents normally assigned to Tisch, Bellevue, and the Manhattan VA hospitals were temporarily assigned to Lenox Hill, several other Health and Hospitals Corporation facilities, and the Brooklyn VA hospitals, respectively. Efforts to maintain educational programs at other institutions began immediately and were spearheaded by the clinical faculty and the program directors. Residents began to transition back to NYU's institutions as hospital services and patients began to return.

## Discussion and Recommendations

Fortunately, catastrophes of this magnitude are rare. Patient safety is the issue of utmost concern, and after it has been ensured, the medical center leadership faces simultaneous, interdependent challenges, the most pressing of which are ensuring student and faculty well-being, maintaining educational programs, addressing financial concerns, minimizing the impact on the community, and reconstructing the physical facilities. The challenges to medical education are different for each disaster, but specific considerations exist for the undergraduate and postgraduate

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levels. The most important challenge is the nature of the disaster and the impact on community infrastructure. These differences were dramatic between disasters and responses differed accordingly; however, certain consistent themes emerged across institutions.

### **Prioritize the Well-Being of Patients, Students, Housestaff, and Faculty**

Catastrophic events such as Hurricanes Sandy and Katrina cause damage to the communities in which patients, students, residents, and faculty live. In the aftermath of the storms, there is value—both educational and medical—to deploying students, residents, and faculty where patient needs are greatest. This strategy provides extra clinicians to institutions that received evacuated patients or to nearby institutions that experienced increased volume due to the disaster—including, to the extent safety permits, those in devastated local communities. Ensuring that housestaff and faculty continue to be paid and that student financial aid is not interrupted during the crisis offers some stability in a chaotic time. Finally, the institution must recognize acts of heroism and individual sacrifices after the disaster, which includes thanking neighboring institutions that graciously helped when it was needed most.


### **Prepare for Disaster**

Institutions should have physical rally points and backup lines for communication set before the disaster. In the cases of the hurricanes, the predicted storm paths were known days beforehand. Students and residents at NYU received detailed instructions before the storm made landfall. These instructions proved crucial for the response, both during and immediately after the disaster. Tulane now requires backup email addresses of students and residents in addition to their university-based email accounts.

### **Minimize Educational Disruptions**

In both disasters, institutions were closed for prolonged periods of time, threatening to extend the training time for students and residents. To prevent the disruption in student and resident training, we suggest that leaders engage in discussions with neighboring institutions to deploy housestaff in ways that are useful both to the affected institution and to the neighboring one. In both Sandy and Katrina, close working relationships among institutions were key to keeping students, housestaff, and faculty practicing. National organizations, such as AAIM, offer means for collaboration between clerkship directors and program directors, and they were helpful resources. Needless to say, Tulane—being the first of the two institutions to experience a natural disaster of this magnitude—was a critical resource to NYU. Further, with every expectation that their programs would be fully up and running within a few months, both institutions made it a priority to continue recruitment efforts, even if under strained conditions.

### **Reflect and Re-Evaluate**

Both NYU and Tulane were confronted with great challenges and our communities learned a great deal from the experiences. For example, novel teaching venues and a team structure resulted from the forced deployment after Hurricane Sandy. At NYU, clinical clerks would attend clinical sites five days a week and then lectures and seminars on Saturday. This return to campus maintained a sense of community, decreased commuting time, and better utilized the few available teaching venues. After Katrina, the Tulane Internal Medicine Residency Program developed the “Elite Code Grey” volunteer team of residents and faculty to stay in the hospital when a hurricane becomes imminent. This team is selected for its mental fortitude and receives special training to provide leadership and medical services during times of crisis or disaster (1). 

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# Teaching Clinical Reasoning: A Little Theory and Practice

**W**hile the challenges of learning clinical reasoning can be traced back as far as Hippocrates, the teaching of this skill is increasingly informed by a solid and growing foundation of cognitive psychology and decision analysis theory. The dual process theory of reasoning—the limestone of this cognitive psychology foundation—describes System 1, our fast-working effortless, pattern-recognizing, intuitive brain, and System 2, our slow-working, effortful, analytic brain (1, 2). Diagnostic reasoning experiments have revealed several key insights into dual process theory. First, System 1, or intuitive reasoning, is the brain's default for diagnosis (1). Second, diagnostic expert performance likely derives from outstanding intuitive reasoning, which arises from a vast knowledge of disease presentations ("patterns") stored in and readily accessible from long-term memory (3). Finally, combining intuitive reasoning with analytic reasoning improves diagnostic accuracy in complex cases (4, 5). We suggest a few practical tips for teaching and remediating students as well as for developing faculty with regard to diagnostic reasoning.

## Case-Based Teaching

The theory of reasoning should inform the approach to teaching clinical reasoning in conferences and on the wards. Students should be encouraged to use intuition and pattern recognition and then apply analytic reasoning (for example, after choosing a leading diagnosis, consider two to three alternate diagnoses and attempt to prove that the patient data make them less likely) to challenge their hunches. Teaching faculty can use the evidence-based SNAPPS (summarize, narrow, analyze, probe, plan, select) as a scaffold to guide students through combined reasoning (6). Evidence suggests that a combined reasoning approach may worsen student diagnostic accuracy in the short term but improve retention in the intermediate term (7).

Clerkship students may initially struggle with the intuitive component of combined reasoning because they lack knowledge about disease manifestations, which is likely the key to expertise. Therefore, the most critical task for clerkship directors and teaching faculty is to help students build mental models, or "illness scripts," of typical presentations of common diseases. How? Clearly, students should see many patients, but teachers should be present to highlight the key features of patient presentations and to give feedback on student diagnostic errors. Teachers can enhance learning by "priming" students for a new encounter. Encourage them to review the differential diagnosis and algorithms for the chief complaint. The latter approach, called scheme-inductive reasoning (for example, students learn to approach acute kidney injury as pre-, intra-, and post-renal), enables students to narrow differential diagnoses into manageable chunks (8). Finally, give them adequate time to process and interpret the data prior to their presentations.

*Case-based didactic exercises are critical opportunities for consolidating and broadening knowledge of diseases in the clerkship rotation as well as in the pre-clinical years.*

Students also build illness script knowledge through reading, but clerkship directors should ban the phrase "read more" and replace it with "read better." Diagnosis is a categorization task. Physicians learn categorization not by memorizing every symptom and sign of diseases, but rather by remembering symptoms that discriminate one disease from another (that is, "discriminating features"). Students should read about at least two diseases when attempting to diagnose a patient, even when the diagnosis is known (9), to discover discriminating features. Students can calibrate the value of these features, or "tests," by finding likelihood ratios for them. These exercises can be real eye-openers (for example, "Tinel's sign is useless for diagnosing carpal tunnel?" [10]). The JAMA Rational Clinical Exam (RCE) series is a wonderful resource for these discoveries.

Given the need for repetition and the limited exposure students have to diseases and their variations, case-based didactic exercises (for example, student morning reports) are critical opportunities for consolidating and broadening knowledge of diseases in the clerkship rotation as well as in the pre-clinical years. We encourage combined reasoning in these sessions and focus on Bayesian reasoning when applicable (for example, pulmonary embolism). We stress the need for pre-test probability estimation in determining the value of tests and ask students to calculate the post-test probability of disease from a pre-test probability and a test. Pre-test probability estimates remain challenging in the absence of prediction rules; however, one study suggests that disease probability research evidence exists for many inpatient chief complaints, provided clinicians make an effort to seek it (11). Likelihood ratios are relatively accessible through Internet resources (RCE series) or applications (for example, Medicine Toolkit [12]). Internet-based Bayesian nomograms and calculators make post-test probability calculations easy.

Conference room or classroom venues also allow for review and discussion of the key steps in the clinical reasoning process: data collection, problem representation, hypothesis generation, search and selection for illness scripts,

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and diagnosis (9) (**Figure 1**). Lucey has developed a valuable structure that integrates some of the previously described approaches (13). The diagnostic process is iterative and reproducing this experience in case-based sessions is valuable (14). Having students develop a differential at the end of the history and then revise it at the end of the physical examination and data sections of the patient presentation role models the approach of experienced clinicians.

## Remediation

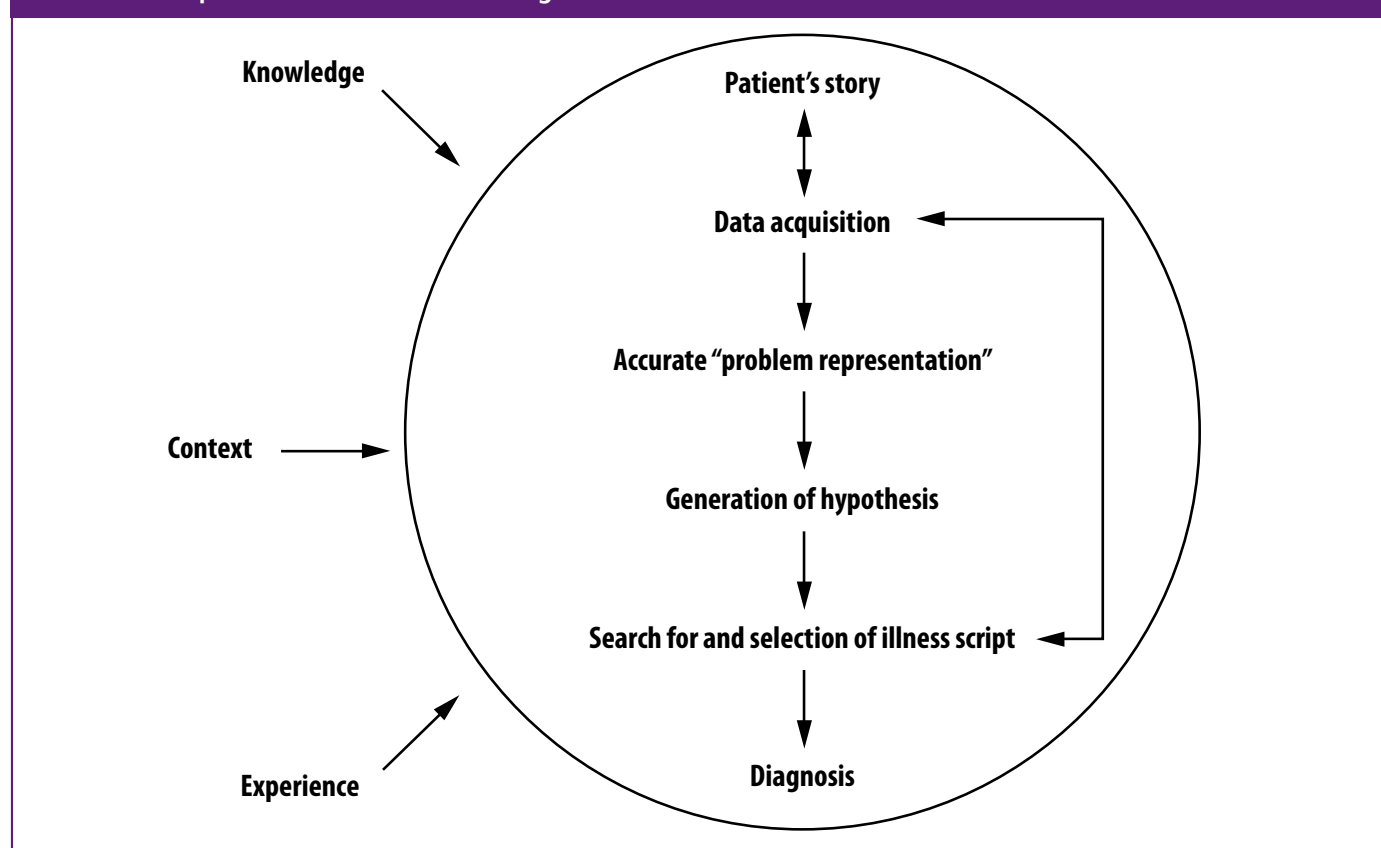
No evidence-based approach to remediation of clinical reasoning deficits exists; however, experience suggests that these approaches performed in an intensive, one-on-one apprenticeship can help a struggling clinical reasoner. Teachers should avoid the trap of teaching a general clinical reasoning process because diagnostic reasoning performance is based on specific disease knowledge content and organization. The most common clinical reasoning deficiencies are knowledge (illness script) deficits. The primary focus of any clinical reasoning remediation is building symptom-based knowledge and approaches. To this end, requiring students to learn and use algorithms can be invaluable. Rather than a long, single-case diagnostic reasoning exercise, four to five short

case vignettes highlighting the discriminating features of diseases within a given symptom may be more effective in developing categorization skills. Constructing tables that explicitly compare and contrast key disease features—and writing typical illness scripts—may help students to correct deficits in knowledge and the organization of that knowledge in memory.

## Faculty Development

Clinical faculty members employ principles of clinical reasoning intuitively in their patient care and teaching; however, a lack of clinical reasoning vocabulary (for example, illness scripts, pre-test probability, heuristics) may prevent them from deconstructing their diagnostic processes to learners (“thinking aloud”). Teaching faculty this fundamental vocabulary is an essential aspect of any faculty development program in clinical reasoning. Furthermore, this vocabulary may strengthen their ability to categorize their learners’ diagnostic errors (for example, “aha, that’s clearly the availability heuristic at work”) and improve formative feedback to learners. We recommend case-based didactic sessions for teaching the vocabulary of clinical reasoning. For example, Dhaliwal reviews key concepts and vocabulary and then has faculty dissect samples of student presentations for diagnostic errors (15). The venue to accomplish this aim

**FIGURE 1.** Components of Clinical Reasoning



*Diagnostic reasoning experiments have revealed several key insights into dual process theory. First, System 1, or intuitive reasoning, is the brain's default for diagnosis (1). Second, diagnostic expert performance likely derives from outstanding intuitive reasoning, which arises from a vast knowledge of disease presentations ("patterns") stored in and readily accessible from long-term memory (3).*

will vary with the size and diversity of the teaching faculty. One strategy would be to start with a core faculty member and have him or her disseminate the information as he or she becomes comfortable with the content and recognizes the value of what has been learned. Ongoing reinforcement and clerkship commitment to the process will be necessary to institutionalize this learning.

## Conclusion

This article provides a sampling of methods for enhancing learning and teaching of clinical reasoning at your institution. Clinical reasoning is a core competency of the internist and deserves a prominent place within the clerkship curriculum. We hope that we have provided you with a new idea to develop at your institution. 🌀

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# Interactive Session Using a “Good Judgment” Model Improves Resident Confidence in Providing Feedback to Learners

## Background

Providing feedback to learners is widely acknowledged as an important component of education (1, 2), and medical educators have recognized that feedback happens infrequently in clinical settings (3). Barriers cited to giving feedback are logistical (lack of time or private space) and pedagogical (lack of faculty skill or confidence). Medical educators often struggle with administering feedback in a manner that does not raise learner defensiveness and they may withhold helpful advice out of concern that it will be perceived as critical (4, 5). With this concern in mind, it is important that faculty who give feedback receive training that allows them to incorporate it into the rapid-paced clinical environment and to feel confident in their skills (6).

Building on work done at the Harvard Center for Medical Simulation and the education literature, University of New Mexico School of Medicine began a feedback initiative to train faculty using the “Debriefing with Good Judgment” model (7, 8). This model seeks to balance faculty’s responsibility to provide learners with corrective direction based on best practices with the need to maintain a safe and respectful learning environment that develops self-regulating professionals. In this model, feedback follows an observation/advocacy/inquiry format to achieve self-reflection. When the teacher observes objective deficiencies in the learner’s practice, he or she advocates for optimal practice and uses inquiry to understand the learner’s frame (knowledge, assumptions, and feelings). Identification of learner frames allows individualized teaching to target knowledge gaps. To facilitate a culture of feedback within the Department of Internal Medicine, we initiated a project to teach a large group of residents using training typically directed at faculty. In this session, residents learned to provide feedback with good judgment via an interactive small group role-play, known as batting practice (9).

## Activity

The training session included a 45-minute didactic for the entire group, illustrating the feedback with good judgment model, followed by 45 minutes of the experiential component of the session (batting practice). The goal of the session was to provide residents with proficiency in initiating a feedback conversation “in the moment” using the core “Debriefing with Good Judgment” skills: observation, advocacy, and inquiry. Batting practice is a brief role-play technique, adapted from motivational interviewing training, in which learners make reflections in real time. The inherent concept allows the learner to practice a skill rather than hit a “home run.” We

chose this skill-building method because it requires participants to give an in-the-moment response and allows several opportunities for practice, even for a relatively large group of participants.

In our activity, batting practice was conducted in small groups with one faculty facilitator and six to eight residents per group. Faculty facilitators had previously completed a two-hour training session that included batting practice. Brief one-line scenarios depicting common clinical errors in judgment were provided on index cards. A participant, designated as the pitcher, read a scenario to another participant, the batter, who responded with feedback in the observation/advocacy/inquiry format. The batter was expected to make a specific observation, an advocacy statement reflecting best practice, and an inquiry statement to obtain the learner’s (pitcher’s) frame. Once the frame was elicited, the batter could provide brief teaching appropriate for a learner’s frame (**Figure 1**). The faculty facilitator led a brief discussion with group members about the feedback and whether it utilized the model effectively:

- Are all three elements present?
- Did the advocacy statement promote optimum practice?
- Did the inquiry convey genuine curiosity about the learner’s point of view?

Participants then changed roles, and a new participant came “up to bat.” Every resident had at least two chances to pitch and two chances to bat.

Residents completed an anonymous, voluntary survey at the conclusion of the session. The Human Research Protections Office of the University of New Mexico Health Sciences Center approved the program evaluation and analysis of these surveys.

## Analysis

Forty-six of 72 internal medicine residents (64%) attended this session. Of them, 42 residents (91%) completed the survey at the conclusion of the session. Among respondents, 19 of 41 (46%) were female and 18 of 42 (43%) considered themselves ethnic minority. The levels of training were postgraduate year (PGY)-1, (18 of 42, 43%); PGY-2 (11 of 42, 26%); or PGY-3, (13 of 42, 31%). Respondents indicated that before the session they regularly provided feedback to medical students (39 of



42, 93%), PGY-1 residents (26 of 42, 62%), senior residents (4 of 42, 9%), and attending physicians (10 of 42, 24%). Using a five-point Likert scale, respondents' perceived confidence in providing feedback rose after the training session (means of 3.19 to 4.07; difference = 0.88; Wilcoxon paired signed rank test  $z = 4.54$ ,  $p < 0.01$ ).


## Limitations

The evaluation of the training session is subject to several limitations. It is the experience of a single institution and the conclusions may not be generalizable to institutions with different types of residents. The survey has not been validated, the opinions of residents who did not participate in the survey may differ from the ones who did, and different conclusions might emerge due to nonresponse bias. This outcome is less likely because of the high response rate (91%). Additionally, we did not assess changes in frequency or quality of feedback given after the training.

## Discussion

Our goal was to broaden an institutional effort to create a culture of feedback by training resident physicians on how to deliver feedback. Although residents are often the recipients of feedback, educating them on its delivery facilitates their growth as physicians and educators. Many of our residents enter the workforce in an academic capacity; we believe knowledge of feedback techniques will further encourage them not only to administer feedback but also to critically evaluate ways to improve the skills of their learners. Batting practice employs a combination of techniques from both motivational interviewing and adult learning theory to create an active learning environment for resident physicians

*In this model, feedback follows an observation/advocacy/inquiry format to achieve self-reflection. When the teacher observes objective deficiencies in the learner's practice, he or she advocates for optimal practice and uses inquiry to understand the learner's frame (knowledge, assumptions, and feelings).*

and to reinforce understanding of the concept of feedback with good judgment. After evaluating this technique with residents, we conclude that a 90-minute training session in feedback with good judgment can increase internal medicine resident confidence in giving feedback. In the future, we hope to expand this program to additional resident physicians not only in the department of medicine but also within other departments in graduate medical education. 

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**FIGURE 1. Typical Scenarios and Frames Used in Batting Practice**

	Example A	Example B
Scenario	The intern sends a 24-year-old woman for a CT scan to evaluate abdominal pain without first checking a pregnancy test.	You are the attending on rounds, and you notice the intern texting while the student is presenting.
Feedback	Dr. Smith, I noticed that you sent the patient for CT scan without checking a pregnancy test [observation]. I am concerned because this could result in dangerous radiation to the fetus if she were pregnant [advocacy]. What are your thoughts [inquiry]?	Dr. Jones, I noticed that you were texting during rounds [observation]. My concern is that because you were not giving full attention to the patient's presentation, you will not know him or her on cross-cover [advocacy]. Can you help me understand your thoughts about that [inquiry]?
Learner Frame	The patient told me she was on her menses.	My father is undergoing bypass surgery.
Teaching Target	Women may have bleeding during pregnancy.	Outside stressors may cause distraction and inability to adequately perform your job. Communication with your team is important to obtain support and ensure good patient care. Texting during rounds may give the appearance of disrespect.

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# GeriScope Interdisciplinary Writers Initiative

## Introduction

The GeriScope Interdisciplinary Writers Initiative (Writers Initiative) was developed as a departmental mechanism to un-silo researchers and clinicians, to build relationships within University of Oklahoma Health Sciences Center (OUHSC) Donald W. Reynolds Department of Geriatric Medicine and across the affiliate Oklahoma City Veterans Affairs Medical Center Department of Geriatric Medicine, and to increase scholarly publications. The Writers Initiative was established to address the Accreditation Council for Graduate Medical Education (ACGME) publication requirement and the simple fact that writing is challenging: faculty members cited lack of time, competing demands, being unsure of how to get started, and lack of resources as challenges to their writing. The purpose of the Writers Initiative was three-fold: increase the quantity and quality of geriatric-focused publications, bring faculty together, and support faculty members and promote faculty collaboration.

We presented a workshop on how to implement similar initiatives at other academic institutions at Academic Internal Medicine Week 2013 (1) with the goal of teaching participants how to create and foster their own forums for faculty development. We encouraged session participants to consider the academic cultures of their own institutions/departments/divisions and to create their own writers clubs.

## Creating and Fostering a Forum for Faculty Development

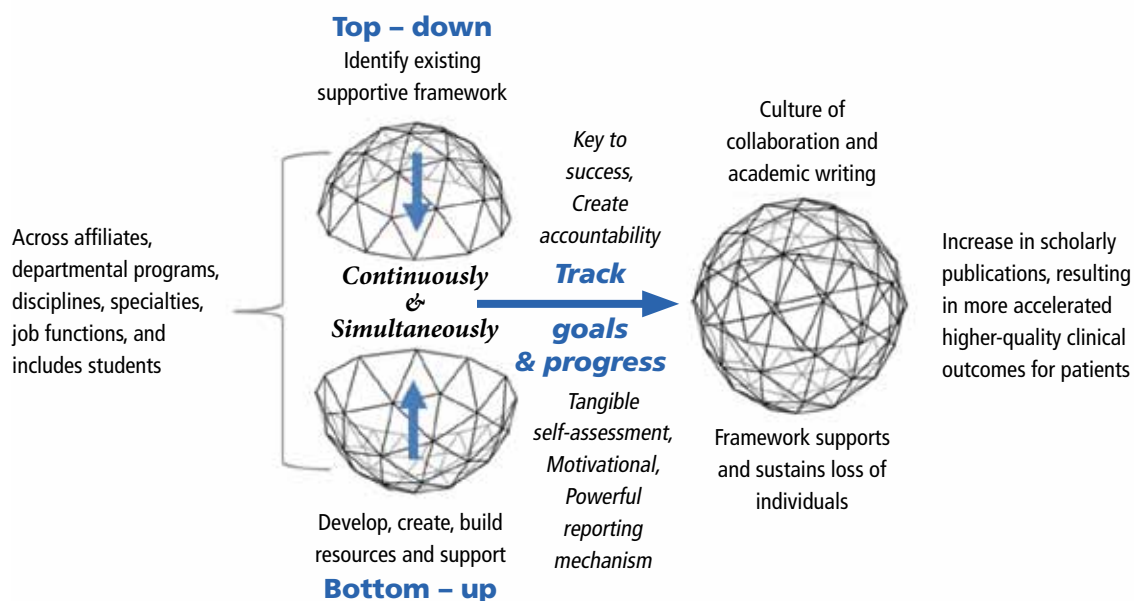
The unique academic landscape of each institution needs to be considered when creating an effective forum for faculty development. The foundational mechanism of the Writers Initiative is analogous to that of a geodome, in which strength lies in the exertion of individual adjacent forces to produce a matrix of support (**Figure 1**). The simultaneous top-down (transfers strength) and bottom-up (builds foundational strength) developmental forces impart structural integrity, while the process of tracking goals and progress provides forward momentum, continuously directing writing toward publication in the Writers Initiative.

## Top-Down: Identify and Disburse Writing Resources

The first step in developing an interdisciplinary writers initiative is to identify a few enthusiastic champions who share a passion and a vision for the value and rewards of an academic writers club and who are willing to take the lead. If unsure of how to get started, we found discussing the types of writing to be a helpful starting point (**Figure 2**). We also collaboratively identified the existing institutional framework that supports academic writing and publication: library services and faculty mentors.

*continued on page 21*

**FIGURE 1. Conceptual Processes**



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## Bottom-Up: Create, Build, and Develop Writing and Publication Resources

Identify the writing resources needed that are not currently provided by your institution. Ask your institution to consider developing these resources. If it is not possible, brainstorm on how you might meet these needs using existing departmental resources and talents. Collectively identify barriers to academic writing and cooperatively identify multiple solutions to each barrier. Because time is such a huge commodity across the board, you will need to develop strategies to promote and accommodate meeting attendance.

### Tracking Goals and Progress

Documenting and tracking goals and progress breathes life into the mechanism, providing continuous forward motion that propels writing toward publication. A customized sign-in sheet used at each meeting records and tracks individual goals and progress as well as requests for assistance. Documentation of goals and progress, such as number of departmental publications, new resources, and number and type of requests for assistance, is tracked and updated monthly on a spreadsheet.

### Dynamics of Meetings

In the beginning, a “how-to” academic writing book served to unify participants while providing practical information about the writing process. We chose *How to*

*Write a Lot: A Practical Guide to Productive Academic Writing* (2). This step-by-step book is brief and easy to read; it had a powerful impact on organizing and motivating academic writing goals. Meetings are facilitated by a moderator and a designated note taker. At the start of each one-hour meeting, a sign-in sheet that tracks individual goals and progresses is passed around and filled out. Participants introduce themselves and state their current projects, their goals for the next week, and what assistance or resources they need most. This process takes approximately 30 minutes; the remainder of the agenda is participant driven. The note taker documents the nature of collaborations and what specific resources were requested during the meeting, any new resources identified, and any new submissions or publications.

### Real-World Implementation of Writers Clubs

Advocate Illinois Masonic Medical Center is a 400-bed community teaching hospital that sponsors a 48-member categorical internal medicine residency. Like many community hospital training programs, we struggle with adequate scholarly activity from both faculty and residents. Using *How to Write a Lot* (2) as a guide, we formed a weekly writers club called The Graphophiliacs. We debunked the myth of writer’s block and stressed that the only way to become a better writer is to write, consistently and regularly.

Our initial goal was to address the dread that many physicians feel when attempting to write. Our premise was that by confronting the task as a group, the challenge of

**FIGURE 2.** Types of Academic or Scholarly Writing (by Publication Outcome)

Journals		Other Peer Review	“Soft” Dissemination	Development of Future Research Projects	Academic or Career-Supportive
Peer-Reviewed Scientific	Service, Administrative, or Trade				
Analytical, observational, descriptive	Performance measures	Book review, chapter, or authorship	Institutional resources; e.g., websites (D2L)	Grant applications, proposals	Term paper, essay, dissertation, thesis
Literature review, systematic review, meta-analysis	Changes in policy & procedures	Conference paper	Other websites: e.g., POGOe	Protocol development	Curriculum development
Clinical case studies, Teaching case studies, teaching methodology	Quality improvement projects	Poster or abstract presentation	Letter to editor, press release, newsletter, reports	Regulatory documents	Letters of recommendation or support
Editorials	Staffing needs, scheduling issues	PowerPoint presentation	Creative in nature: e.g., poetry, musings	Program methods	Biosketch, resumes, CVs

*Collectively identify barriers to academic writing and cooperatively identify multiple solutions to each barrier. Because time is such a huge commodity across the board, you will need to develop strategies to promote and accommodate meeting attendance.*

writing would be shared and therefore less painful. We also employed the concept of social contracts to ensure an individual's commitment to the group would assist in the successful completion of set goals.

We assembled a cohort of internal personnel resources, including the hospital's director of research services, reference librarians, and a prolific faculty member, then invited residents and faculty to join the club. Members committed to a once-weekly informal gathering. This hour-long confessional session provided a supportive space where individuals could discuss the status of their writing projects, support each other, and offer suggestions on how to develop concrete and realistic goals.

After the initial 10 weeks of meetings, we continue to generate enthusiasm and interest—and new members. The written output of members, while desired, is less important than the fact that we are clearly converting self-diagnosed graphophobes into committed and hopefully lifelong graphophiliacs.

## Future

The Geriscope Interdisciplinary Writers Initiative methods have been presented to the OUHSC College of Medicine, Office of Academic Affairs and Faculty Development, which expressed interest in exploring the possibility of implementing this program as a departmental template for increasing scholarly publications university-wide. 🌀

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## PGY-4 Chief Resident Position

Position available June 2014 for a PGY-4 chief resident position at MedStar Franklin Square Medical Center. The MedStar Franklin Square Medical Center Chief Resident works with the Program Director and the Chair of Medicine in the Internal Medicine Residency Program, which consists of 30 categorical and seven preliminary residents. The Chief Resident serves as a junior faculty attending with ample daily teaching opportunities and attends on both inpatient and outpatient services. The MedStar Franklin Square Medical Center has an academic affiliation with the University of Maryland School of Medicine. Supervision of daily morning report and noon conference, as well as regular medical student teaching are additional expectations. This 12-month position fosters growth and development of leadership, administrative and practice skills and may be ideal for an Internal Medicine Residency graduate considering academics, practice or fellowship. The applicant should be a graduate of a three-year Internal Medicine Residency program prior to July 2014 and eligible for the ABIM certifying exam. The applicant should also be eligible for unrestricted licensure to practice medicine as an independent practitioner in the State of Maryland, as well as certified in CPR and ACLS. This position is not eligible for Visa sponsorship.

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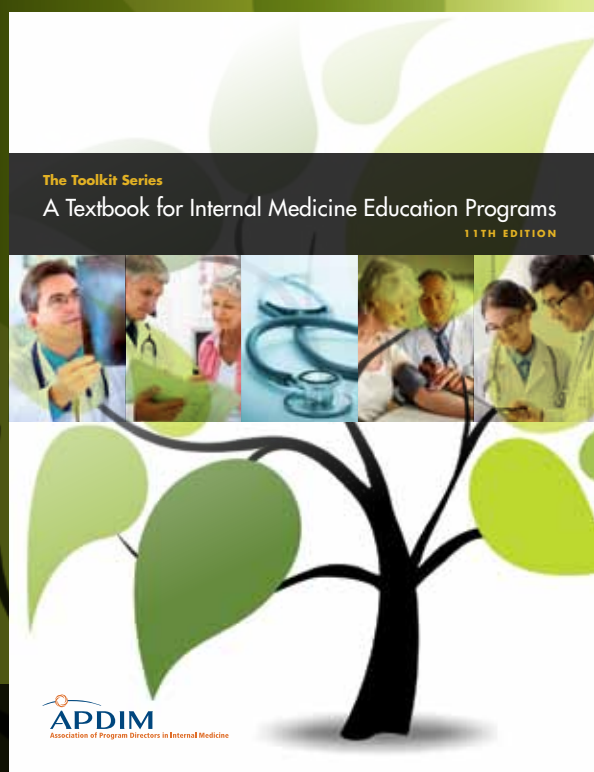
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