# ACADEMIC INTERNAL MEDICINE
# INSIGHT

## By the Numbers

### 5:1
New ratio of learners to preceptors in continuity clinics as mandated by the ACGME residency requirements

### 49%
Percentage of internal medicine faculty who are satisfied with how well their clinical locations function

### .85
Correlation coefficient for relationship between USMLE Step 1 and COMLEX-USA Level 1 scores.

## Also In This Issue

# AAIM Looks to the Future

At the end of my first year, I continue to enjoy serving as President of the Alliance for Academic Internal Medicine (AAIM). I look forward to more growth and increasing influence as the agendas of the alliance and its member organizations continue to evolve.

At this crossroads of increasing regulation, decreasing resources, and significant need for health care providers and access, AAIM has a unique opportunity to shape the future of internal medicine and subsequently medicine in general. Leading the largest specialty in medicine, departments of internal medicine and their faculty and staff affect every current and future physician in the United States—and many beyond.

To ensure that the voices of academic medicine and internal medicine are strong and effective, we must continue to increase our partnerships with the entities that regulate and represent the discipline, including the American Board of Internal Medicine, the American College of Physicians, the Accreditation Council for Graduate Medical Education, the Association of American Medical Colleges, and the innumerable subspecialty societies.

But to ensure maximum impact and effectiveness within the larger community, we must ascertain order and efficiency in our own organizations. In July, representatives from each of the five member organizations (Association of Program Directors in Internal Medicine, Association of Professors of Medicine, Association of Specialty Professors, Clerkship Directors in Internal Medicine, and Administrators of Internal Medicine) convened at the AAIM Strategic Planning Retreat in San Francisco, CA.

AAIM Executive Vice President Bergitta E. Smith outlined the work leading up to the retreat, including objectives based on preliminary interviews, consensus meetings, and other planning efforts in her article in the most recent issue of Insight (1). Not surprisingly, the areas of focus at the retreat centered on how to increase the attractiveness of internal medicine as a discipline.

During the retreat, leaders met in small, blended groups and caucused among their own associations to refine a list of 20 possible efforts to five core ideas.

1. Create an integrated medical curriculum from pre-clinical to continuing medical education.
2. Advocate for regulatory issues by partnering with others and hopefully achieving representation on external stakeholder boards.
3. Identify and develop resources to advance the research mission in academic internal medicine.
4. Develop strategies to improve the work environment for faculty in academic internal medicine and partner with other organizations to advocate to improve the practice environment for all of internal medicine.
5. Promote research initiatives, networks, and demonstration projects to study patient safety and quality improvement best practices.

These initiatives would be developed in partnership with other relevant organizations to avoid duplicative efforts. However, in this era of limited resources, AAIM and its member organizations must make hard choices to ensure that both existing and new projects can reasonably succeed with the available volunteers, time, staff, and funding streams.

AAIM has already elected to begin leading one effort that touches every member: education redesign. At Academic Internal Medicine Week 2008, Lee R. Berkowitz, MD, Chair of the new AAIM Education Redesign Task Force, discussed goals of applicability to all programs, transparency of process, and a quick timeline for change. The task force seeks to define the core of internal medicine and the master clinician.

The AAIM Board of Directors will dedicate a considerable portion of its efforts in the next six to 12 months to establish where costs can be cut and the efficiencies generated by a single staff and a single office can be maximized. Our staff is talented and dedicated, but the demands of managing the initiatives of five associations, two affiliate organizations, and the alliance—each with their own governance, financial, and committee structures as well as separate meetings, membership, and advocacy efforts—have left them with little additional time or resources to support new work. **Figure 1** provides an introduction to the scope of the work.
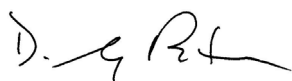
The upcoming year will be dedicated to finding balance: of projects and resources, of alliance and association initiatives, of generating internal leadership and seeking

| TABLE 1: AAIM by the Numbers | |
|---|---|
| Combined budget for the associations in fiscal year FY 2009 | $7,026,639 |
| Departments of internal medicine represented by the associations | 402 |
| Current members of the associations in AAIM | 4,145 |
| Councils, boards, committees, task forces, and advisory boards of AAIM and its member associations | 52 |
| Publications produced by AAIM and the associations | 15 |
| Annual surveys conducted by AAIM member associations | 5 |
| Average age of the staff | 23 |
| Total staff members | 17 |

external support, and of existing efforts and new initiatives. In conjunction with the hard work of our volunteers and staff, I welcome the challenge of building AAIM into an organization that effects change for the community of internal medicine and academic medicine while still providing support for the individual faculty and staff members. ◌

Sincerely,

D. Craig Brater, MD
AAIM President

# ACGME Revises Internal Medicine Residency Program Requirements

The Residency Review Committee for Internal Medicine (RRC-IM) spent nearly two years conducting a major revision of the Accreditation Council for Graduate Medical Education (ACGME) Program Requirements for Resident Education in Internal Medicine. The goal of this revision was to restructure and rewrite the requirements to make residency training more outcomes-based rather than curriculum- or procedure-based. The result is a new set of program requirements released September 2008 and scheduled to take effect July 1, 2009.

Most notably, RRC-IM revised the continuity clinic requirement to read, "Each resident's longitudinal continuity experience must include a minimum of 130 distinct half-day outpatient sessions, extending at least over a 30-month period, devoted to longitudinal care of the residents' panel of patients." This requirement is different from the previous version, which required residents to attend a minimum of 108 weekly continuity clinic sessions during 36 months of training. The new requirement provides program directors more flexibility in designing residents' clinical and didactic schedules. Instead of being constrained to one continuity clinic per week, program directors are free to schedule continuity experience in a variety of different models, including blocks. Another revision regarding continuity clinic is a reduction in the ratio of residents or other learners to faculty preceptors from 5:1 to 4:1.

The caps on the number of patients for which interns and residents can be responsible have decreased in the revised program requirements. On inpatient rotations, a first-year resident "must not be responsible for the ongoing care of more than 10 patients." When a resident is supervising one first-year resident, "the supervising resident must not be responsible for the ongoing care of more than 14 patients." A resident supervising more than one first-year resident must not be responsible for more than 20 patients. These numbers have decreased from 12, 16, and 24, respectively.

A notable deletion from the program requirements is the mandate for internal medicine residents to have non-internal medicine experiences, including psychiatry, dermatology, medical ophthalmology, office gynecology, otorhinolaryngology, non-operative orthopedics, and rehabilitation medicine. According to the revised requirements, the experiences have become "opportunities" and are no longer required of all students. Allergy/immunology, palliative medicine, and sleep medicine have been added to the list of non-internal medicine specialty areas in which residents must have the opportunity for experience.

The sponsoring institution requirements include several new mandates related to fostering a culture of quality improvement and patient safety. The requirements mandate sponsoring institutions "provide residents with access to training using simulation" and access to an electronic health record (EHR). According to the revised requirements, if a program does not have an existing EHR, "institutions must demonstrate institutional commitment to its development and progress towards its implementation."

Contrary to earlier considerations, RRC-IM did not change the program requirements to prohibit the required time residents spend in the emergency department to count toward the overall requirement for ambulatory training. Instead, the requirement states: "Emergency medicine may count for no more than two weeks toward the required 1/3 ambulatory time." Total required emergency medicine experience must not exceed two months (decreased from three in the previous requirements) during three years of training.

> *Another revision regarding continuity clinic is a reduction in the ratio of residents or other learners to faculty preceptors from 5:1 to 4:1.*

During the revision process, members of the Alliance for Academic Internal Medicine (AAIM), through the AAIM Residency Program Requirements Task Force and the Association of Program Directors in Internal Medicine Accreditation Committee had the opportunity to provide suggestions for possible revisions. AAIM looks forward to helping its membership receive the information and tools necessary to successfully follow the requirements. In addition, AAIM is dedicated to continuing collaboration with RRC-IM to bring future iterations of the requirements to an outcomes-based format that is feasible for the academic internal medicine community.

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# Alliance Groups Respond to Proposed Changes to USMLE

A driving force and founding principle leading to the creation of the Alliance for Academic Medicine (AAIM) was to ensure AAIM would speak with one voice and in doing so, maximize its influence and effectiveness as a leader in academic medicine.

As former AAIM leaders, we are disappointed in the responses to US Medical Licensing Examination (USMLE) reform submitted by three associations of the alliance. We believe these responses result from a parochial and self-serving view more reflective of the "pre–AAIM" days, rather than what we have come to respect and enjoy from the alliance with its comprehensive unified educational perspective; as such, it represents a major missed opportunity for the alliance.

There have been numerous examples detailed in academic publications and recanted at countless national meetings during recent years calling for reform of medical education. Few experienced medical educators would argue that the fragmentation in this continuum from pre-medical through postgraduate training has created and resulted in lasting barriers to reform.

As educators involved with the opportunity to design and develop a new medical school in partnership with a large health system (Hofstra University School of Medicine in partnership with North Shore—Long Island Jewish (LIJ) Health System, we would like to share our perspective regarding USMLE.

The Hofstra University School of Medicine is one of approximately 10 new schools in varying stages of the Liaison Committee on Medical Education accreditation process. As the leaders of such an institution, we have also enjoyed a close association with our new colleagues fostered by obvious common interests in creating the best new schools and curricula in an environment free in large part from the constraints of established medical school traditions and archaic organization. We have also had communications with numerous other medical schools in North America and Europe involved in the process of either curricular reform or the design of entirely new schools. What is most striking is that virtually all of us have seemingly independently arrived at the same conclusions based largely on experience and years of thoughtful reflection.

We are thoroughly committed to integrating basic science and patient care in a way that allows students and future physicians to best comprehend and apply that critical basic science knowledge in the care of patients. We have met no one who is interested in "devaluing the basic science content" in the process, but rather the opposite effect of having the freedom as educators and innovators to explore and disseminate best practices and methodologies to ensure that our students integrate the principles of basic science into clinical care. Disconnected facts, passive learning, and wild variation in the depth and detail of the content taught and a cram-regurgitate-forget strategy of approaching USMLE

Step 1 all predict educational failure. No one would attempt to teach future scientists this way, nor should we inflict this educational nightmare on future physicians. We strongly argue that USMLE Step 1 and its forced separation of basic science from clinical medicine is the single greatest obstacle to ongoing curricular innovation and reform.

It appears that three themes emerge from the alliance's responses, each from a different member of AAIM; however, they all agree that additional research and evidence must support any change that is implemented.

The Association of Professors of Medicine fears this reform would devalue the basic science component and could lead to a generation of physicians without a comprehensive understanding of or appreciation for the core scientific principles and knowledge at the foundation of medicine. We believe this has already happened and that the existing "divide" between basic and clinical science and the dysfunctional way science is learned are perpetuated by the current USMLE. No current or existing evidence demonstrates that students can apply basic science in the care of patients.  The pre-clinical curriculum of the past has fostered student resentment and is the antithesis of integrated science rooted in conceptual, critical thinking. Sadly, it is not even necessary to attend class to pass USMLE Step 1 and the majority of students do not.

The Association of Program Directors in Internal Medicine, content with the "status quo," seems less interested in fostering innovative education than in protecting its own self-interests. Program directors use the USMLE scores and their inherent validity primarily to distinguish one student (often an international medical graduate) from another. The unproven but

## 10 Tunes

That Make You Think…
Time in the Continuity Clinic

If you would like to suggest a theme or a list for Ten Tunes, please email *Insight* Editor Sheila T. Costa at scosta@im.org.

(Ain't It Funny) How Time Slips Away by Al Green

No Time to Kill by Clint Black

As Time Goes By by Jimmy Durante

Time Is on My Side by Rolling Stones

Haven't Got Time for the Pain by Carly Simon

No Time Left for You by The Guess Who

Time Marches On by Tracy Lawrence

Bidin' My Time by Ella Fitzgerald

Time Will Tell by Bob Marley

Time Is Running Out by Muse

# Racial and Ethnic Disparities Persist in Health Care Access and Quality

Though they comprise approximately one-third of the population of the United States (**Figure 1**), racial and ethnic minority populations do not receive the same health care as non-minority populations (1). As defined by the "priority populations" of the Agency for Healthcare Research and Quality (AHRQ), minority populations include black, Asian, American Indian/Alaskan Native (AI/AN), and Hispanic or Latino individuals (2).

Discrepancies are noticeable in how individuals rate their own health; with the exception of Asian individuals, minority individuals are more likely to report poor health than non-Hispanic white individuals (**Figure 2**). Sixty-two percent of white non-Hispanic individuals rate their health as excellent or very good, while 51% of black individuals and 47% of both Hispanic and AI/AN individuals gave their health a high rating.

The 2007 AHRQ *National Healthcare Disparities Report* revealed disparities still exist in the health care system today and are worsening, especially for the black, Hispanic or Latino, and AI/AN populations (2). AHRQ tracks quality and access for priority populations and uses core report measures (CRM) to evaluate the care received by patients. **Figure 3** shows the latest access and quality reports stratified by race and ethnicity for those CRMs. The most glaring discrepancies lie in access; Hispanics or Latinos, blacks, and American Indian/Alaskan Natives have more difficulty accessing health care than non-Hispanic whites. The Hispanic population experiences the biggest differentiation from the white non-Hispanic population, with 87.5% indicating worse access to care and 60.52% worse quality of care for selected CRMs.

The differences in quality of can be attributed to where minority individuals go for care. One study found that disparities in minority population care could be reduced after adjusting for site of care, "suggesting that an underlying cause of disparities may be that minority patients are more likely to

## FIGURE 2: Percentage of Adult Health Reports Based on Race and Ethnicity (1)
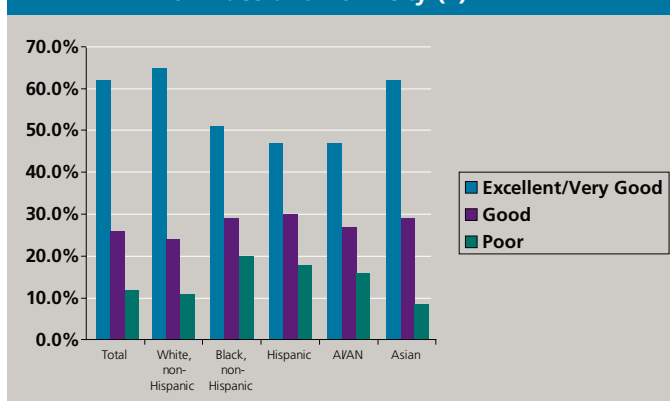


receive care in lower performing hospitals" (3). **Figure 4** shows the percentage of minority patients seen by top and bottom performing hospitals for certain measures.

Forty-seven million Americans are currently uninsured (4). In particular, a significant percentage of minority individuals are uninsured, especially AI/AN individuals (37.6%) and Hispanics or Latinos (34.6%) (**Figure 5**) (5). Uninsured populations were found to have the most difficulty obtaining specialty services (**Figure 6**) (6). Most notably, uninsured individuals have more difficulty with access to high-tech services, with a more than 30% difference between uninsured individuals and those who receive Medicaid funding or assistance.

Though racial and ethnic disparities have been identified as a serious problem for the health care system, the gaps in access and quality have not decreased. AHRQ releases a health care disparities report annually; the 2008 report should be available in February 2009.

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2. Agency for Healthcare Research and Quality. *National Healthcare Disparities Report*. Rockville, MD: 2007.

3. Hasnain-Wynia R, Baker DW, Nerenz D, Feinglass J, et al. Disparities in health care are driven by where minority patients seek care. *Arch Intern Med*. 2007;167(12):1233–1239.

4. Johnson TD. Census bureau: Number of US uninsured rises to 47 million Americans are uninsured: Almost 5 percent increase since 2005. *Nation's Health*. 2007;37(8).

5. *National Health Interview Survey 2006*. National Center for Health Statistics, Hyattsville, MD: 2006.

6. Cook NL, Hicks LS, O'Malley AJ, Keegan T, et al. Access to specialty care and medical services in community health centers. *Health Affairs*. 2007;26(5):1459–1468.

## FIGURE 1: Percentage of US Population, 2005 (1)
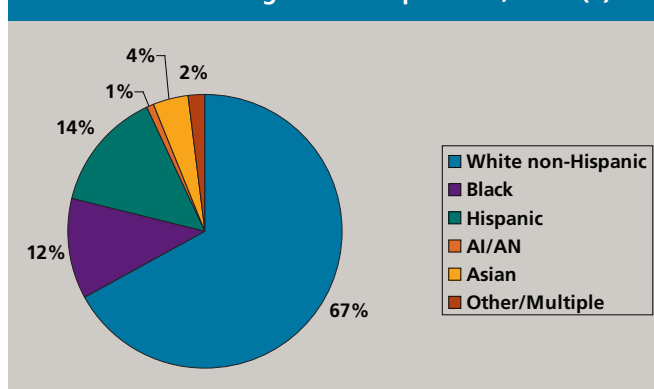
**FIGURE 3A: Racial and Ethnic Minorities Compared with Non-Hispanic Whites on Measures of Quality (2)**
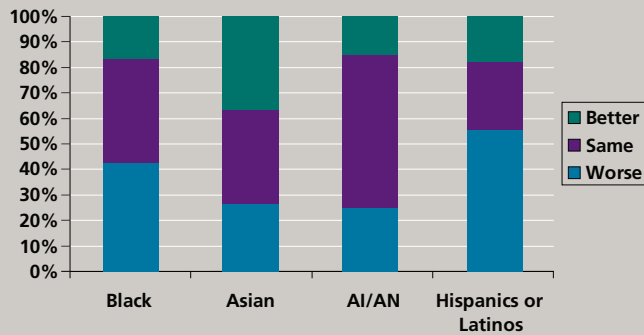


**FIGURE 3B: Racial and Ethnic Minorities Compared with Non-Hispanic Whites on Measures of Access (2)**
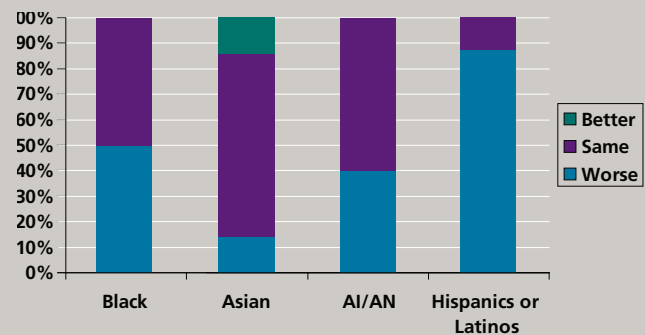


**FIGURE 4: Percentage of Minority Patients Cared for in Top-Performing and Bottom-Performing Hospitals (3)**
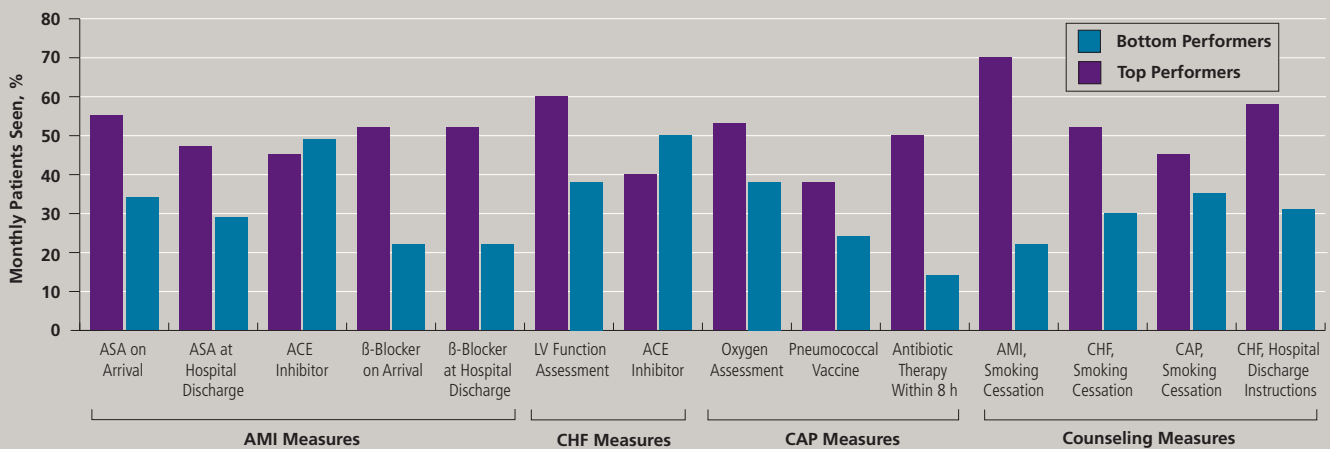


**FIGURE 5: Percentage of People Under Age 65 without Health Insurance Coverage, 2006 (5)**
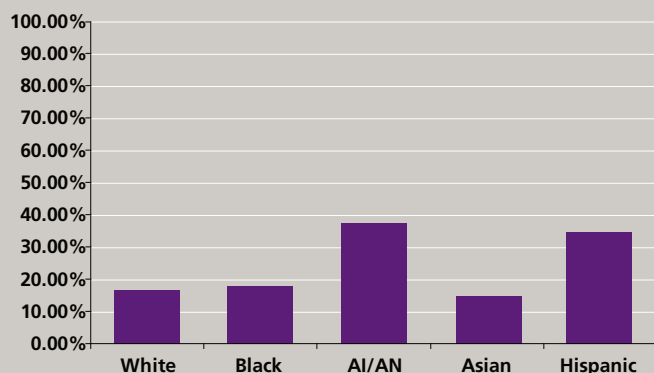


**FIGURE 6: Percentage of Community Health Center (CHC) Directors Reporting Difficult Access to Specialty Medical Services by Insurance Category, 2004**
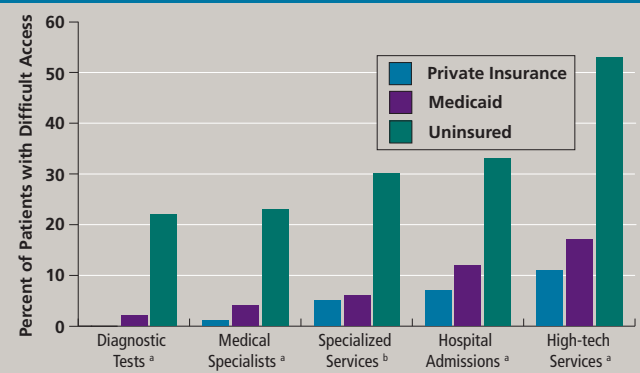


**SOURCE:** All information was derived from the authors' computations using survey response data.
**NOTES:** "Difficult access" means that patients were "never" or "rarely" able to obtain access.
[a] For private insurance compared with Medicaid, $p < 0.05$. For private insurance compared with uninsured and Medicaid compared with uninsured, $p < 0.001$.
[b] For private insurance compared with uninsured and for Medicaid compared with uninsured, $p < 0.001$.

# Job Satisfaction of US Medical School Faculty with a Focus on Internal Medicine Departments

As demands on academic medical faculty have risen, medical school leaders and researchers have raised awareness about and attention to job satisfaction, faculty stress and burnout, and struggles with recruitment and retention. This increased attention is important because researchers have consistently demonstrated an empirical link between job satisfaction and retention as well as between job dissatisfaction and intent to leave an organization (1–4). Given the high costs of faculty turnover (5–7), it is essential to understand the factors that contribute to the satisfaction of medical school faculty.

Using responses from a faculty satisfaction survey administered to full-time faculty at 10 medical schools, we examined key areas of medical faculty job satisfaction and dissatisfaction, first, for all faculty, and second, for faculty in internal medicine departments. Results illustrate significant differences between clinical faculty and basic science faculty in the areas of highest faculty satisfaction, and differences between internal medicine faculty and other clinical faculty on satisfaction with their clinical practice.

## Methods

In spring 2007, in partnership with the Collaborative on Academic Careers in Higher Education (COACHE), the Association of American Medical Colleges (AAMC) administered a survey on faculty job satisfaction to 9,148 full-time basic science and clinical faculty at 10 medical schools. Faculty members from these schools voluntarily participated in the survey and their identities remained confidential. The survey, which was created based on focus groups with medical school faculty and the extant literature, included questions about institutional climate and culture, governance and operations, promotion policies, faculty recruitment and retention, clinical practice, and global satisfaction, among others.

The overall response rate for the survey was 35% (37% for clinical faculty and 35% for basic science faculty). The current sample included faculty who were full-time and assistant, associate, or full professors (*N*=2,853). Of the clinical faculty included in the sample (*n*=2,357), 26% (*n*=608) were faculty in internal medicine departments. Descriptive statistics for all faculty are presented to give a sense of overall faculty satisfaction, in addition to results for faculty in internal medicine departments and how they compare to faculty in other clinical departments.

## Results and Discussion: Areas of Overall Faculty Satisfaction

Survey results indicate that, overall, approximately two-thirds (62%) of responding faculty were satisfied or very satisfied with their medical schools and 68% were satisfied with their departments as places to work. These percentages are slightly lower than overall measures of physician satisfaction over the past decade (8).

Overall survey results also revealed several areas of high faculty satisfaction (**Table 1**). More than three-fourths of the faculty respondents reported being satisfied with the autonomy in their work (78% satisfied or very satisfied). Clinical faculty were less likely to report satisfaction with the autonomy in their work than were basic science faculty (76% versus 84%, respectively, p<.001). Overall, 71% of the faculty respondents noted that they were satisfied or very satisfied with the quality of professional interactions with departmental colleagues. Again, these responses differed by faculty type, as clinical faculty reported more satisfaction with the quality of professional interactions with their departmental colleagues than did their basic science peers (72% versus 65%, respectively, p<.01). Approximately two-thirds of the faculty respondents (66%) reported being satisfied or very satisfied with their sense of belonging (how well they "fit") in their department. There was not a significant difference between clinical faculty and basic science faculty on this item. Finally,

| TABLE 1: Areas of High and Low Faculty Satisfaction and Dissatisfaction | | | | |
|---|---|---|---|---|
| | **All Faculty** | **Clinical Faculty** | **Basic Science Faculty** | |
| Areas of high faculty satisfaction: | | % satisfied or very satisfied | | significance[1] |
| Autonomy in my work | 78 | 76 | 16.50% | *** |
| Quality of professional interaction with departmental colleagues | 70 | 72 | 14.09% | *** |
| How well I "Fit" in my department | 66 | 66 | 19.04% | ns |
| Areas of low faculty satisfaction: | | % agree or strongly agree | | |
| Criteria for promotion are consistently applied to faculty across comparable positions | 34 | 33 | 39 | ns |
| My work is appreciated by the school of medicine dean's office | 29 | 28 | 31 | ns |
| My medical school does a good job explaining its overall finances to faculty | 20 | 20 | 18 | ns |
| 1***=p<.001; **=p<.01; *ns*=no significance | | | | |

**TABLE 2:** Comparison of Internal Medicine Faculty and Other Clinical Faculty on Satisfaction with Aspects of Clinical Practice

| | Internal Medicine Faculty | Other Clinical Faculty | |
|---|---|---|---|
| | % satisfied or very satisfied | | significance[1] |
| Support from administrative or office staff for your clinical practice | 37 | 49 | *** |
| Support from non-physician clinical staff for your clinical practice | 50 | 55 | * |
| Opportunities for physician input in management decisions | 41 | 48 | * |
| Communication to physicians about this location's financial status | 28 | 35 | ** |
| Teamwork between physicans and other clinical staff | 65 | 69 | ns |
| Communication between physicians and senior administrators | 33 | 39 | * |
| Responsiveness in meeting physican requests | 29 | 36 | * |
| Space available for your clinical practice | 43 | 43 | ns |
| Availability of supplies for your clinical practice | 50 | 59 | ** |
| Quality of equipment needed for your clinical practice | 55 | 61 | ns |
| Quality of patient care provided | 79 | 80 | ns |
| How well this clinical location functions overall | 49 | 58 | ** |

1 ***=p<.001; **=p<.01;*=p<.05; *ns*=no significance.

for the subset of faculty respondents involved in patient care, 80% were satisfied or very satisfied with the quality of care provided in their institutions (not reflected in table).

Findings also revealed several areas of low faculty satisfaction. About one-third of the respondents (34%) agreed or strongly agreed that the criteria for promotion at their institution were consistently applied to faculty across comparable positions. Less than one-third of responding faculty (29%) felt that their work was appreciated by the medical school dean's office; fewer responding faculty (20%) felt that their medical schools did a good job explaining their overall finances. No significant differences were found in these areas of low satisfaction between basic science and clinical faculty.

From these findings, it appears that higher areas of satisfaction tend to stem from the relationships that a faculty member has with colleagues and the school. In contrast, areas of lower satisfaction seem to stem from the institutional environment, including communication (or lack thereof) from medical school administration and perceptions of equity.

### Satisfaction of Internal Medicine Faculty versus Other Clinical Faculty

Within the subgroup of clinical faculty respondents, the responses of faculty in internal medicine departments were examined for any differences from the responses of faculty in all other clinical departments.[1] Faculty in internal medicine departments were less likely to be satisfied with their department as a place to work compared to other clinical faculty (65% versus 69%, respectively, p<.05). Also, faculty in internal medicine departments were less likely to report being satisfied with their "fit" in their department than were faculty in other clinical departments (61% versus 68%, respectively, p<.05).

No other significant differences were found between internal medicine and other clinical faculty in other areas of the survey, with one exception. Internal medicine faculty were less satisfied than other clinical faculty on eight of 12 survey items related to clinical practice (**Table 2**). Anecdotes suggest that these differences may stem from internal medicine faculty being less satisfied with their overall compensation than other clinical faculty, but no support was found for this theory (44% of the faculty from both groups reported being satisfied or very satisfied with overall compensation).

The results demonstrate that many of the significant differences between faculty in internal medicine departments and faculty in other clinical departments were related to either support or communication issues at the clinical practice location. These findings may warrant attention from internal medicine departments as past research suggests that increased communication is a key factor to retaining physicians in medical groups (9).

### Implications

These data indicate that, while the majority of medical school faculty are satisfied or very satisfied with their schools and departments as places to work (62% and 68%, respectively), there are several areas for potential improvement in faculty satisfaction. Schools may choose to use these and other measures of faculty satisfaction as indicators of institutional progress toward making their institutions better places for faculty to work. For example, the results of this survey related to faculty dissatisfaction may prompt medical schools and departments to improve transparency of financial operations and seek strategies to communicate the consistent application of faculty policy, especially as it relates to promotion criteria.

# A Novel Assessment Form for Observing Medical Residents

Since abandoning the oral exam in 1972, the American Board of Internal Medicine (ABIM) has placed the onus of verifying residents' patient care skills on the directors of residency programs. Studies show residents have deficiencies in identifying murmurs (1), a decline in history-taking skills after a peak in medical school (2), and frequent misses of important aspects of informed consent in discussions with patients (3). Although no single evaluation tool is effective for all six core competencies, "focused assessment of resident skills by direct observation" has been cited as a key evaluation measure to determine the competence of a learner to apply skills and knowledge to a unique patient's care (4).

Direct observation methods in internal medicine training have evolved from the clinical evaluation exercise (CEX), a two-hour observation of a resident performing a complete history and physical with limited reliability and validity, to the more feasible mini-clinical evaluation exercise (Mini-CEX). The Mini-CEX involves a faculty member observing a focused, 15–20 minute patient encounter which is recorded based on seven domains and rated on a nine-point numerical scale. Initially, studies showed the Mini-CEX format to be a feasible tool with external validity (when compared to the ABIM monthly evaluation form) (5) and construct validity (when used by faculty watching videos with scripted errors) (6). However, other studies revealed range restriction and instances of the halo effect (5,7), while faculty users in some studies could not easily discriminate between satisfactory and unsatisfactory performances using the Mini-CEX evaluation tool (6). Lack of specific, directed comments and an action plan also limited program directors in both identifying unsatisfactory performance trends and in developing focused remediation plans.

In response to these limitations, the authors redesigned a form (the Minicard) for resident observation that preserves the Mini-CEX format, while reducing the score range from nine to four points, adding behavioral and adjectival anchors, condensing seven domains into the familiar language of the three Accreditation Council for Graduate Medical Education (ACGME) competencies (communication, medical knowledge and professionalism), and providing space for a written

action plan on a four- by 10-inch double-sided card. Additions included prompts for each domain to cue listeners to the expected behaviors in the sequence that those behaviors would typically occur, allowing for real-time scoring. The Mini-CEX form was substantially modified to produce concrete observations, minimize grade inflation and the halo effect, and prompt observers to convert their observations to specific feedback. The authors hypothesized this assessment tool would more accurately distinguish satisfactory from unsatisfactory performances than the current assessment tool and increase the quantity and quality of intended feedback and written comments.

Four institutions, two community-based programs and two university-based programs, participated in a study to test if the Minicard could improve faculty accuracy in detecting unsatisfactory performances, generate more rater observations, and improve feedback quality compared to the Mini-CEX form. Two study groups of randomized internal medicine faculty at each institution participated in a one-hour training course, which consisted of an introductory training videotape for each form followed by facilitated group-training sessions. The groups reconvened for testing two to three weeks later and watched a set of videotapes with scripted errors that had been scored by a team of experts. Study participants were asked to record observations in real time, and were given three minutes between videos to complete their documentation and write down their "intended feedback." Intended feedback was reviewed by three authors and classified as "minimal," "observational," and "action-oriented" for quality determinations.

The findings of the study showed faculty trained to use the Minicard were more accurate in discriminating satisfactory from unsatisfactory performances (85% versus 73% correct) and were more sensitive to unsatisfactory performances (96% versus 52% correct), but were less accurate in determining satisfactory performances (73% versus 95% correct) (**Table 1**). There was no difference in the amount or quality of intended feedback between the groups; however, the intervention group with the Minicard's prompts recorded nearly twice as many observations (10.8 versus 5.7) (**Table 2**). Inter-rater

**TABLE 1: Accuracy of Intervention and Control Faculty in Classifying Resident Performance as Passing or Failing**

|  | Intervention (Minicard) | Control (ABIM Mini-CEX Form) | OR (CI)† | p-value |
|---|---|---|---|---|
| **% Correct Overall** | 85% | 73% | 2.13 (1.32, 3.44) | .002 |
| **% Correct of Passing Scenarios** | 73% | 95% | .145 (.054, .392) | <.001 |
| **% Correct of Failing Scenarios** | 96% | 52% | 25.35 (9.12, 70.46) | <.001 |

| TABLE 2: Differences Between Total Intended Feedback and Total Observation Scores | | | |
|---|---|---|---|
| **Total # of Items** | **Intervention (Minicard)** **Mean (SD)** | **Control (ABIM Mini-CEX Form)** **Mean (SD)** | **Cohen's d (95% CI)** |
| **Intended Feedback** %Minimum % Observational %Action | **4.68 (2.40)** 18 (23) % 59 (32) % 24 (30) % | **5.69 (2.50)** 18 (22) % 57 (30) % 26 (30) % | .63 (.17, 1.08) |
| **Observations** %Minimum % Observational %Action | **10.84 (4.87)** 14 (16) % 74 (21) % 12 (17) % | **5.77 (2.54)** 17 (20) % 57 (30) % 26 (30) % | 1.76 (1.23, 2.28) |

agreement improved from low to moderate with the new form (Fleiss' kappa, 0.299 for Mini-CEX versus 0.525 for Minicard).

Faculty members participating in a workshop at the 2008 Association of Program Directors in Internal Medicine Spring Meeting in New Orleans, LA, were given the same 10-minute introduction as the intervention group followed by a small-group practice session using the Minicard on three of the vignettes seen in the study. Participants then reviewed the raw data from the study, including the scores from the Minicard and the Mini-CEX on the vignettes they had just watched. Participants were given copies of the training video and the vignettes as well as an electronic copy of the Minicard on a CD-ROM. Faculty participants noted in post-workshop surveys that program directors clearly have a need for specific, direct feedback from their faculty and that the Minicard showed promise as a tool that is both feasible for busy faculty use and able to increase specific observations of resident performance.

The program leadership at two of the study sites, Lankenau Hospital and Reading Hospital, created faculty development initiatives centered on the Minicard training video and group practice sessions and require faculty to routinely use the Minicard. These faculty development initiatives and incentives resulted in at least doubling the number of documented observations in a year at both institutions, with one site averaging 21 observations per resident annually. The increased number of direct observations has resulted in prompt identification of skills deficiencies and remediation. Reading Hospital incorporated

these forms into standardized patient video self-assessment and portfolio initiatives.

Programs interested in the materials from the study may download the copyrighted materials at http://readingdvd. imsumma.org or may request more information at donatoa@ readinghospital.org. At the time of publication, the results of the prospective trial of the Minicard had been accepted to *Medical Education*, with publication expected in fall 2008. ↻

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# Health Care Reform: What Does the Medical Community Propose?

The last three issues of *Academic Internal Medicine Insight* have highlighted proposals to reform the US health care system. State reform efforts, new approaches to the delivery and coordination of care, and the next president of the United States all present proposals for rectifying the growing number of uninsured Americans, stemming the increase in health care costs, and improving the quality of patient care. This article addresses these issues through the positions of several medical organizations for repairing the nation's broken heath care system.

## AAMC: Principles for US Health Care Reform

In October 2008, the Association of American Medical Colleges (AAMC) released its revised *Principles for US Health Care Reform,* stating any health care system must achieve six goals:

- Affordable, transportable, and continuous health care coverage that combines the best of public and private systems and is available to all.
- A health care delivery system that supports health promotion and disease prevention, while providing high quality and cost-effective diagnosis and treatment as well as palliative care.
- A health care financing system that is sustainable, equitable, explicit, and accountable as well as promotes efficiency and quality.
- A safety net to maintain existing health care programs until "superior alternatives" can fully replace them.
- An adequate workforce to reflect the population and its health care needs.
- Adequate and stable support for health research, technology development, and the provision of necessary specialized services recognized and provided (1).

These principles reflect an understanding that no single plan or reform is a panacea for the nation's problems with health care. AAMC cautions, however, that any changes to the system should not focus solely on the financing and delivery of health care (2). Health reform measures must also protect and strengthen the education of physicians and other members of the health care workforce, the medical research enterprise, and the quality of patient care.

A January 2008 commentary in *Modern Healthcare*, by AAMC President and Chief Executive Officer Darrell C. Kirch, MD, reaffirms AAMC's support of affordable and accessible health care for all Americans, but warns against the bitter political disputes that will most certainly preside over the multi-faced health care reform discussion. "If we are to climb out of this trap and find the political high ground, we must bring equal energy to changing multiple aspects of both our financial model and clinical care model," stated Dr. Kirch.

## ACP: Achieving Affordable Health Insurance Coverage

In 2008, the American College of Physicians (ACP) published its position paper on health care reform, *Achieving Affordable Health Insurance Coverage for All Within Seven Years: A Proposal from America's Internists*. The paper, based largely on a 2002 ACP position paper of the same title, offers a framework for reform policies that would "enable all Americans to have access to affordable health insurance coverage within the seven years" (3). In accordance with AAMC, ACP believes complete health care reform should coordinate changes in both health care financing and the delivery of care.

To reorganize health care financing, ACP recommends that federal and state governments consider adopting either a single-payer system or a pluralistic system that would allow individuals to purchase private supplemental insurance. ACP also supports state expansion of Medicaid and State Children's Health Insurance Program (SCHIP) coverage and providing eligible individuals with tax credits to buy coverage through arrangements modeled after the Federal Employees Health Benefits Program. Perhaps most notably, ACP proposes that once changes are made to ensure health insurance is made more affordable and available, the federal or state governments should apply mandates—individual, employer, or automatic enrollment—to guarantee all individuals participate in a plan (3).

Like AAMC, ACP also makes the case that expanding health insurance is only one element of necessary reform. Adopting policies that establish high-quality, coordinated care—such as the tenets of the ACP-endorsed patient-centered medical home—and reducing health care disparities based on race, ethnicity, sex, and gender should also be considered in the reform debate (4).

## AMA: Voice for the Uninsured

Through its national "Voice for the Uninsured" campaign, the American Medical Association (AMA) has taken its health care reform proposal to the public. The AMA proposal is based on three pillars: "subsidies for those who most need financial assistance obtaining health insurance;" "choice for individuals and families in what health plan to join;" and "fair rules of the game that include protections for high-risk patients and greater individual responsibility" (5).

The AMA plan proposes the use of earmarked tax credits or vouchers for health insurance, particularly for lower income levels. In the current system, AMA estimates the government

already provides more than $125 billion annually in financial assistance for people to buy private insurance (5). However, according to AMA, this spending also includes an employee income tax break on job-based insurance, which benefits individuals at higher income levels. AMA claims shifting these funds to tax credits and vouchers for lower-income individuals would reduce the number of uninsured and "improve fairness in the health care system." AMA joins its fellow members of the Health Coverage Coalition for the Uninsured (HCCU) in support of these tax credits. Flexibility and more streamlined market regulations are also key components of AMA's plan.

## AHA

The American Hospital Association (AHA), another member of HCCU, also supports providing tax credits to allow low-income families to purchase insurance as well as expanding public and private coverage through Medicaid and SCHIP (6). To drive down health care costs, AHA also supports greater coordination of health care as well as expanded efforts to promote comparative effectiveness research that is publically available to clinicians, purchasers, and patients (7).

These reform recommendations have not fallen on deaf ears in Congress. Beginning in May 2008, the Senate Committee on Finance held a series of health care reform-themed hearings to address many of these concerns. Witnesses included former Secretaries of Health and Human Services Donna E. Shalala, PhD, and Tommy G. Thompson as well as representatives from health policy research organizations, coalitions, economists, and insurers. Hearing discussions centered on health care quality, delivery system reform, and insurance market reform will continue to remain a high priority for the committee as well

as Congress in 2009. In a committee press release, committee chair Max Baucus (D-MT) stated: "The crisis in America's health care system is growing and Americans are ready for reform. The climate will be right for change next year. I intend for the Finance Committee to lead."

In 2009, the Alliance for Academic Internal Medicine (AAIM) will release a position paper on physician workforce changes necessary to implement health care reform. In addition, AAIM will look at how certain reform proposals may impact elements of the academic medicine enterprise including physician training and research.

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# Alliance Groups Respond to Proposed Changes to USMLE

high-stakes connection between performance on USMLE Step 1 and competitive residencies (totally perpetuated by program directors) forces medical schools to pervert curricular reform to this test. There is no way USMLE Step 1 in its current form is a friend of the patient, student, or thoughtful program director.

The Clerkship Directors in Internal Medicine (CDIM) implies that the impetus to reform USMLE is really to influence curricular reform. CDIM, with its close interactions with students and familiarity with medical school curricula, comes close to acknowledging that USMLE reform might actually be the solution and not the problem. The association falls short of that acknowledgement and also seems overcome with fear that somehow the laudable intention of better integrating basic and clinical science will not be realized because there are no assurances. Assurances? Is that really the attitude that should be promoted by educators who embrace creativity and innovation?

What AAIM really needs is to better familiarize its leadership with some of the exciting, innovative, creative,

and thoughtful educational approaches the new medical schools both in the United States and around the world have embraced as they design the curricula of the future to address the shortcomings of the past. With that, we believe AAIM will be poised to speak with a comprehensive and unified voice, representing the preeminent leaders in education, and be part of the solution in unifying the continuum of education.

Respectfully,

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# The New York State Near Miss Registry

A famous Lucian Leape, MD, graph compares number of fatalities to number of uses of different industries (1). Without defining "uses" and how fatalities are measured, the graph places chemical manufacturing, commercial air flight, and nuclear power on one end of a spectrum marked safe and ultrasafe while health care shares the dangerous end of the spectrum with bungee jumping and mountain climbing.

Health care is a dangerous business though it cannot afford to be that way. The system is beginning a search for what Paul Barach, MD, calls "highly reliable organizations" for little-known diseases and "ultrasafe systems" for well-known diseases (2). Highly reliable organizations use experts to extend the boundaries of their own abilities but rely on excellent communications, teamwork, and systems to ensure consistency and compliance with established protocols in cases where established protocols exist.

A prerequisite to safe health care is understanding the conditions that lead to medical error. One way to study the origins of error is to evaluate adverse events such as transfers from a regular floor to an intensive care unit, sudden drops in hemoglobin or renal function, unexpected deaths, and other "trigger events." Although these investigations are informative, they depend on adverse events and are skewed because it is difficult for physicians to admit errors.

Another way of looking at medical error is studying events that could have happened but ultimately, did not occur. These events are commonly called "near misses." They represent a vast pool of erroneous actions that were detected and corrected by whatever redundant systems were in place. Near misses would ordinarily never be reported because they are non-events by definition. James Reason's Swiss Cheese Model of Errors (**Figure 1**) depicts this concept: hazards are frequently blocked (near misses) by porous barriers (redundant systems). When the holes line up, however, injury happens (3).

Studying near misses is a large part of how the airline industry, chemical manufacturing, and nuclear power attained their lofty safety records. Many believe that if medicine is to ever become safe and reliable, studying near misses is necessary.

At the 2004 Association of Program Directors in Internal Medicine New York Special Interest Group Meeting, a participant suggested collecting the near misses of all internal medicine residents in New York to create a database of medical errors.

Within one year, with the help of Linda Lambert, Executive Director of the New York Chapter of the American College of Physicians (NY ACP), five programs (St. Luke's-Roosevelt Hospital Center, Lenox Hill Hospital, Staten Island University Hospital, New York University Downtown Hospital, and St. John's Episcopal Hospital-South Shore) planned and executed a pilot study of an online survey tool. The pilot showed that it was possible to collect one incident for every 10 beds in a six-month period. We proved that residents would speak up if it was safe and anonymous.



Figure 1: Swiss Cheese Model of Errors (3)
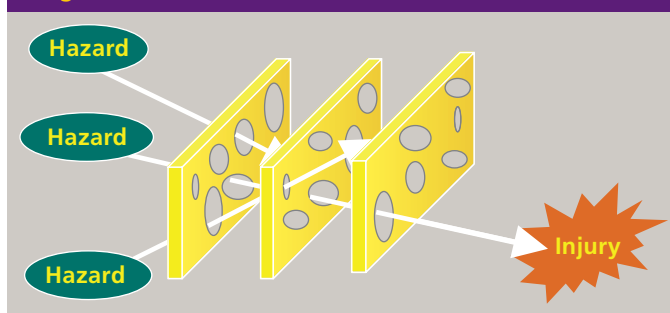
New York public health law requires the state Department of Health to partner with voluntary organizations that collect information on otherwise nonreportable medical errors (near misses). As the pilot was ending, John Morley, MD, of the Medical Director of the New York State Department of Health's Office of Health Systems Management approached NY ACP to fund the design of a web-based tool that would reliably allow only internal medicine residents in New York to anonymously enter near miss data. The Department of Health agreed to fund the project at $340,000 over three years; 65 teaching hospitals in the state joined the effort.

The group expanded and consolidated its efforts with a quality improvement expert, Mary Donnelly, at the NY ACP office in Albany coordinating the project. Shadi S. Saleh, PhD, a bio-statistician, and Steve E. Szebenyi, MD, a patient safety expert from the Albany School of Public Health were invited to join as well. An advisory group was formed with representation from two large hospital associations in New York (Hospital Association of New York State and the Greater New York Hospital Association), the nation's largest housestaff union (Committee for Interns and Residents), other members of the original pilot group, and some new physicians, residents, and other concerned individuals.

Thousands of unique login codes were created and randomly distributed to internal medicine program directors who then randomly distributed the codes to their residents to ensure anonymity of the individual user. The project maintains that only a risk-free anonymous reporting system is capable of capturing this sensitive data.

The New York State Near Miss Registry went live July 1, 2007, at www.nearmiss.org. Of the 65 teaching hospitals in New York, more than 40 have trained or have agreed to train their residents in the recognition of latent error and how to access the website and enter an event. To date, more than 70 events have been collected.

It is important to realize that every entry on the registry provides at least two pieces of information. First, the entry reveals systemic weaknesses and what errors might have occurred. Second, it illuminates the barrier that detected

and neutralized those errors. The analysis of these events may show the most important pitfalls to avoid as well as the strongest barriers to errors which must be strengthened.

The registry has already taught a number of lessons. For instance, computerized physician order entry has allowed a new family of "wrong patient" medical errors to arise, particularly in busy hospitals where the computers are at the nurses' station. However, medication reconciliation at multiple levels (nursing, pharmacy, and when teams pass their patients off between shifts) truly saves lives.

The Near Miss Project has advantages for all involved. For program directors, the project provides a guided tour of medical errors, human factors, and system-based practice in the form of Microsoft Power Point presentations complete with lecture notes to train residents. For hospital chief medical officers and safety officers, the project distributes a quarterly newsletter to summarize the registry entry and offers tips for making hospitals and clinics safer. For the project developers, the registry is the source material for scholarly papers.

Residents get quite a bit for their participation in the project. In addition to learning about human factors, medical errors, and prevention, residents who contribute to the registry have an opportunity to print out a certificate at the conclusion of their entry. The certificate does not indicate what was entered but congratulates the resident for demonstrating competence in systems-based practice. The resident can sign and date the certificate and include it in their academic portfolio as proof of their competence in systems-based practice.

The Near Miss Registry is the first state-wide attempt to apply anonymous, risk-free reporting of latent errors to a medical setting. Ideally, the project will open the registry up to other departments, other roles, and other parts of the country. In the meantime, the registry will continue to collect events that could have hurt patients and barriers that kept patients safe. ◌

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# Job Satisfaction of US Medical School Faculty with a Focus on Internal Medicine Departments

Medical schools may also want to address departmental differences in job satisfaction for clinical faculty. Though faculty satisfaction in internal medicine departments may differ by general internists and internal medicine subspecialists, as suggested by Wetterneck et al. (10), these survey results reflect some notable differences in levels of satisfaction between internal medicine faculty and other clinical faculty. In particular, internal medicine departments and affiliated clinical practice locations may want to improve communication lines between and among faculty, administrators, and clinical practice staff in order to create environments that maximize faculty vitality and satisfaction. ◌

i All degree types of clinical faculty were included in these analyses. In separate analyses, it was determined that Ph.D. clinical faculty did not skew the results for clinical faculty; the same significant differences existed between internal medicine and other clinical faculty when excluding that group, with only one exception.

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# COMLEX-USMLE Score Correlation: Are they Comparable?

## Background

**A**llopathic residency directors may consider Comprehensive Osteopathic Medical Licensing Examination (COMLEX-USA) scores as a substitute for US Medical Licensing Examination (USMLE) scores in hiring decisions. The number of osteopathic physicians-in-training in allopathic residency training programs has risen from 3,333 (3.4%) in 1995–1996 (1) to 6,474 (6.3%) in 2005–2006 (2). The number of osteopathic students taking the USMLE has remained below the number enrolling in Accreditation Council for Graduate Medical Education (ACGME) residencies, with 1,325 total osteopaths taking the USMLE Step 1 in 2006 (3). This discrepancy suggests the majority of osteopathic residents in ACGME programs have taken COMLEX-USA in lieu of USMLE. However, current evidence for correlation of USMLE and COMLEX-USA scores is limited. A single osteopathic medical school compared COMLEX-USA and USMLE scores for their students who sat for both exams (4). The study showed score correlation, but mean and standard deviations were not reported; it remains uncertain whether the findings can be generalized to students from other osteopathic schools.

USMLE and COMLEX-USA are similarly structured with three examination levels, but are written and implemented by separate oversight bodies. USMLE Step 1 and COMLEX-USA Level 1 assess scientific knowledge while USMLE Step 2 CK and COMLEX-USA Level 2 CE assess clinical knowledge. Individually, USMLE and COMLEX-USA are reliable and predictive. COMLEX-USA scores correlate with medical school grade point average (5–8) and USMLE scores correlate with both medical school and residency performance (9–15).

The USMLE three-digit passing score is periodically adjusted. The USMLE Step 1 passing score was raised to 182 and 185 in 2001 and 2007, respectively; the Step 2 passing score was 174, 182, and 184 in 2000, 2003, and 2007, respectively (3). While the passing score is periodically adjusted, scores themselves are intended to be equivalent over time, such that the same three-digit result indicates equivalent performance on each administration of that step. Mean USMLE scores vary between approximately 210 and 220, with a standard deviation of approximately 20 (See **Table 1**). COMLEX-USA Level 1 and Level 2 CE mean three-digit scores are 500, regardless of the date of administration. Standard deviations from 2001 to 2006 were 71 to 79 for Level 1 and 73 to 83 for

Level 1 (16). A score of 400 is set as passing for all COMLEX-USA administration dates.

The study objective was to compare COMLEX-USA and USMLE scores for osteopathic students who reported both scores when applying to internal medicine residency programs to determine the correlation between scores from both exams and to generate a prediction model for estimating USMLE scores from COMLEX-USA scores based on linear regression.

## Methods

A cross-sectional survey study of paired COMLEX-USA and USMLE scores was designed. All data was collected anonymously, using an electronic data collection tool to extract paired COMLEX-USA and USMLE data from individual residency program databases derived from the Electronic Residency Application Service. The Association of Program Directors in Internal Medicine was recruited to participate in data collection. To maintain anonymity while providing a means to identify duplicate applicant data, applicant identification numbers were passed through an automated "hash function" to generate replacement identification strings. Institutions returned anonymous paired scores with identification strings to the investigators for pooled analysis. The hash function scrambled identical applicant numbers into unique strings, allowing exclusion of duplicates from the final data. For applicants who reported multiple attempts for one or both exams, we selected a single pair of scores with the closest examination dates. Scores reported from examination years 2001–2006 during application years 2004–2007 were analyzed. The USMLE Step 1 passing score for these examination years was 182 and the Step 2 passing score ranged from 174 to 182. Mean and standard deviation of reported scores were compared with reported national standards. Linear regression was used to calculate a prediction formula for USMLE score based on COMLEX-USA score. Pearson's correlation was used to quantify the association between paired USMLE and COMLEX-USA scores for both Step 1 and Step 2.

## Results

Twenty three residency programs participated in data collection. After removal of duplicate applicant data from 1,055 collected applicant scores, 672 unique applicants

| TABLE 1: Mean and Standard Deviation of Paired Study Data Compared with Reported License Examination National Data | | | | | | | |
|---|---|---|---|---|---|---|---|
| **COMLEX-USA** | | | | **USMLE** | | | |
| **Level 1** | | **Level 2** | | **Step 1** | | **Step 2** | |
| Study | Reported | Study | Reported | Study | Reported | Study | Reported |
| **Mean** 560 | 500 | 561 | 500 | 209 | 210–220 | 215 | 210–220 |
| **SD** 68 | 71–79 | 73 | 73–83 | 17 | 20 | 19 | 20 |

remained. Following elimination of data reported from exams taken before 2001, the data set produced 588 unique Step 1 pairs and 241 unique Step 2 pairs. Scores for multiple examination attempts of a single licensing exam (due to initial examination failure) were reported by 3% of the applicants reporting Step 1 pairs and 2% of the applicants reporting Step 2 pairs, resulting in selection of closest date paired scores for those applicants.

Table 1 presents the observed mean and standard deviation for paired COMLEX-USA and USMLE data in this study compared with the mean and standard deviation for each exam, as reported by each examination's oversight body. Pearson's coefficients demonstrated high degrees of correlation: 0.85 for Step 1 scores and 0.79 for Step 2 scores. Scatterplots of paired COMLEX and USMLE Step 1 and Step 2 scores reveal a positive, linear relationship between the two variables (Figure 1).

For the studied population of osteopathic applicants to internal medicine residency programs who have reported scores on both exams, a strong correlation exists between USMLE and COMLEX-USA scores. The relationship between COMLEX-USA and USMLE based on the joint distribution plots for both Step 1 and 2 is nearly bivariate normal. Based on linear regression, a COMLEX-USA Level 1 passing score of 400 has correlated with a USMLE Step 1 score of 174, but the 95% confidence interval is wide at 156–192. A COMLEX-USA Level 2 CE passing score of 400 has correlated with a USMLE Step 2 CK score of 182, with a similarly relevant wide 95% confidence interval of 158–206.

## Discussion:

Despite the significant strength of the correlation found in this study, variations seen in individual data points may be large enough to be educationally significant and interpretation of individual scores must be approached with caution. The strength of correlation does not imply equivalence of passing score thresholds.

The limitations of this data set are important. Because the USMLE passing score threshold is periodically adjusted and the COMLEX-USA is fixed at 400, these historic data cannot be used reliably for prospective score prediction. Also, the data was derived from a subpopulation of osteopathic students who took both the USMLE and the COMLEX-USA exams, and may not be fully generalizable to osteopathic students taking solely the COMLEX-USA exam. Indeed, our data suggest Step 2 passing scores may be roughly equivalent, but historic USMLE and COMLEX-USA Step 2 data demonstrate an absolute difference of approximately 12% in the pass rate for osteopathic students. If passing scores do correlate for Step 2, then the osteopathic pass rate for first takers of the COMLEX-USA Level 2 CE should be approximately 75%, the osteopathic pass rate on the USMLE Step 2 CK. The recent COMLEX-USA



FIGURE 1: Mean and Standard Deviation of Paired Study Data Compared with Reported License Examination National Data
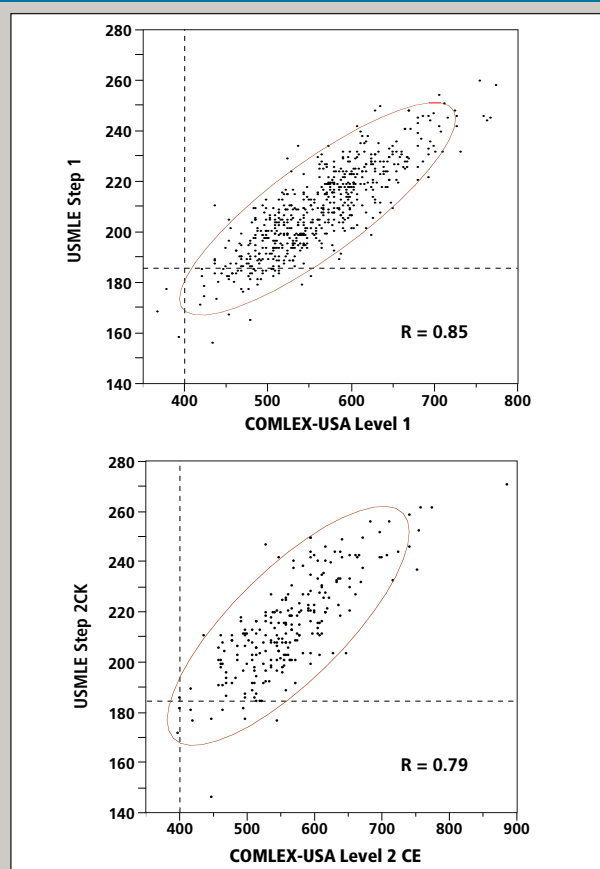
Legend: Plots showing the relationship between 3-digit scores for COMLEX-USA Level 1 and USMLE Step 1 and COMLEX-USA Level 2 CE and USMLE Step 2CK. Score pairs for each individual are plotted along with a Pearson's correlation. Current USMLE and COMLEX passing threshold scores are noted by dashed lines.

pass rate computed from National Board of Osteopathic Medical Examiners 2005–2006 data (17) is 89%, consistent with reported standard deviations of 73 to 83 around a mean of 500. Therefore, the sample may be skewed toward individuals who outperform their osteopathic peers on USMLE.

In summary, while scores for individual applicants taking only the COMLEX-USA must be evaluated in the context of this study's limitations, the overall correlations of the current exams is well supported. Physician self-regulation of licensure requires continual scrutiny of evaluation processes. As the number of osteopathic applicants to allopathic training programs continues to rise and as USMLE policies and formats are adjusted, continued assessment of USMLE and COMLEX-USA correlations are advisable.

# Resident Mentoring: A Key to Culture Change

Today's educational atmosphere seems dominated by duty hour regulations, evolving definitions of professionalism, and increasing emphasis on work-life balance.

While many of these changes are both positive and necessary, years spent in residency seem at risk of being redefined as a "job" rather than as a once-in-a-lifetime educational experience. Given these circumstances, how can internal medicine residency program directors continue to foster the culture of excellence they desire in their programs? Perhaps the key is to refocus efforts at the level of the individual residents in the form of quality mentoring. Indeed, the new program requirements for internal medicine, effective July 2009, reflect the necessity of mentorship of residents. The requirements state program director must "oversee the development of an effective resident advising program," and faculty will be expected to "provide advising for residents in the areas of educational goal setting, career planning, patient care, and scholarship."

However, the reality is that mentoring takes time—program directors' most valuable and limited resource. Most programs have too many residents for this responsibility to be handled solely by the program director. Three years ago, the University of Louisville School of Medicine internal medicine residency program faced an organizational opportunity. Two new associate program directors (APDs) joined a veteran program director and APD; the group seized this chance to tackle the issue of culture change by raising residents' academic expectations of themselves, identifying struggling learners earlier to intervene appropriately, improving medical knowledge acquisition based on objective measures (board passage rate, in-training examination scores), and creating a positive feedback loop by attracting academically stronger students into the program.

The reorganization itself was fairly straightforward but required thoughtful preparation. The former system had been loosely defined, and most resident mentoring fell to the program director. As a starting point, APDs evaluated their own skills and interests and determined a matching area of program administration on which to focus. One APD, skilled at navigating and networking in health care systems, was placed in charge of oversight and integration of residency goals at the program's multiple education sites. Another APD took on curriculum issues and ambulatory care. Lastly, one detail-oriented APD took charge of scheduling and administering other logistical aspects of the program. Increased efficiency provided the time necessary to implement the desired changes to the process of resident mentoring. The program director's role also changed. She began to serve as an advisor to APDs and as a consultant on all significant issues concerning residents. She directly engaged residents whenever needed but remained readily accessible upon the request of residents. The result was more time available for the program director to plan for the future and attend to the issues and duties unique to her role. The program director and all APDs met on a weekly basis.

A system that promotes improved resident mentoring was achieved by dividing 60 categorical residents into "teams," consisting of an equal number of postgraduate year(PGY)-1, -2, and -3 individuals. The residents were purposefully distributed by the program director based on past and anticipated academic performance. One APD served as the primary advisor for each team and met formally on a semi-annual basis with each of the 20 residents, though informal meetings occurred on a more frequent basis. The APD also continuously tracked the academic progress of the team via an online evaluation system. Because of the early and intense involvement, the APD often proactively intervened before formal remediation became needful, which resulted in improved time management since early intervention often requires less intensive involvement and time commitment than remediation. In addition, the APDs provided provide individualized mentorship to each resident: career and fellowship advising, critiques of personal statements and curricula vitae (CVs), and mock job interviews.

This new system was not without implementation challenges. Residents in the program at the time of change resisted the new organization, fearing loss of contact with the program director. Residents did not value group-learning activities, which the program administration had initially identified as a key task of the teams. APDs struggled with the new degree of autonomy while the program director had to cope with delegating the task of mentoring. In addition, an initial investment of the program director's time was necessary to develop the tools and skills needed to assist APDs in their new roles. The APDs developed instructions for residents on how to lead a clinical team, distributed tips for writing a CV, and created a self-reflection form based on the core competencies. Tools the APDs created for their own use included an outline of how to diagnose and treat the learner for medical knowledge remediation and an individualized education agreement to help delineate expectations and growth tasks for at-risk individuals. Throughout this transition, the collaborative problem solving accomplished at weekly meetings was vital though it was challenging to carve out protected time.

Without an increase in time or other resources, was this reorganization of resident mentoring successful in its mission to bring about culture change in the internal medicine residency program? Several measures point toward a palpable culture change.

The team concept effectively individualized the mentoring process. At-risk residents are identified much earlier in their training, sometimes within the first three months of residency; APDs are able to address problems as they arise. Middle-tier residents, easily lost in the shuffle of a less deliberate system, now receive high-quality mentoring along with academically superior and at-risk residents. Residents have embraced the higher expectations and increased level of personal accountability, and resident-initiated board preparation occurs

earlier in their training. Fewer adverse evaluations are noted; fewer residents require intense remediation. Recruitment of academically strong residents has notably improved, as evidenced by the increase of median and mean US Medical Licensing Examination Step 2 scores of the department's matched PGY 1 residents since implementation of these changes (by 21 and 30 points, respectively). The cumulative percentile in-training exam score for the program increased 21 points; the board passage rate for the first group of residents to graduate after having two years of intensive mentoring was 100% (increased from 85%). Certainly, future data remains to be seen, but all indicators to date have been positive. In addition, despite historically poor retention of faculty in the APD positions, the program leadership has stabilized. This retention may be attributed to assignment of responsibilities that utilize the individuals' strengths and the satisfaction that comes from developing meaningful mentoring relationships.

Culture change toward excellence in a residency program can seem nebulous and overwhelming–even unattainable. The changes in this residency program provide one example of a successful back-to-basics approach to resident mentoring congruent with expectations in the program requirements. High-quality, deliberate mentoring may be a key to combating the sometimes negative influences and pressures on resident physicians in today's educational environment. ↻

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# COMLEX-USMLE Score Correlation: Are they Comparable?

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# 2008 APDIM Distinguished Medical Educator Award

The Association of Program Directors in Internal Medicine (APDIM) presented the 2008 APDIM Distinguished Medical Educator Award to Marshall A. Wolf, MD, during the association's fall meeting, held October 30–November 2, 2008, in Lake Buena Vista, FL. The APDIM Distinguished Medical Educator Award recognizes an individual or a team for outstanding contributions to the field of graduate medical education (GME). Dr. Wolf is the first recipient of the award.

Dr. Wolf was recognized for his profound effect on the role of the internal medicine program director, using his extraordinary teaching, clinical, and mentoring skills to change the face of GME. Described by his nominators as "one of the finest medical educators of our time," Dr. Wolf "created a model of a successful medical educator at the GME level, paving the way for others who now view the position of program director as a destination, rather than a transient way station on the way to another job."

In addition to his many innovations that are now prevalent in medical education, Dr. Wolf's colleagues declared that there are few physicians alive "who have had a greater impact on the training of current and future leaders of medicine in the United States and many other countries."

Dr. Wolf is currently the Program Director Emeritus and Professor of Medicine at Harvard Medical School Brigham and Women's Hospital. He earned his MD at Harvard Medical School, completed his residency in internal medicine at Brigham and Women's Hospital, completed his training in cardiology at the West Roxbury Department of Veterans Affairs Hospital, and returned to Brigham and Women's Hospital for three additional years of cardiology fellowship.

For more information about the APDIM Distinguished Medical Educator Award, please visit www.im.org.

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# 2008 CDIM Award Recipients Honored in Florida

The Clerkship Directors in Internal Medicine (CDIM) presented the 2008 CDIM Awards for Excellence during the association's national meeting, held October 30–November 2, 2008, in Lake Buena Vista, FL. The awards recognize outstanding contributions by CDIM members in the areas of educational programs, educational research, and service to the association.

Heather E. Harrell, MD, received the 2008 CDIM Louis N. Pangaro, MD, Educational Program Development Award for her work in the development of educational portfolios. When Dr. Harrell became clerkship director in 2002, she introduced a new portfolio-based curriculum, which she continues to develop and share with other educators at national meetings. In addition to presenting her program at CDIM national meetings, Dr. Harrell has shared her work with colleagues in the Society for General Internal Medicine, the Generalists in Medical Education, and the Association of American Medical Colleges Southern Group on Educational Affairs.

Dr. Harrell is Clinical Associate Professor of Medicine, Medicine Clerkship Director, and Director of Fourth Year Programs at the University of Florida in Gainesville. She earned her MD with honors from University of Florida and completed her residency at Harvard Medical School Beth Israel Deaconess Medical Center.

Liselotte N. Dyrbye, MD, received the 2008 CDIM Charles H. Griffith, III, MD, Educational Research Award for 2008. The award recognizes Dr. Dyrbye for her work studying physicians-in-training and faculty quality of life and the effect of their well-being on competence, empathy, and specialty choice.

Dr. Dyrbye is currently Assistant Professor of Medicine at Mayo Clinic College of Medicine. She also serves as Director of the Internal Medicine Preclinical Course and Director of an MD-PhD Re-Entry Curriculum. She earned her MD from University of Wisconsin School of Medicine and Public Health and completed her residency at University of Washington School of Medicine.

D. Michael Elnicki, MD, received the 2008 CDIM Ruth-Marie E. Fincher, MD, Service Award for his participation in and contributions to CDIM throughout his years of membership. In addition to serving in various leadership roles on the CDIM Council from 1992–2006, Dr. Elnicki was committee chair of both the CDIM Publications Committee (1994–1998) and the CDIM Research Committee (1998–2000).

Dr. Elnicki is currently Professor and Chief of the University of Pittsburgh School of Medicine's General Internal Medicine Section at Shadyside Hospital. Dr. Elnicki earned his MD from University of Pittsburgh School of Medicine and completed his residency at University of Rochester School of Medicine and Dentistry and his fellowship training at University of North Carolina School of Medicine.

Sue A. Morschhauser received the 2008 CDIM Linda J. Marts Administrator Service Award. A CDIM member since 1997, Ms. Morschhauser received the award for contributions to CDIM over the years. Ms. Morschhauser was instrumental in establishing clerkship administrator membership in CDIM, and her work helped define the role of the administrator as a professional-level medical education manager. Ms. Morschhauser has served on a number of CDIM committees and task forces,

including the Publications Committee, Communications Committee, and the Administrator Certification Task Force.

Ms. Morschhauser is currently the Education Program Manager for third- and fourth-year medical students at University of Wisconsin School of Medicine and Public Health, where she has worked since 1979. She received her bachelor's degree with honors in business from Concordia University.

A complete list of previous award recipients is available on the CDIM website at www.im.org.

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# ASP Announces 2008 T. Franklin Williams Scholars

The Association of Specialty Professors (ASP) is pleased to announce the seventh class of T. Franklin Williams Scholars. These scholars are recipients of two- and four-year career development awards funded by a generous grant from the Atlantic Philanthropies (USA) Inc., supported by the John A. Hartford Foundation, and co-sponsored by 12 partnering internal medicine specialty societies. The 12 new investigators funded under this initiative will join the 52 previously announced T. Franklin Williams Scholars to achieve the program goal of integrating geriatrics into the specialties of internal medicine (**Table 1**).

T. Franklin Williams Scholars conduct a research project and pursue a career development plan focused on a geriatric aspect of their specialty. Recipients must meet several criteria to be eligible for the award, including completion of an internal medicine specialty fellowship and dedication of 75% of their professional effort to medical research. The program provides recipients awards of $50,000 to $75,000 per year to support the early stages of their academic careers.

Awards for the 2009 T. Franklin Williams Scholars grant cycle are available with the same partners as 2008 (**Table 2**).

Please contact ASP Project Administrator Erika D. Tarver at (202) 861–9351 or etarver@im.org for more information about the T. Franklin Williams Scholars Program.

### Table 2: 2009 ASP T. Franklin Williams Scholars Partners

- American Academy of Allergy, Asthma, and Immunology
- American College of Rheumatology Research and Education Foundation
- American Diabetes Association
- American Gastroenterological Association Foundation
- American Geriatrics Society
- American Society of Clinical Oncology
- American Society of Hematology
- American Society of Nephrology
- CHEST Foundation of the American College of Chest Physicians
- Infectious Diseases Society of America
- Society of General Internal Medicine and Association of Chiefs of General Internal Medicine
- Society of Geriatric Cardiology and the American Heart Association

### TABLE 1: The Seventh Class of T. Franklin Williams Scholars

**Steven G. Coca, DO**
Yale University School of Medicine
*Effect of Acute Kidney Injury on Long-Term Kidney Function in Elderly Patients*
American Society of Nephrology-ASP Junior Development Award in Geriatric Nephrology

**Heidi D. Klepin, MD**
Wake Forest University School of Medicine
*Functional and Cognitive Assessment in Older Adults with Acute Myelogenous Leukemia*
American Society of Hematology-ASP Geriatric Hematology Research Award

**Elizabeth Haney, MD**
Oregon Health and Science University School of Medicine
*Bone Turnover and Bone Loss Among Older Selective Serotonin Reuptake Inhibitor Users*
Society of General Internal Medicine-Association of Chiefs of General Internal Medicine-ASP T. Franklin Williams Scholars Award in Geriatrics

**Amie L. Meditz, MD**
**University of Colorado School of Medicine**
*Influence of Sex Steroids and Aging on HIV-1Chemokine Coreceptor Expression in Women*
**ASP-Infectious Diseases Society of America Young Investigator Award in Geriatrics**

**Jeffrey C. Horowitz, MD**
University of Michigan Medical School
*Myofibroblast Fate Determination by Extracellular Matrix Evaluations*
ASP-CHEST Foundation of the American College of Chest Physicians Geriatric Development Research Award

**Lisa M. Nanovic, DO**
University of Wisconsin School of Medicine and Public Health
*Effect of Angiotensin-Converting Enzyme Inhibitors on Aortic Stiffness in Elderly Patients with Chronic Kidney Disease*
American Society of Nephrology-ASP Junior Development Award in Geriatric Nephrology

**Kim M. Huffman, MD, PhD**
Duke University School of Medicine
*Mechanism of Insulin Resistance in Older Individuals with Rheumatoid Arthritis*
American College of Rheumatology Research and Education Foundation-ASP Junior Career Development Award in Geriatric Medicine

**Richard J. Saad, MD**
University of Michigan Medical School
*The Differences in Physiologic Mechanisms Underlying Chronic Constipation in Elderly Versus Younger Adults with Constipation*
American Gastroenterological Association Foundation-Sucampo-ASP Designated Research Award in Geriatric Gastroenterology

**Joachim H. Ix, MD**
University of California, San Diego, School of Medicine
*Fetuin-A, Adiposity, and Incident Diabetes in Older Persons*
American Diabetes Association-ASP Young Investigator Innovation Award in Geriatric Endocrinology

**Carla R. Scanzello, MD, PhD**
Rush Medical College of Rush University
*Age-Associated Matrix Alteration and Inflammation in Idiopathic Knee Osteoarthritis*
American College of Rheumatology Research and Education Foundation-ASP Junior Career Development Award in Geriatric Medicine

**Shirley F. Jones, MD**
Texas A&M Health Science Center
*Understanding the Relationship between Sleep, Circadian Rhythm, and Intensive Care Unit Delirium*
ASP-CHEST Foundation of the American College of Chest Physicians Geriatric Development Research Award

**George C. Wang, MD**
Johns Hopkins University School of Medicine
*Immunology Dysregulations and Inflammation in the Pathogenesis of Frailty of Older Age: The Role of Chronic Cytomegalovirus Infection*
ASP-American Geriatrics Society Foundation for Health in Aging Award

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