



Tomorrow's Doctors, Tomorrow's Cures®

Developing Team Competencies Through the Continuum of Medical Education

Learn

Serve

Lead

2016 AIAMC Annual Meeting
Tucson, AZ

Darrell G. Kirch, MD
President and CEO, AAMC
March 31, 2016



Association of
American Medical Colleges

“Teams” Across the Full Continuum for Medical Education

Learning



Premedical



Medical School

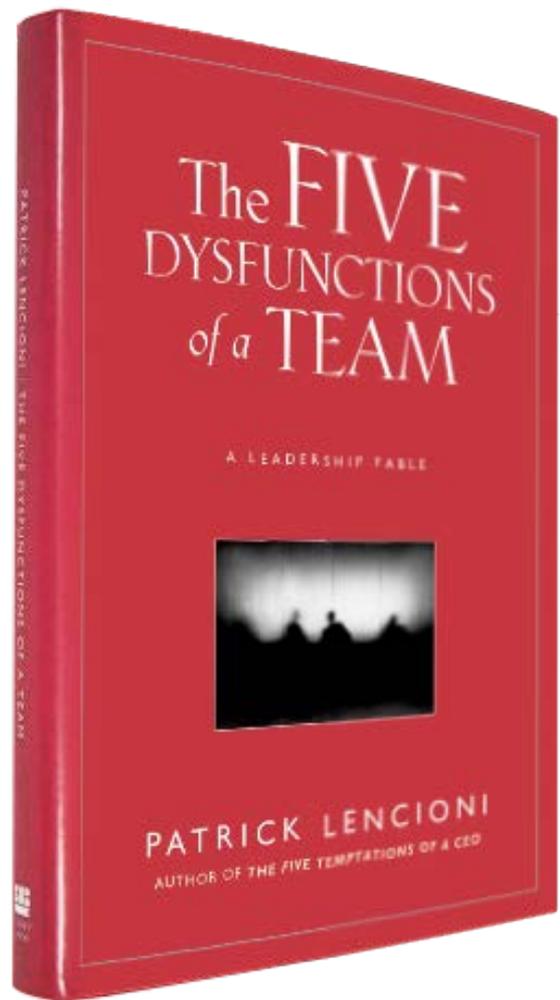
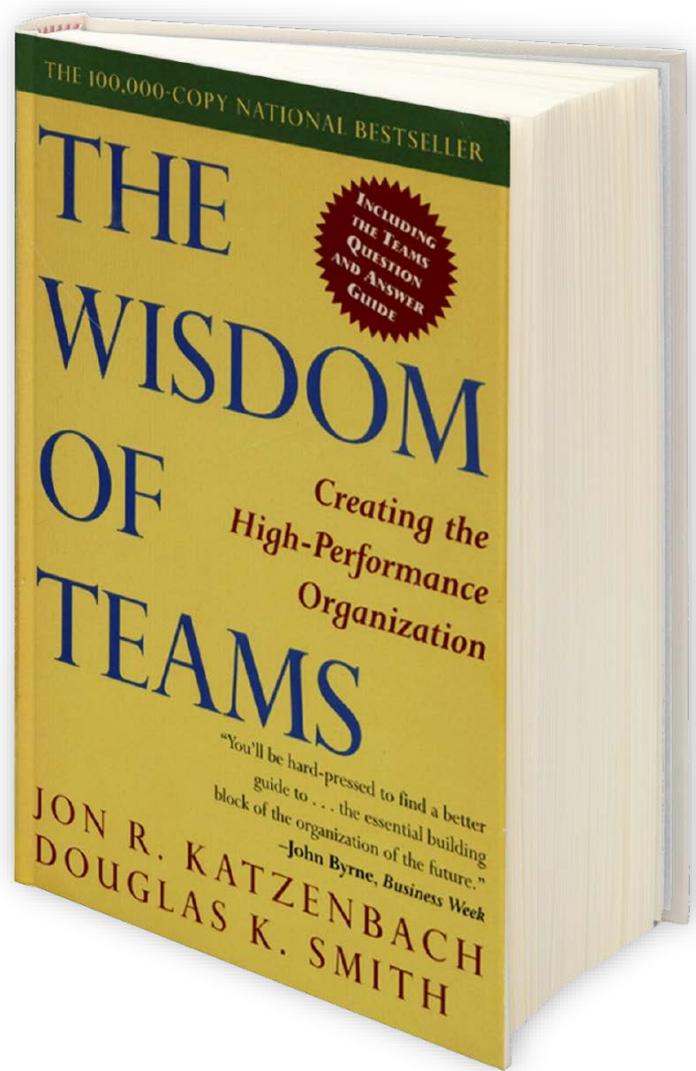


Residency and Fellowships



Practice

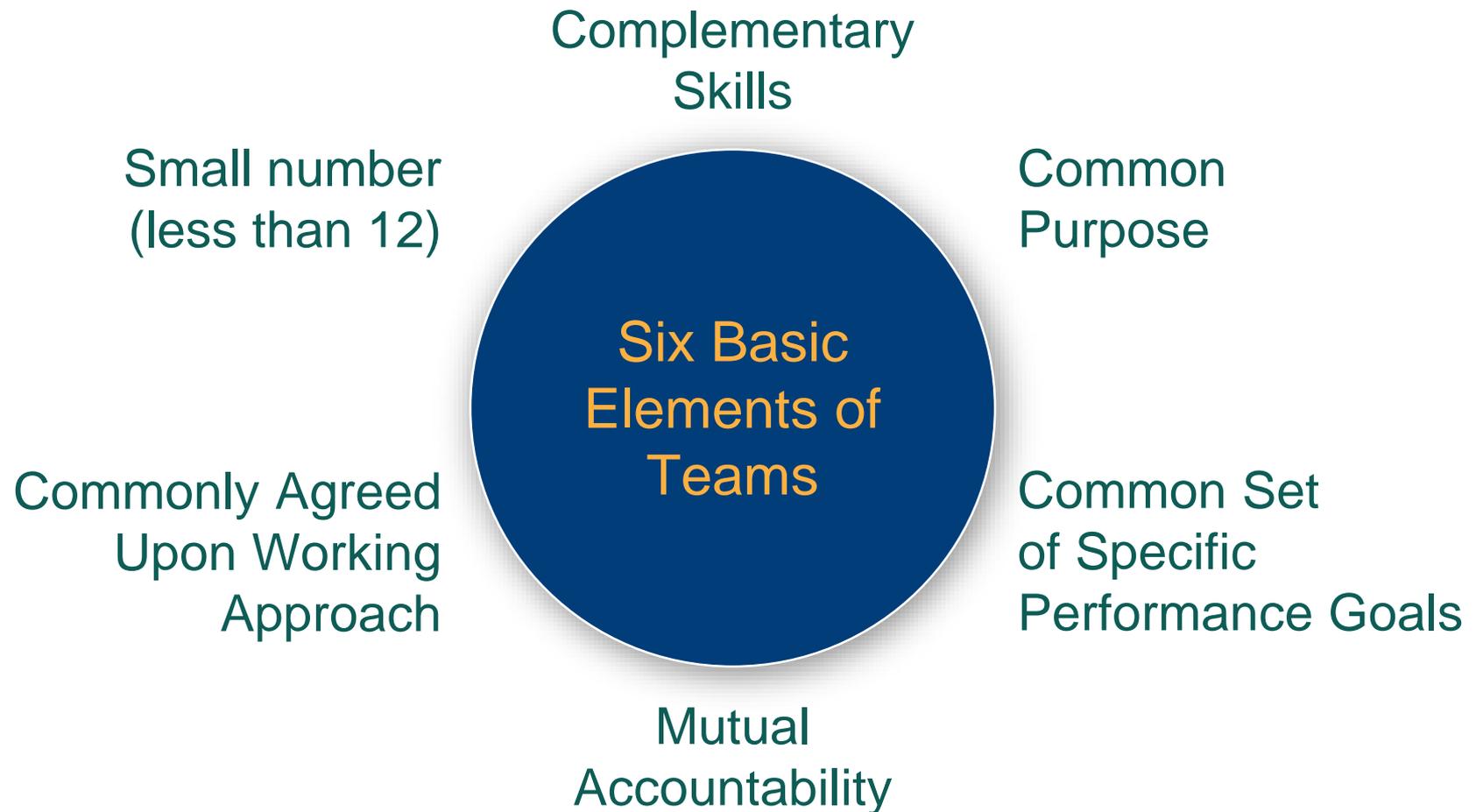
Assessment





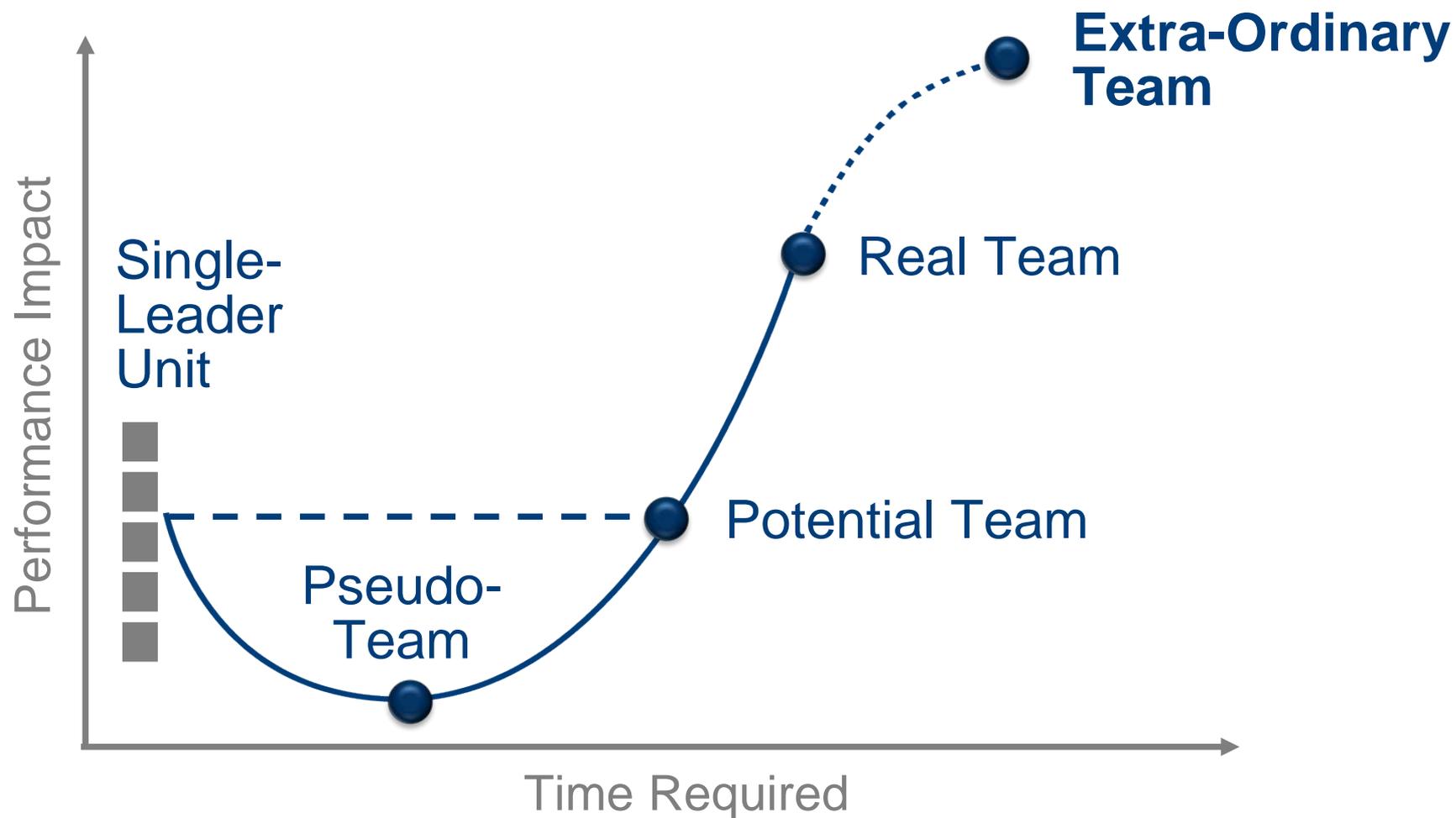
Six Basic Elements of Teams

According to Katzenbach and Smith





Harness the Power of Teams



Source: Katzenbach and Smith, 2006



Premedical Education

Learning



Premedical



Medical School



Residency and Fellowships

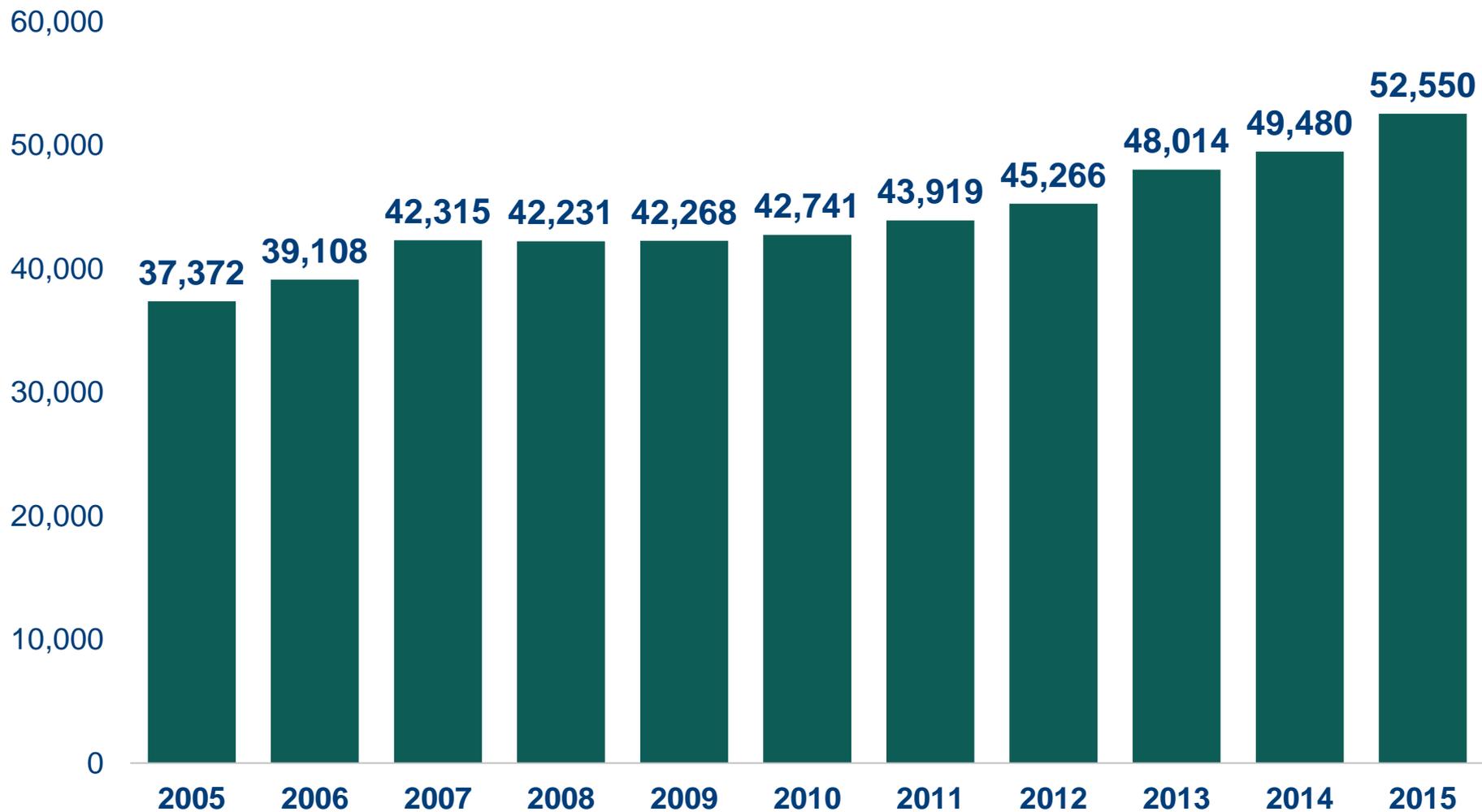


Practice

Assessment

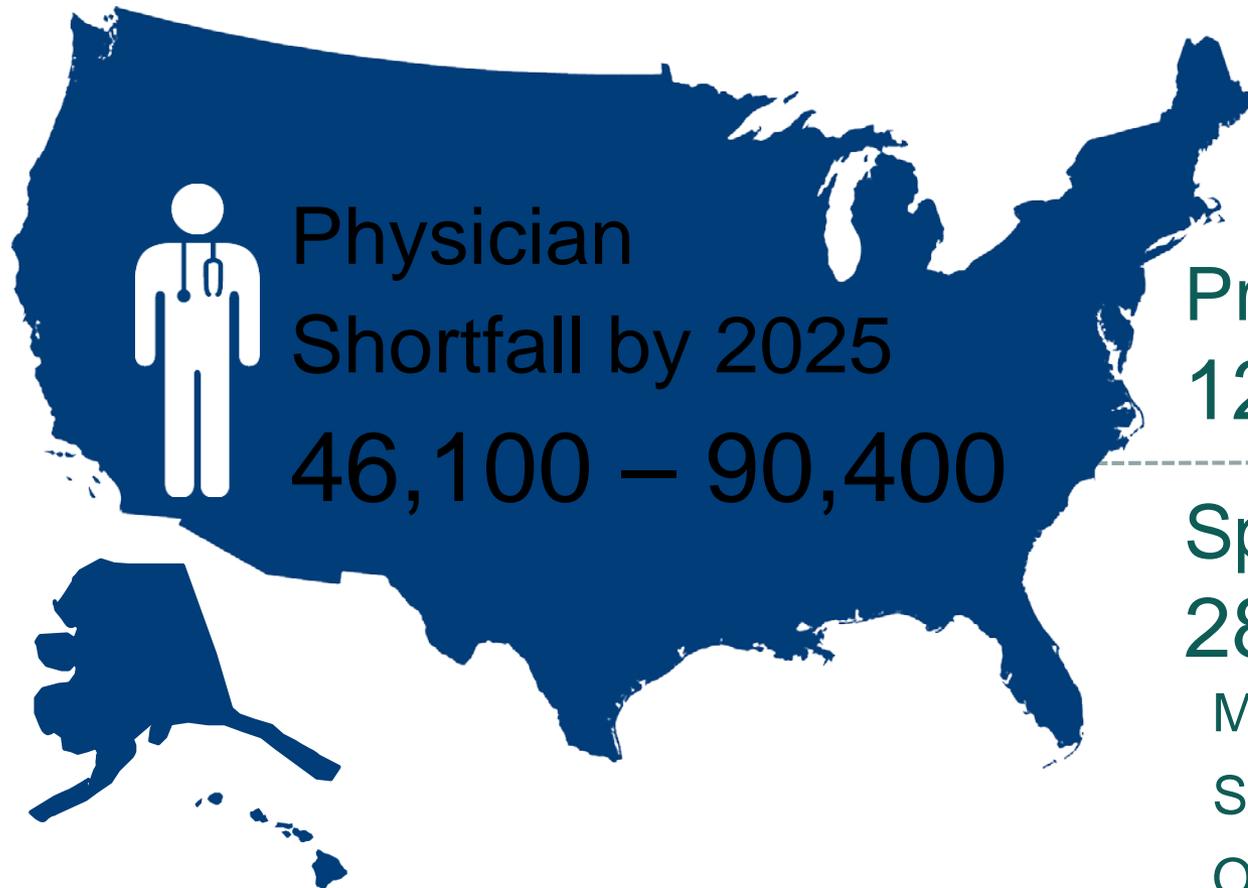


Medicine Remains an Attractive Career...



AMCAS Applicants to Medical School

...But Can We Improve Learner Selection To Meet the Needs of the Nation?



Primary Care
12,500 – 31,100

Specialty Care
28,200 – 63,700

Medical 5,100 - 12,300

Surgical 23,100 - 31,600

Other 2,400 - 20,200

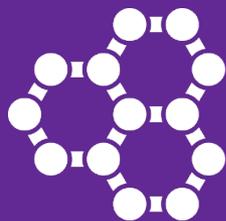


Core Competencies in Premedical Students

The image displays 15 core competencies for premedical students, arranged in a grid-like fashion. A large red circle highlights the 'Teamwork' competency. Each competency is represented by a colored box with text, often accompanied by a small photograph of students engaged in various activities.

- Service Orientation** (Dark Blue box)
- Social Skills** (Dark Blue box)
- Cultural Competence** (Teal box)
- Teamwork** (Red circle highlight)
- Oral Communication** (Purple box)
- Ethical Responsibility** (Dark Blue box)
- Reliability and Dependability** (Dark Grey box)
- Resilience and Adaptability** (Teal box)
- Capacity for Improvement** (Dark Blue box)
- Critical Thinking** (Dark Blue box)
- Scientific Inquiry** (Dark Blue box)
- Quantitative Reasoning** (Dark Purple box)
- Knowledge of Living Systems** (Yellow box)
- Written Communication** (Purple box)
- Knowledge of Human Behavior** (Teal box)

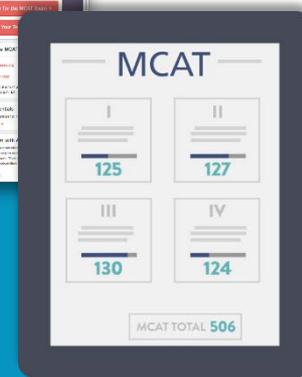
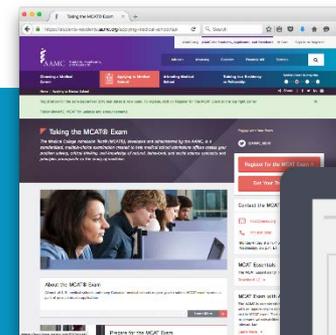
A New MCAT Exam – 1 Year Later



Biological and biochemical foundations of living systems



Chemical and physical foundations of biological systems



Psychological, social, and biological foundations of behavior

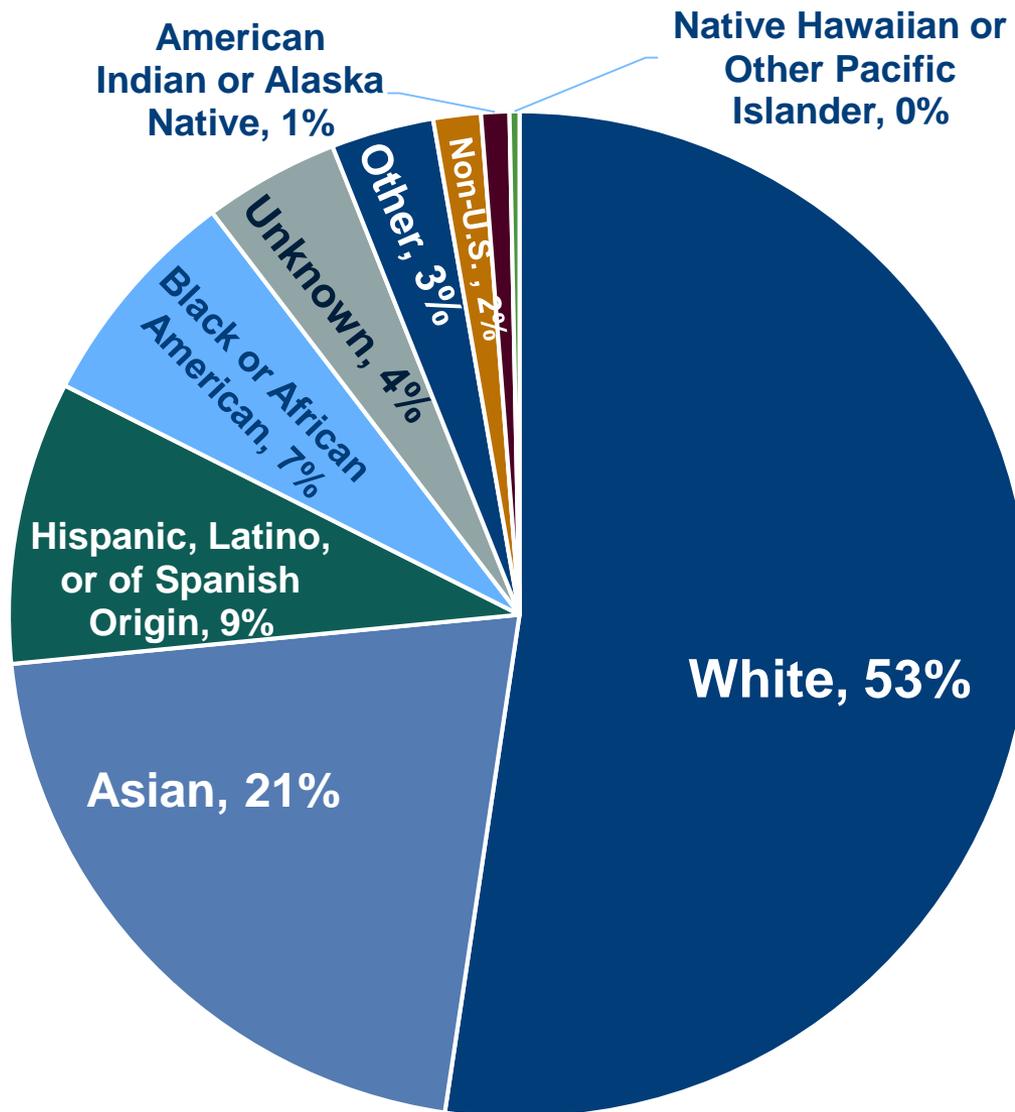


Critical analysis and reasoning skills

Improving Admissions: Situational Judgment Test



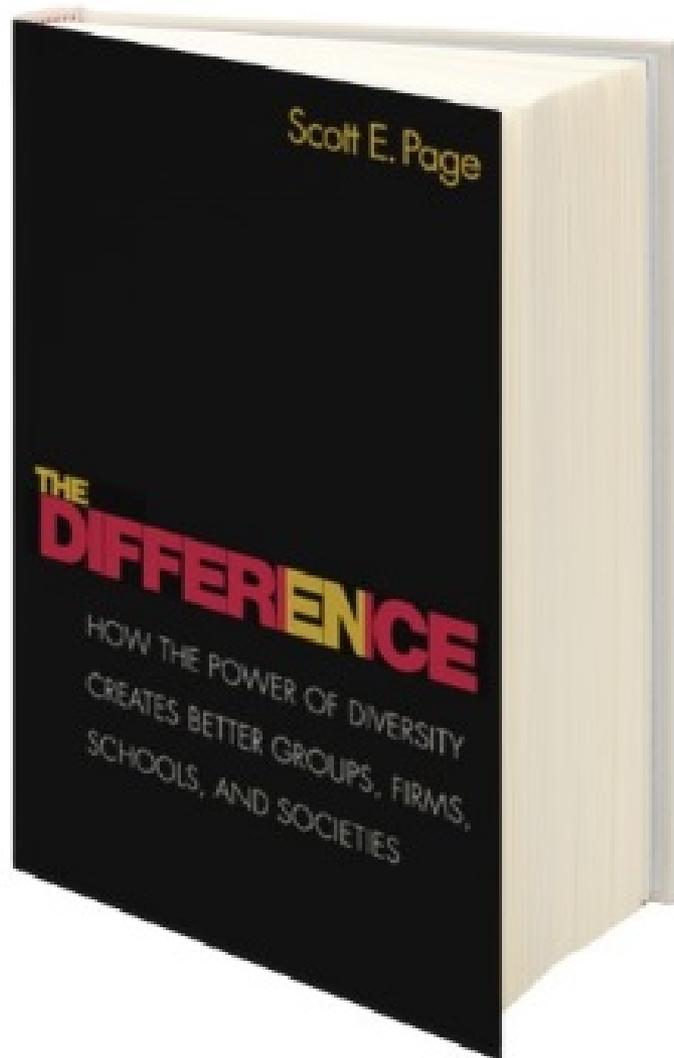
Matriculants Do Not Reflect The Diversity of the Nation!



U.S. Medical School Matriculants, 2015



Power of Diversity



Progress depends as much on our collective differences as it does our individual IQ scores.



Scott Page, PhD



Medical School

Learning



Premedical



Medical School



Residency and Fellowships



Practice

Assessment

Improving the Educational Environment

AAMC Statement on the Learning Environment

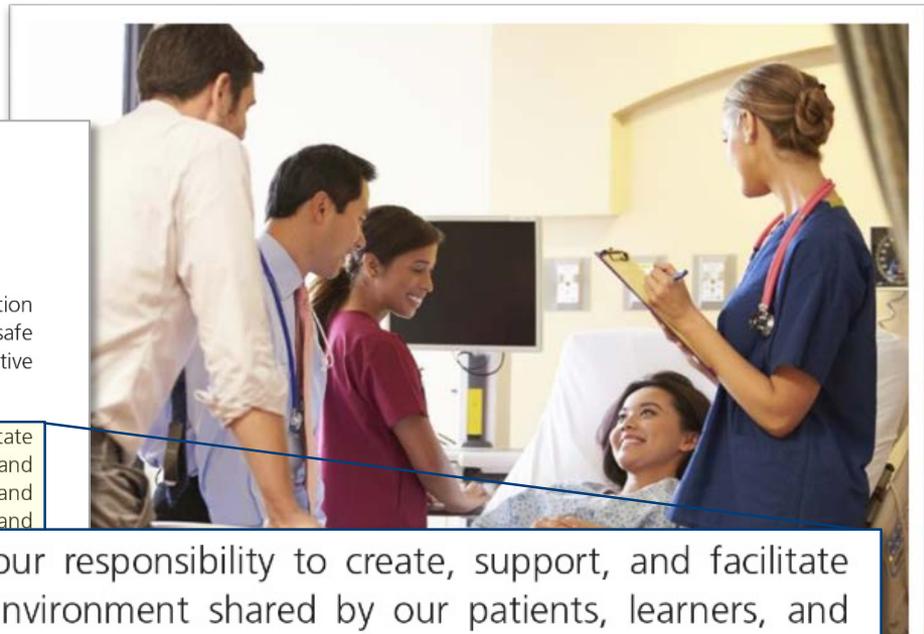
We believe that the learning environment for medical education shapes the patient care environment. The highest quality of safe and effective care for patients and the highest quality of effective and appropriate education are rooted in human dignity.

We embrace our responsibility to create, support, and facilitate the learning environment shared by our patients, learners, and teachers. In this environment, our patients witness, experience, and expect a pervasive sense of **respect, collegiality, kindness, and cooperation** among health care professionals, administrators, staff, and learners from all health professions in patient care environments.

We affirm our responsibility to create a learning environment that fosters our responsibility to create an atmosphere where all teachers are willing to engage with students in an inherently uncomfortable and challenging.

We affirm our commitment to shaping a culture of teaching and learning that is rooted in respect for all. Fostering resilience, **excellence, compassion, and integrity** allows us to create patient care, research, and learning environments that are built upon constructive **collaboration**, mutual respect, and human dignity.

For more information and to view a library of resources, visit aamc.org/learningenvironment.



We embrace our responsibility to create, support, and facilitate the learning environment shared by our patients, learners, and teachers. In this environment, our patients witness, experience, and expect a pervasive sense of **respect, collegiality, kindness, and cooperation** among health care team members.



Interprofessional Education Collaborative



13 Core Entrustable Professional Activities for Day One of Residency

- 1) Gather a history and perform a physical examination
- 2) Prioritize a differential diagnosis following a clinical encounter
- 3) Recommend and interpret common diagnostic and screening tests
- 4) Enter and discuss orders/prescriptions
- 5) Document a clinical encounter in the patient record
- 6) Provide an oral presentation of a clinical encounter
- 7) Form clinical questions and retrieve evidence to advance patient care
- 8) Give or receive a patient handover to transition care responsibility
- 9) Collaborate as a member of an interprofessional team
- 10) Recognize a patient requiring urgent or emergent care, and initiate evaluation and management
- 11) Obtain informed consent for tests and/or procedures
- 12) Perform general procedures of a physician
- 13) Identify system failures and contribute to a culture of safety and improvement



Residency and Fellowships

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Medical
School



Residency and
Fellowships



Practice

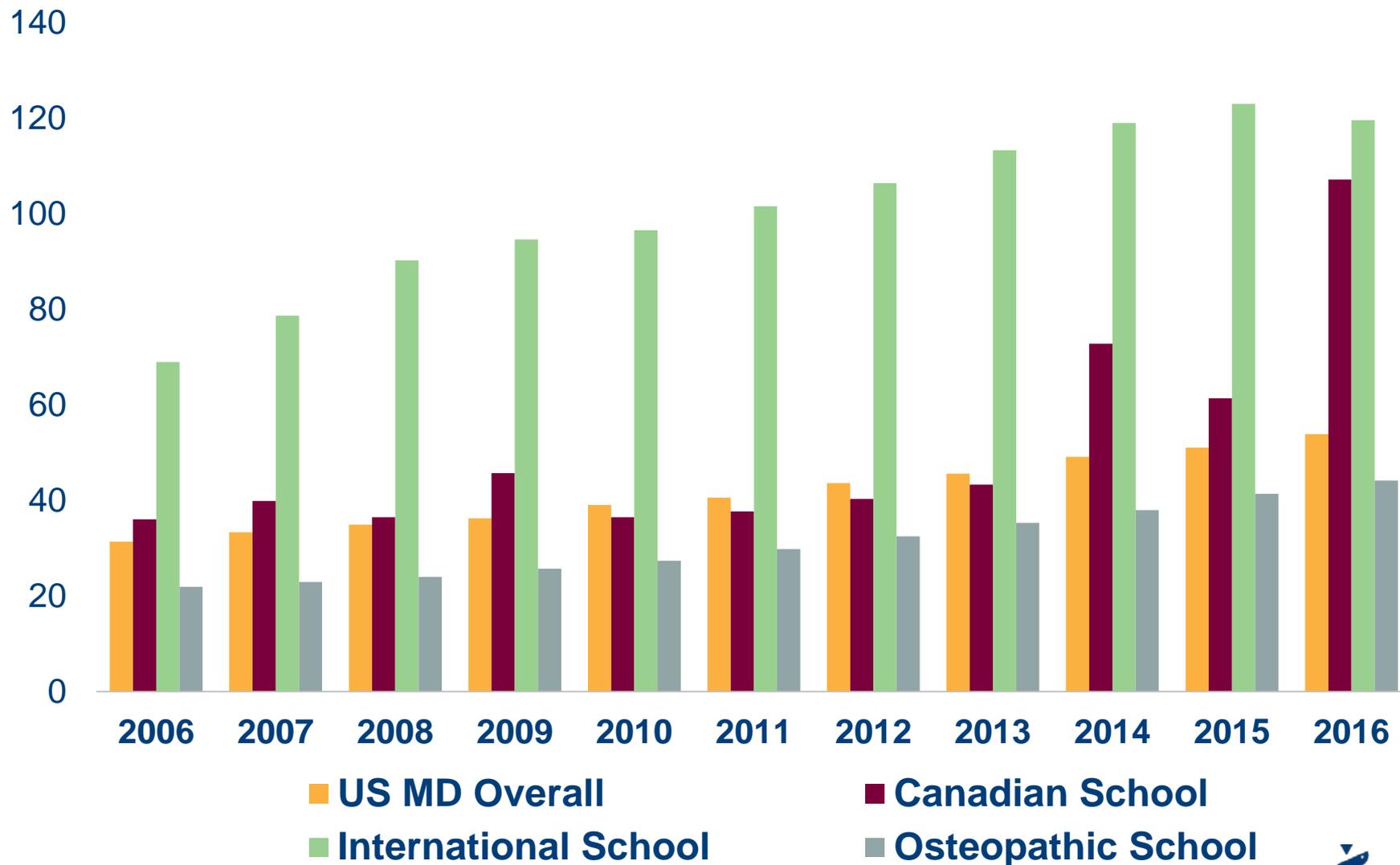
Assessment

Celebrating Match Day





Average ERAS Applications Per Applicant



Tools for Improving Residency Selection





Practice

Learning



Premedical



Medical School



Residency and Fellowships



Practice

Assessment

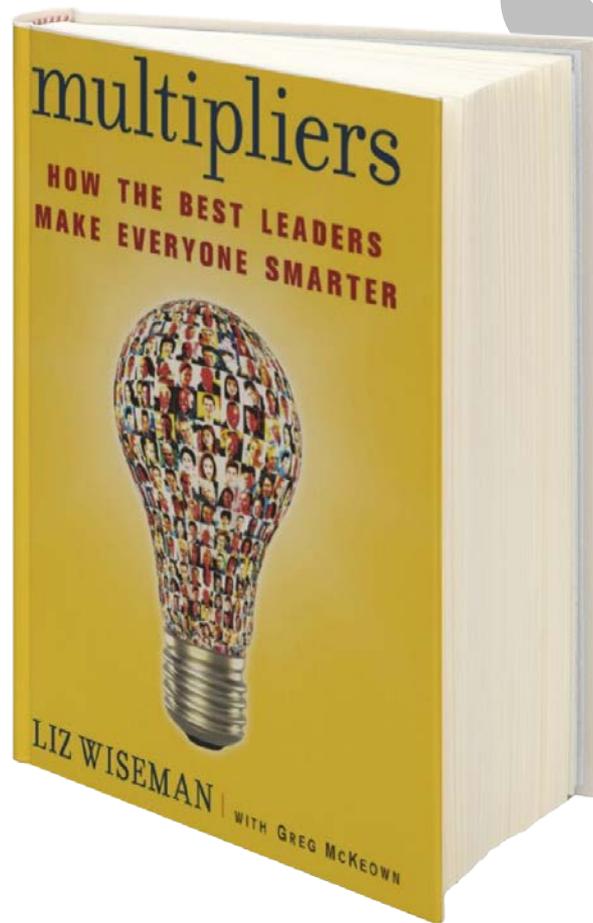
The Anatomy of Integration vs. The Physiology of Integration



True teams require a new model of leadership



Leaders of Health Care as “Multipliers”



Multipliers are leaders who look beyond their own genius and focus their energy on extracting and extending the genius of others.

Liz Wiseman

“Teams” Across the Full Continuum for Medical Education

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Association of
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ACCREDITATION COUNCIL FOR GRADUATE MEDICAL EDUCATION

*The Clinical Learning Environment,
Milestones,
and Team Competencies*

Thomas J Nasca MD MACP
Chief Executive Officer

Disclosure

- Full Time Salaried by ACGME
- Professor of Medicine and Physiology
Sidney Kimmel College of Medicine
Thomas Jefferson University
Senior Scholar, Department of Medical Education
College of Medicine
University of Illinois at Chicago
- No conflicts of interest to report

CLER
Clinical Learning Environment Review

National Report of Findings 2016



- Baseline, 2013-2015
- Strengths, Progress
- Opportunities

PRE-PUBLICATION
ACGME EMBARGOED
DOCUMENT

Accreditation Council for Graduate Medical Education

CLER National Report of Findings 2016.
Accreditation Council for Graduate Medical Education
Chicago, IL. 2016.



“The ACGME would like to thank the Designated Institutional Officials of our accredited Sponsoring Institutions along with the executive leaders of the participating hospitals and medical centers for graciously hosting this first set of visits. We appreciate the efforts that were involved in arranging the visits, the open access to converse with residents, fellows, faculty members and staff, and your willingness to receive feedback. It was a privilege to spend time in your organizations.”

Assumption

- The quality of outcomes of experientially based education is related, in significant part, to the quality of the task or process the trainee participates in delivering

Sirovich, B.E., Lipner, R.S., Johnson, M., Holmboe, E.S.
The Association Between Residency Training and Internists' Ability to Practice Conservatively.
JAMA Internal Medicine. 2014;174(10):1640-1648

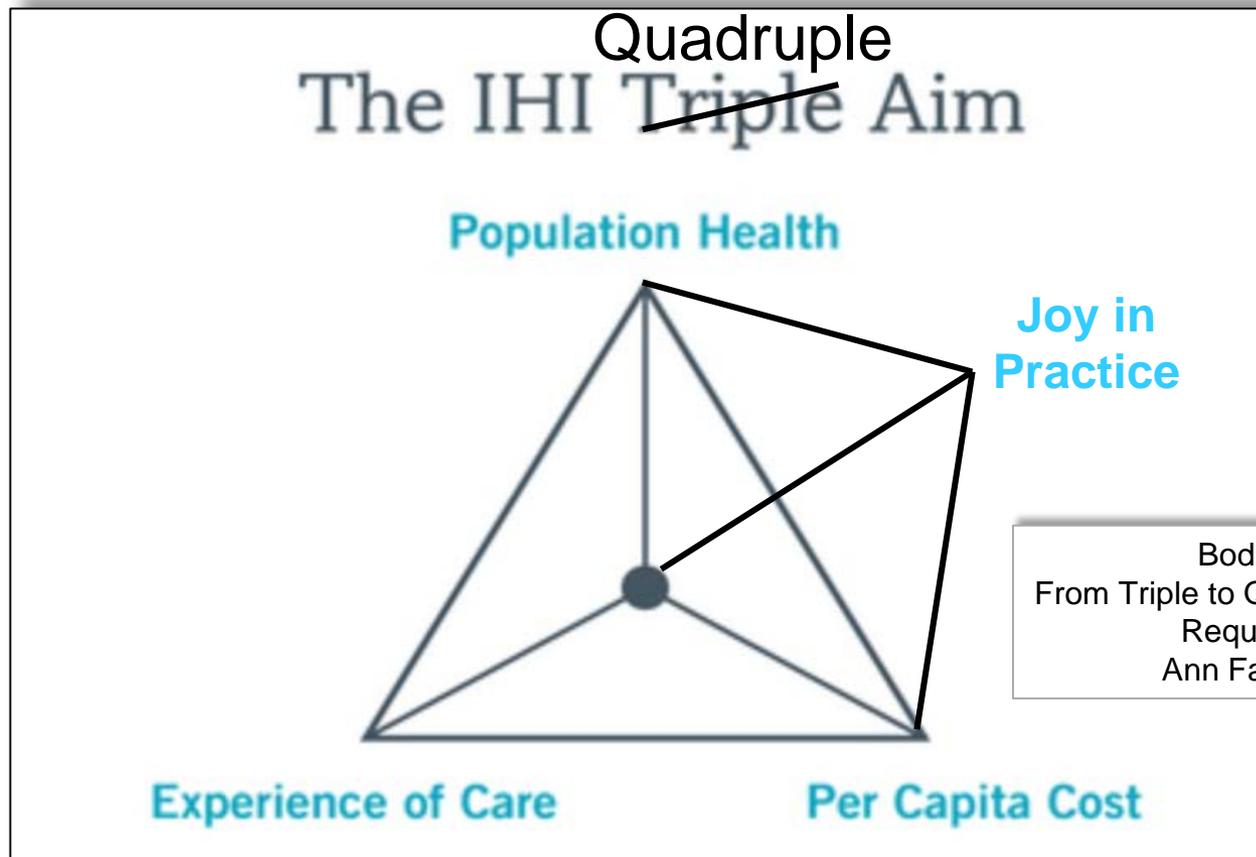
Chen, C., Petterson, S., Phillips, R., Bazemore, A., Mullan, F.
Spending Patterns in Region of Residency Training and Subsequent Expenditures for Care Provided by Practicing Physicians for Medicare Beneficiaries.
JAMA. 2014;312(22):2385-2393

Asch, DA, Nicholson, S, Srinivas, S, Herrin, J, Epstein, AJ.
Evaluating Obstetrical Residency Programs Using Patient Outcomes.
JAMA 2009;302(12):1277-1283.

Epstein, AJ, Nicholson, S, Asch, DA.
The Production Of and Market For New Physicians' Skill.
Working Paper 18678 – <http://www.nber.org/papers/w18678> National Bureau of Economic Research
1050 Massachusetts Ave, Cambridge MA 02138. January, 2013

Assumption

- The Clinical Learning Environment Has Direct Impact on Graduates' Ability to Achieve the Triple Aim



Bodenheimer, T, Sinsky, C.
From Triple to Quadruple Aim: Care of the Patient
Requires Care of the Provider
Ann Fam Med 2014; 12:573-576

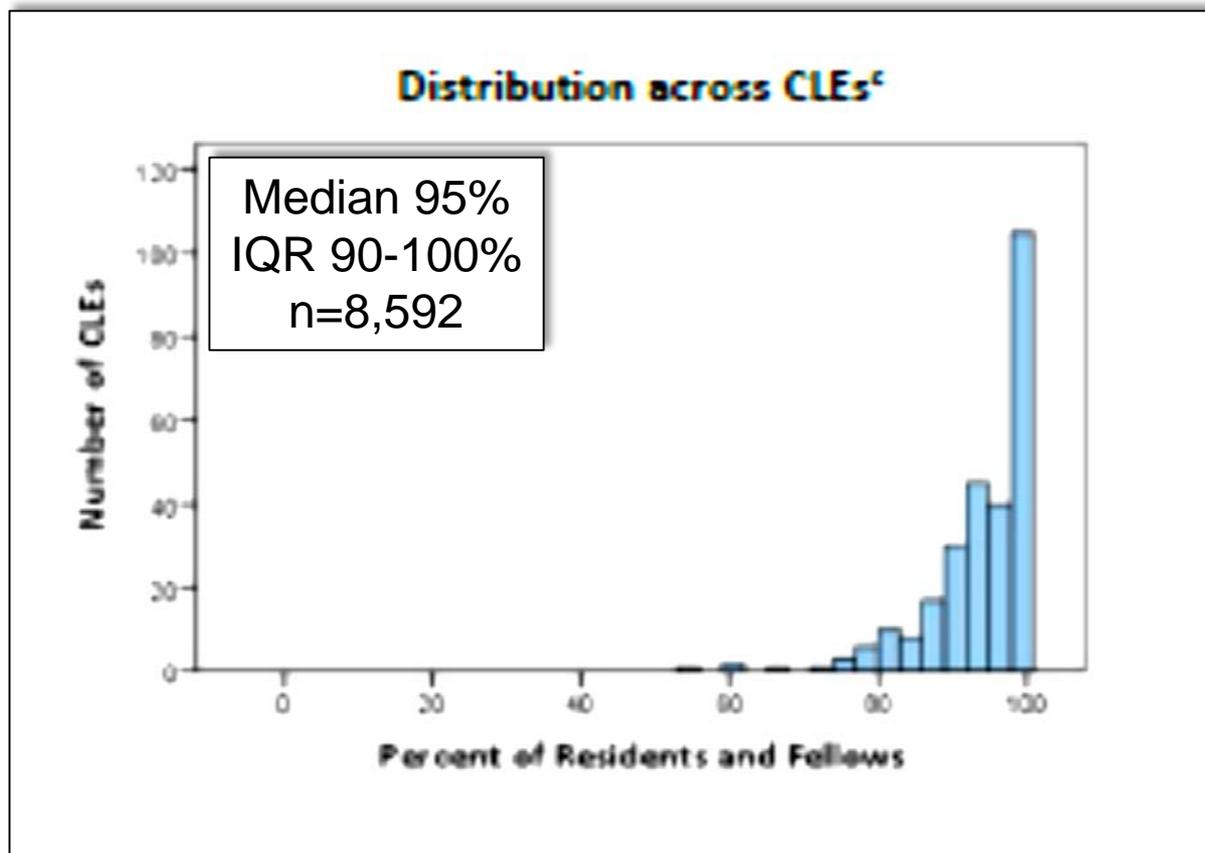
<http://www.ihl.org/Engage/Initiatives/TripleAim/Pages/TripleAimReady.aspx>

Assumptions

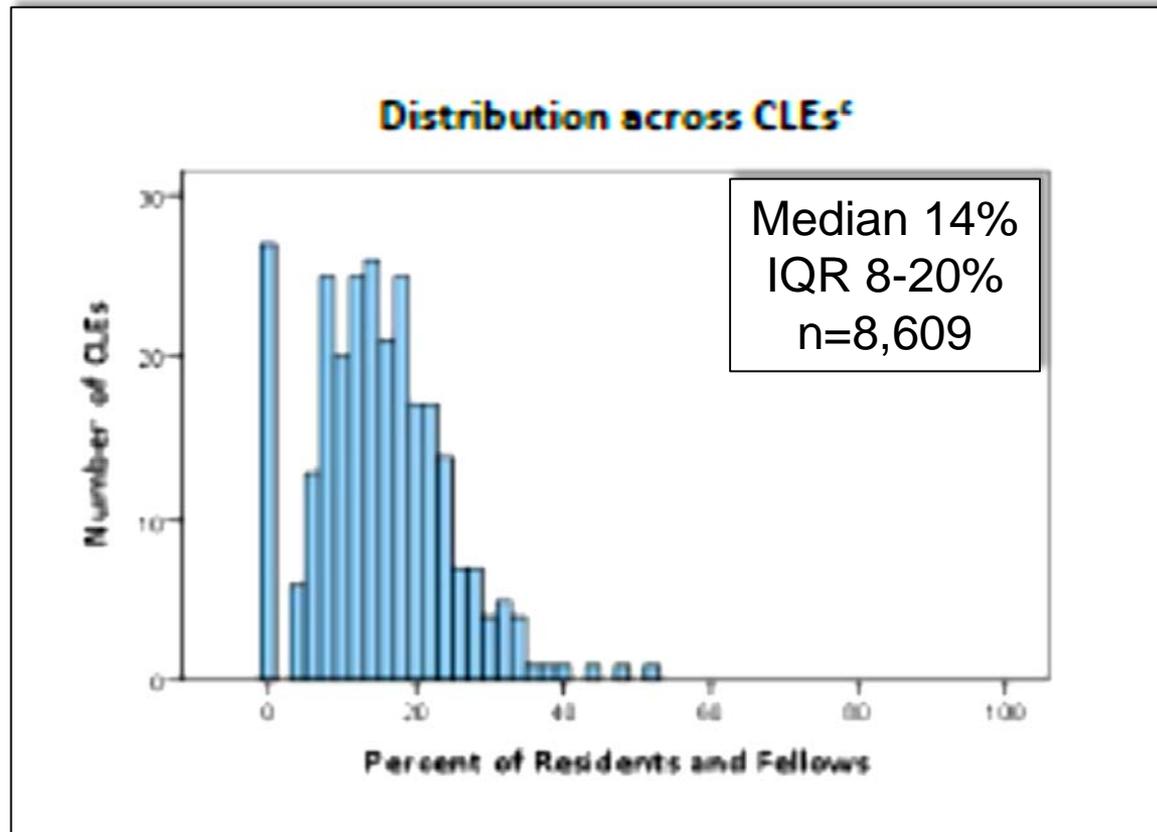
- Residents will manifest “Teamwork” skills (Outcomes) that emulate the “Teamwork” manifest in the Clinical Learning Environment
- Evaluation of resident outcomes will, in part, be influenced by faculty conceptualization of “Teamwork,” as manifest in the Clinical Learning Environment

Let's Look at Markers of “Teamwork” Competency

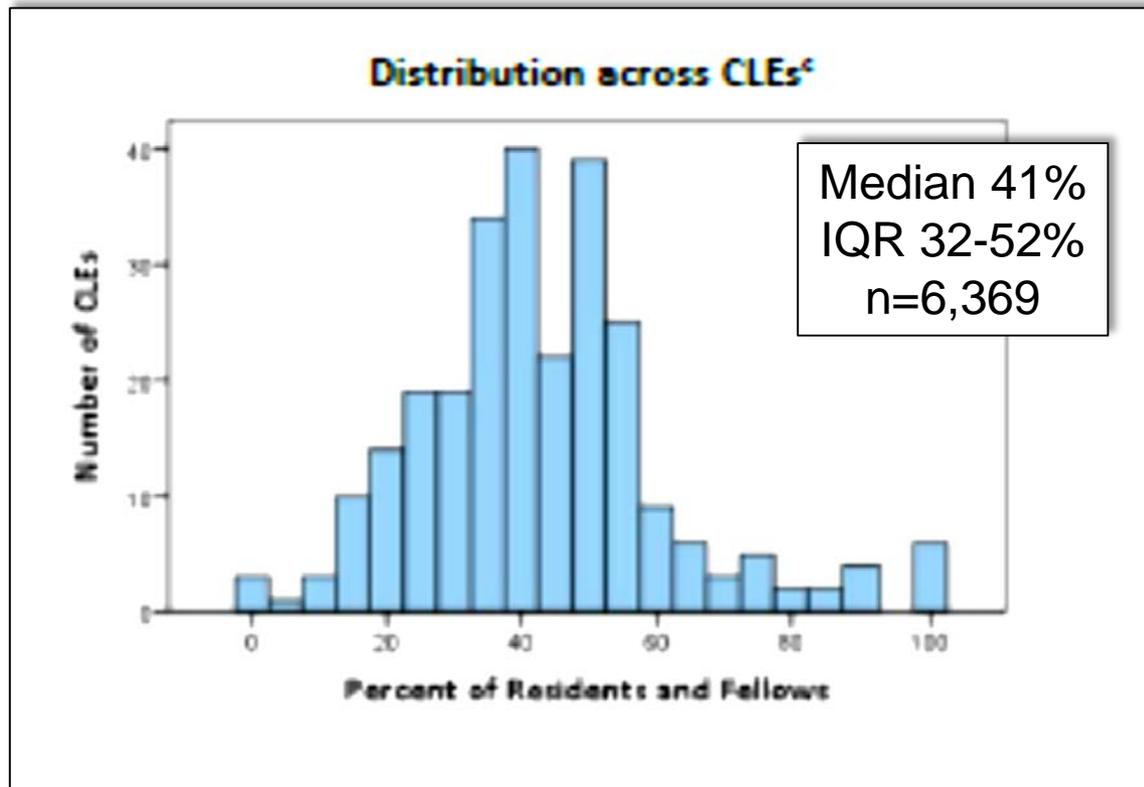
B21. Percentage of residents and fellows who reported that their clinical site provided a supportive, non-punitive environment for coming forward with concerns regarding honesty in reporting (e.g., patient data, duty hours)



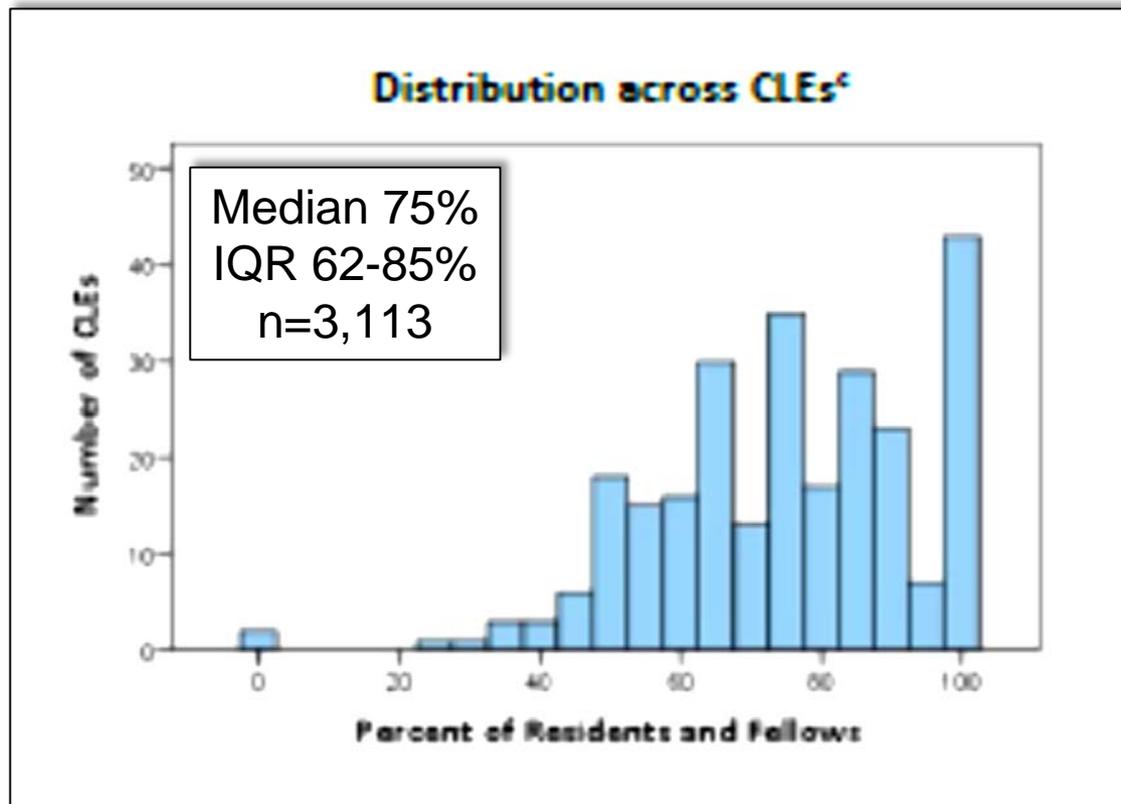
B22. Percentage of residents and fellows who reported having felt pressured to compromise their honesty or integrity to satisfy an authority figure during their training at the clinical site



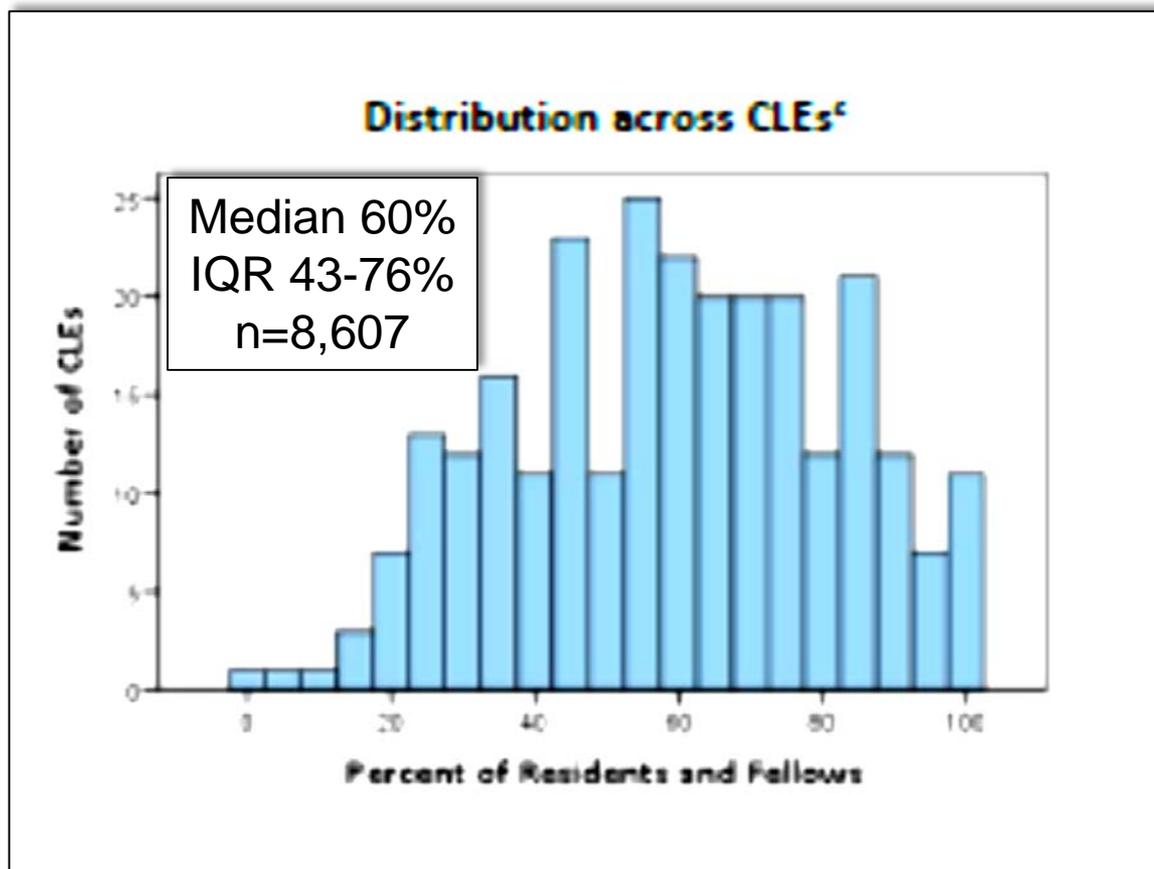
B7. Percentage of residents and fellows (PGY-3 and above) who reported participating in an inter-professional (physicians, nurses, administrators, others) investigation of a patient event (e.g., root cause analysis)



B11. Percentage of residents and fellows who reported being engaged in inter-professional quality improvement teams (e.g., nurses, administrators, pharmacists, etc.) while participating in a quality improvement project directly linked to one or more of the clinical site's quality improvement goals



B13. Percentage of residents and fellows who reported knowing the clinical site's priorities with regard to addressing health care disparities

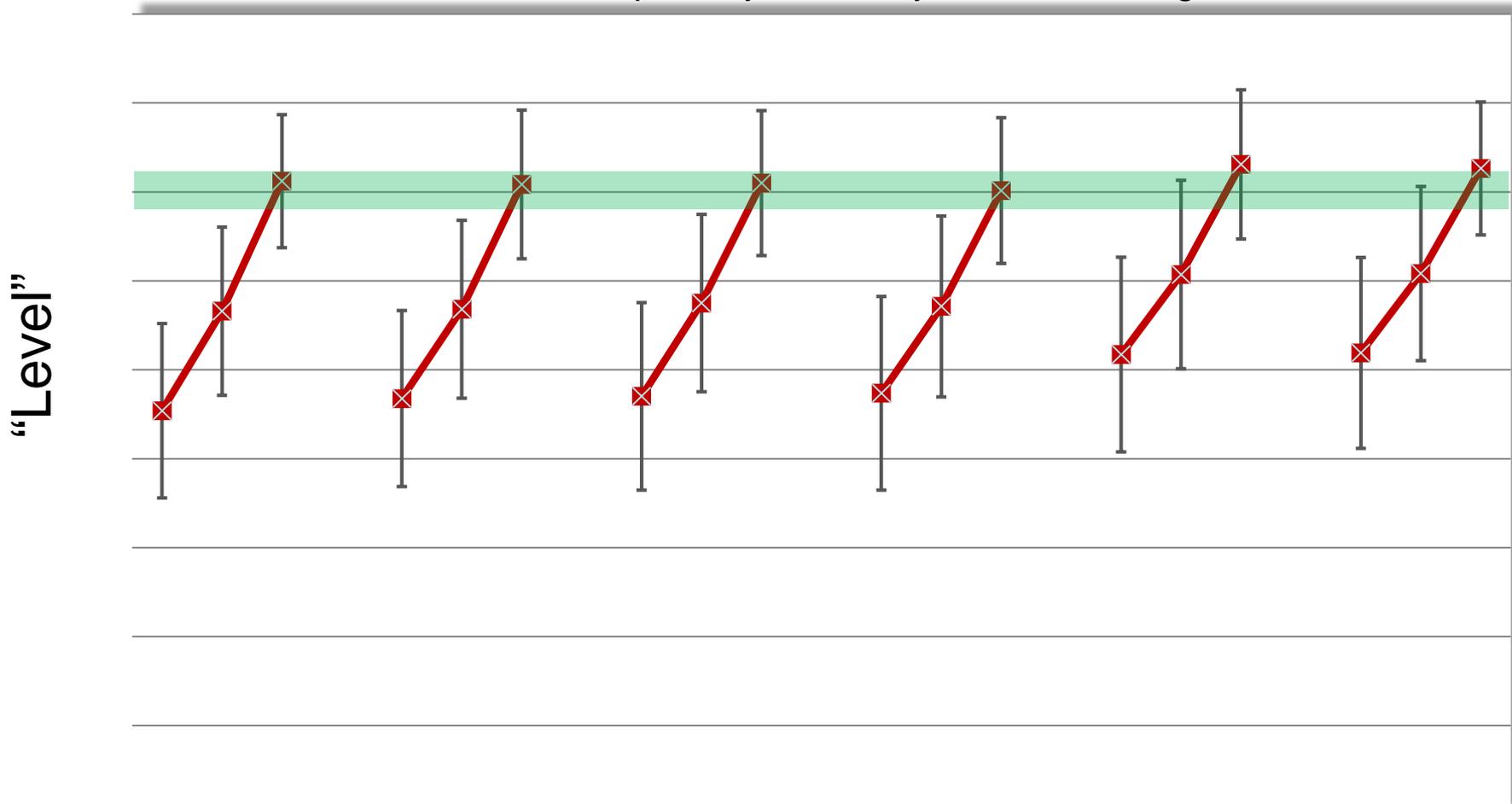


Let's Switch to Resident Outcomes Milestones

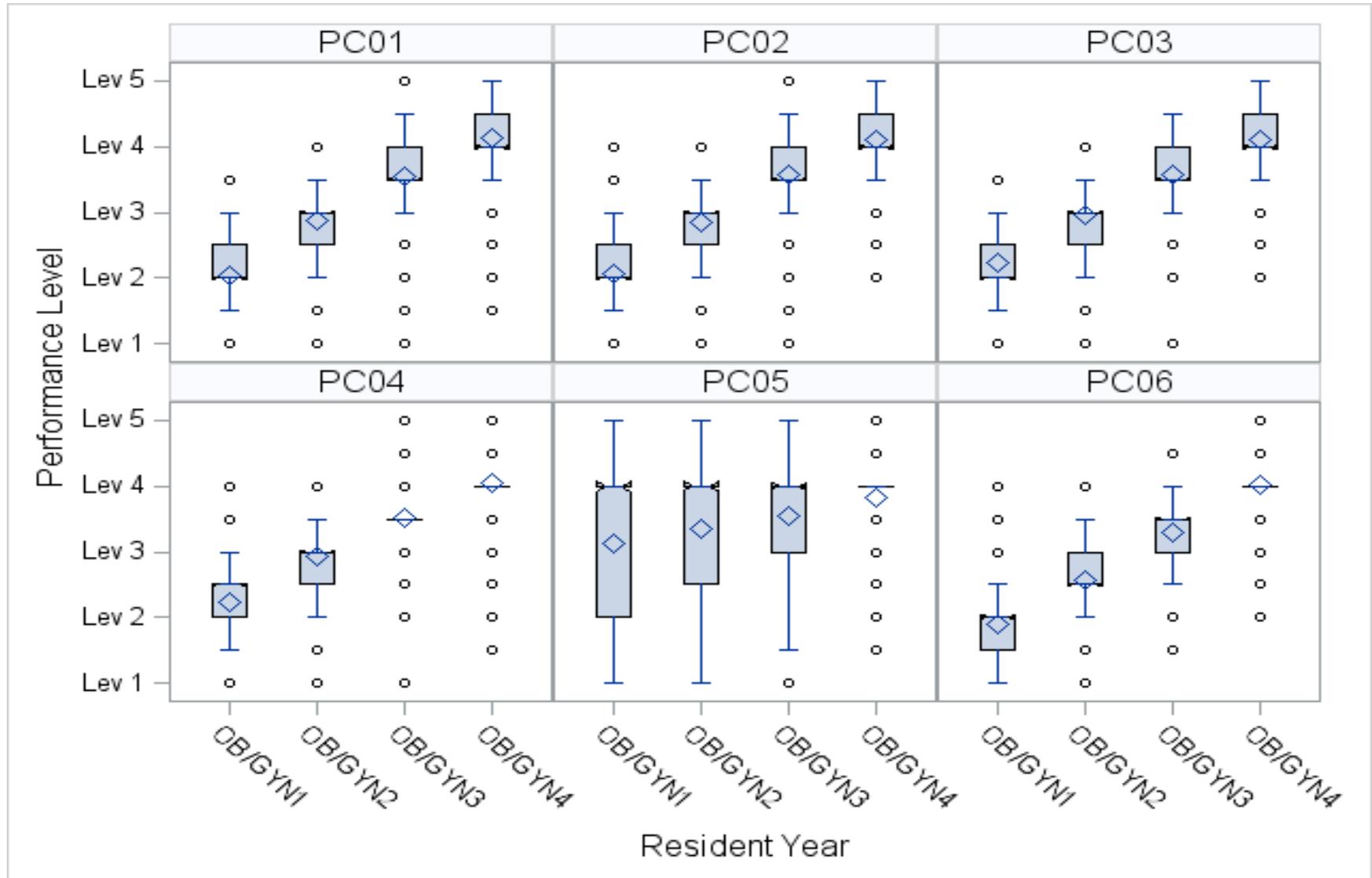
Milestones, A Preliminary Snapshot

Milestone Data Mean/SD of Sub-Competency Means Each Level of Training, June 2014

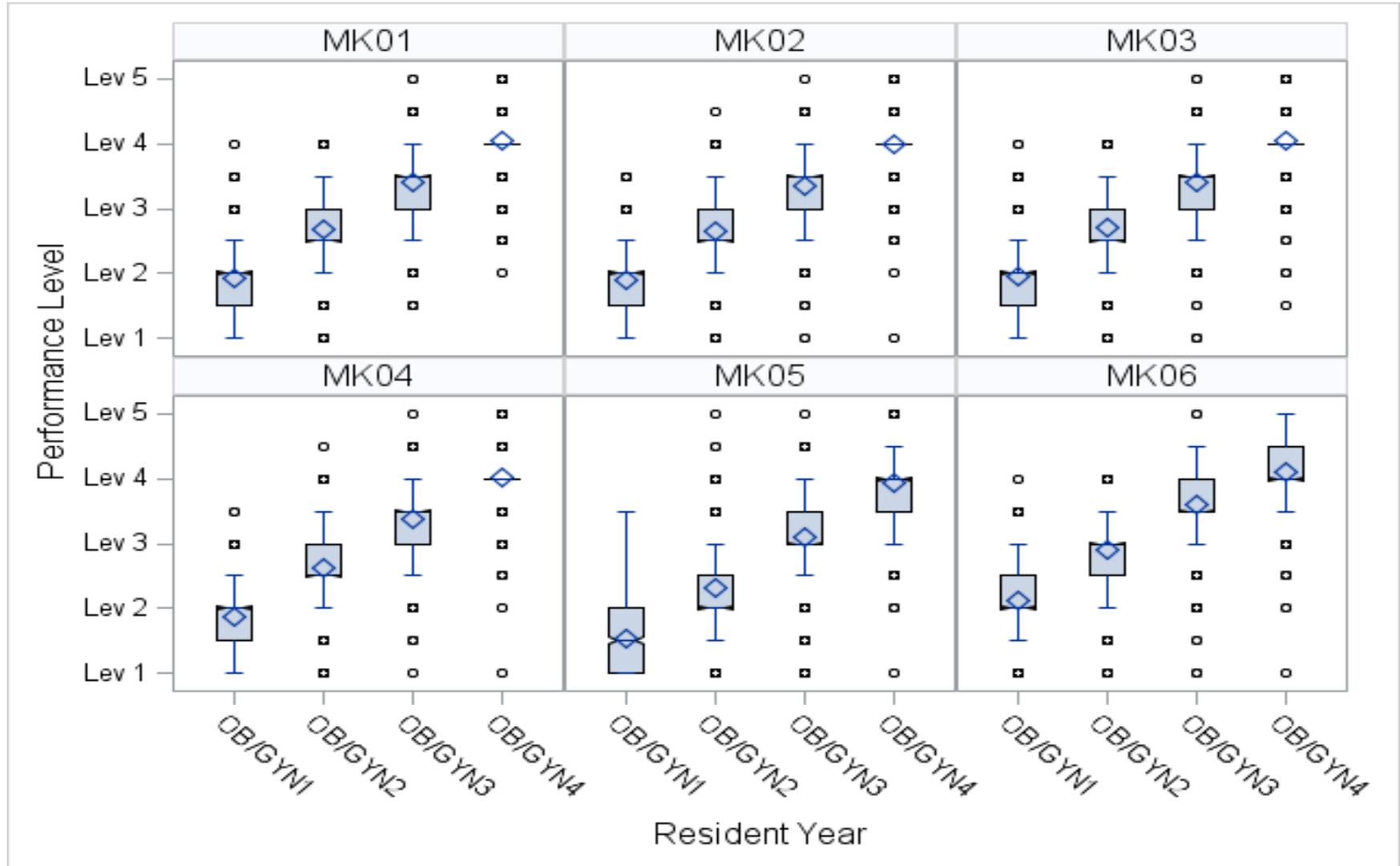
Internal Medicine (n=21,767)
Overall Competency Means by Year of Training



Median Ratings Across Programs, Patient Care Obstetrics and Gynecology, 2015

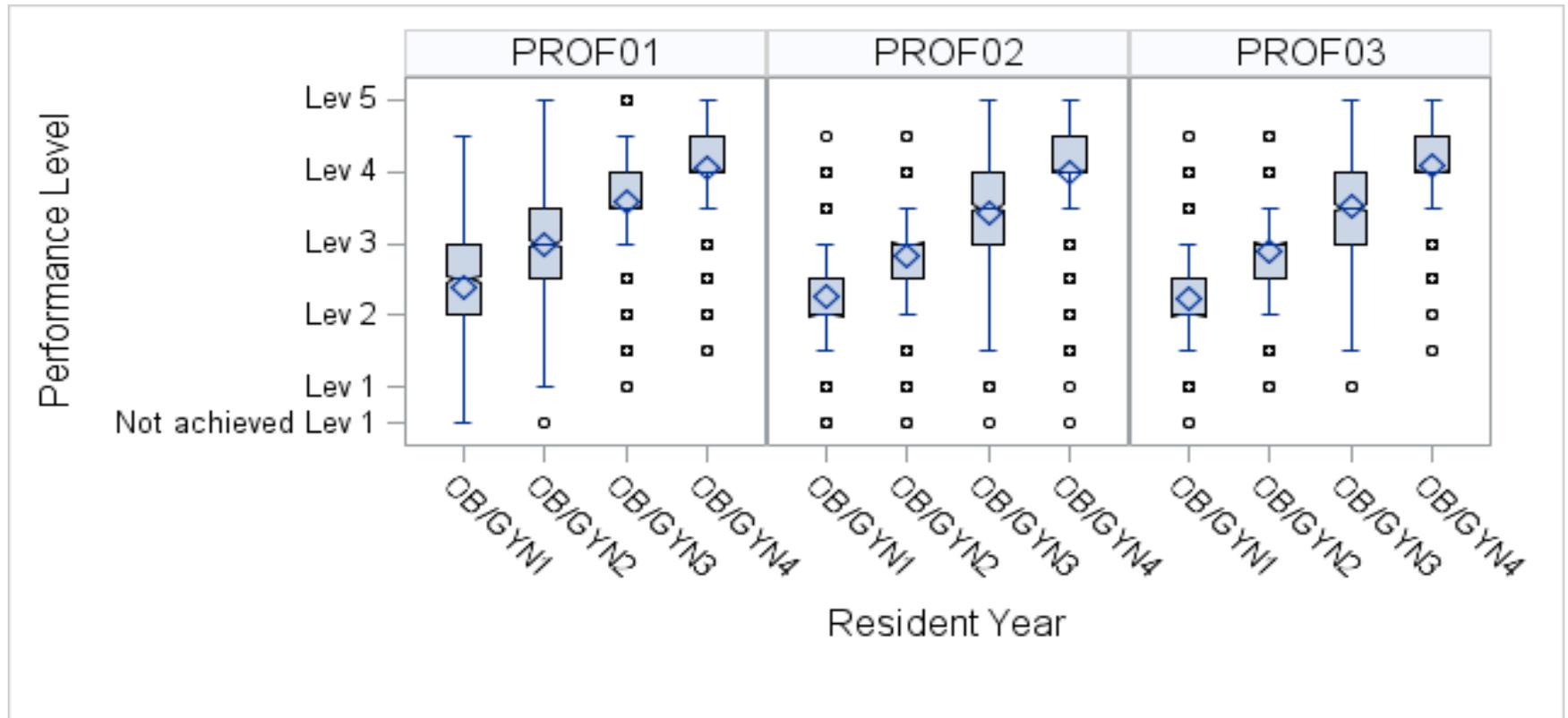


Medical Knowledge Obstetrics and Gynecology, 2015

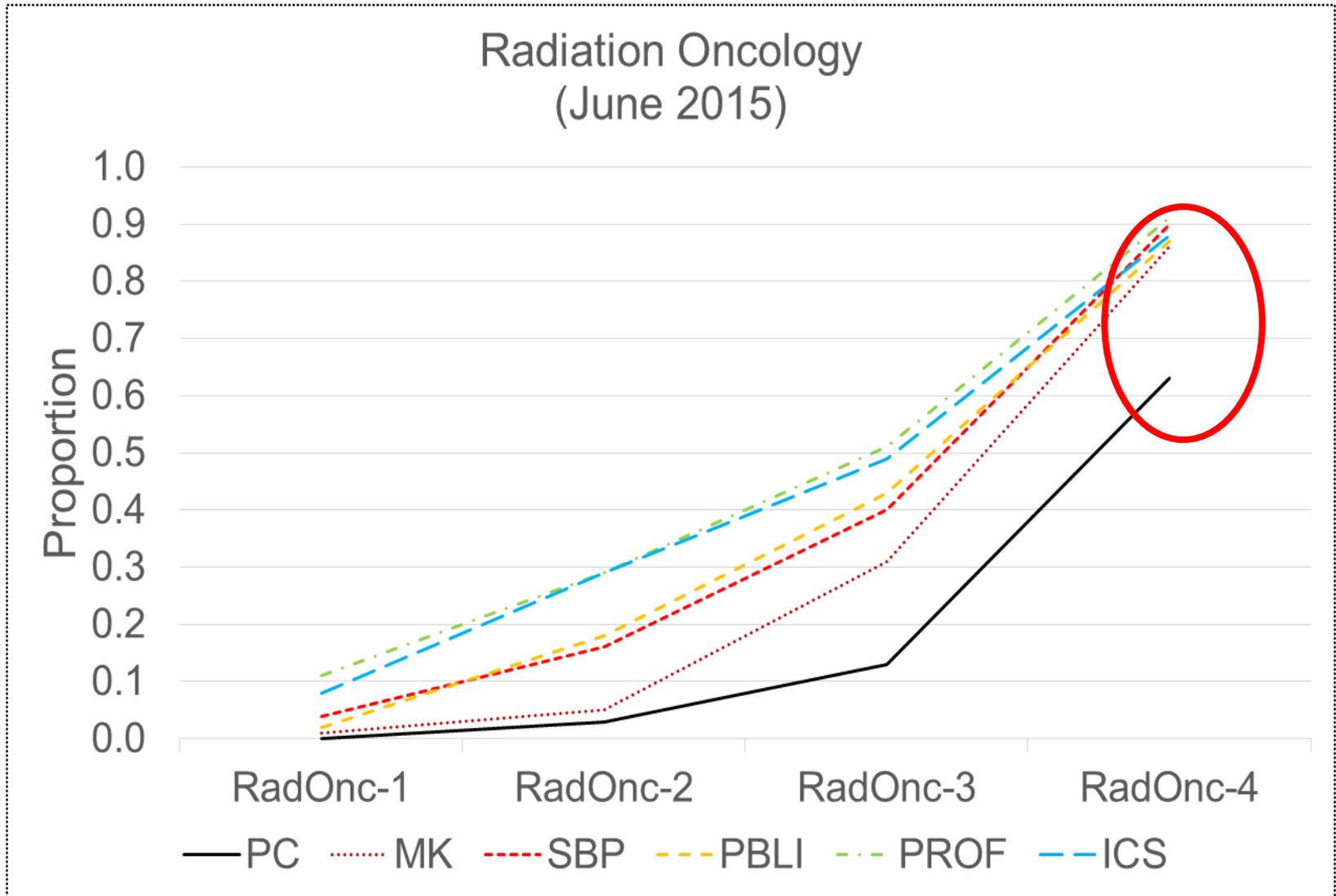


Professionalism

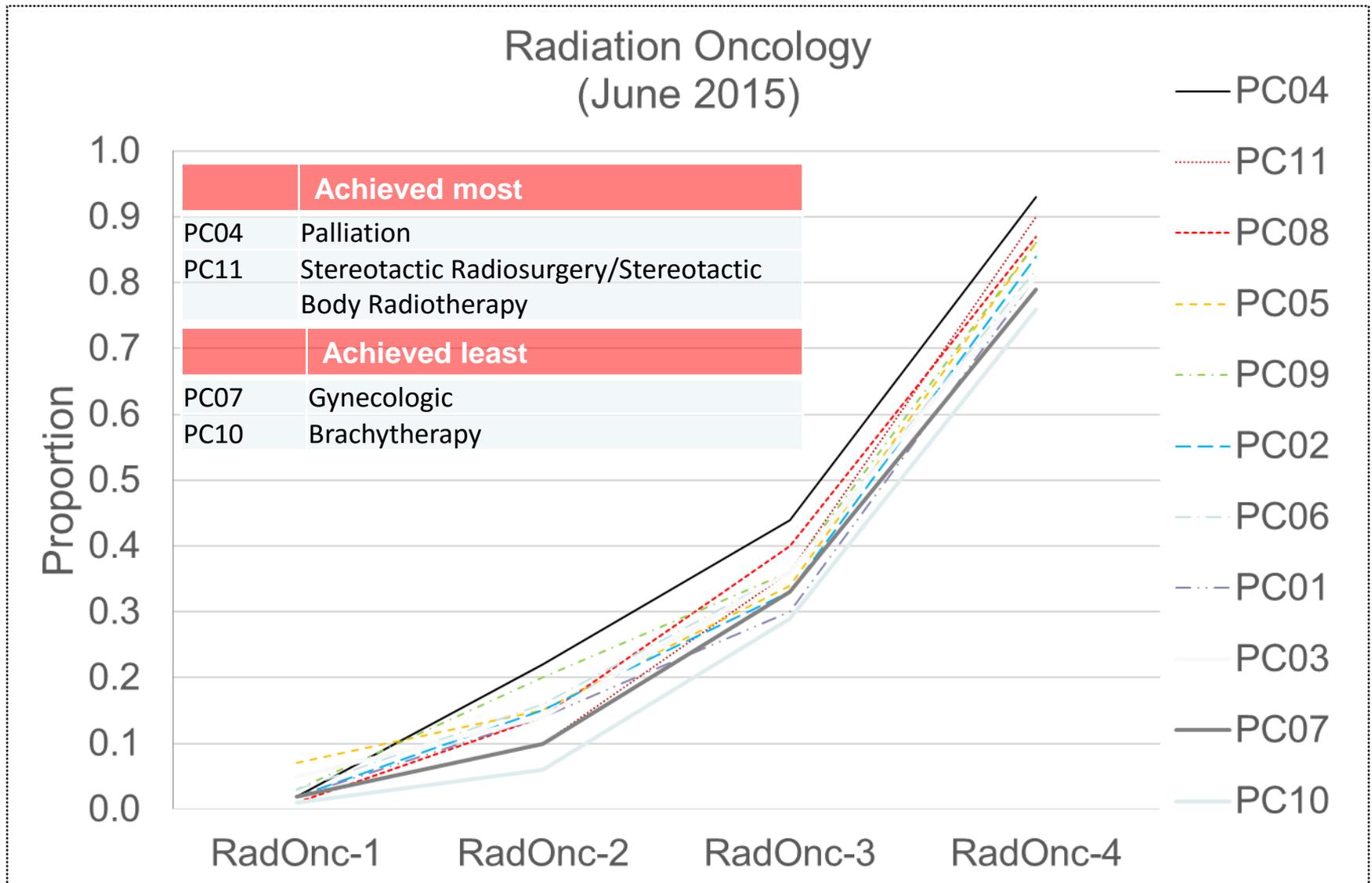
Obstetrics and Gynecology, 2015



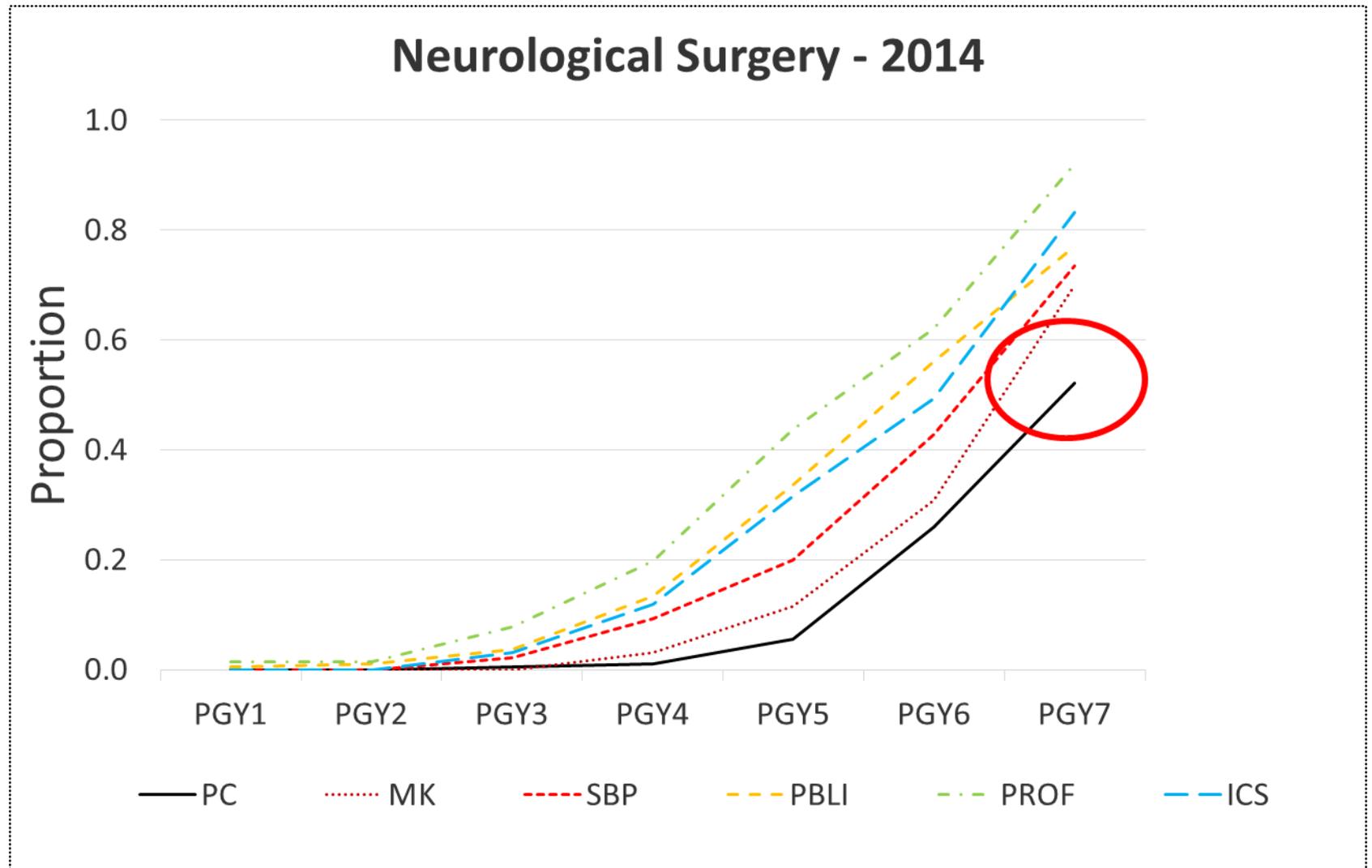
Residents Attaining Level 4 or Higher



Residents Attaining Level 4 or Higher for PC Sub-Competencies

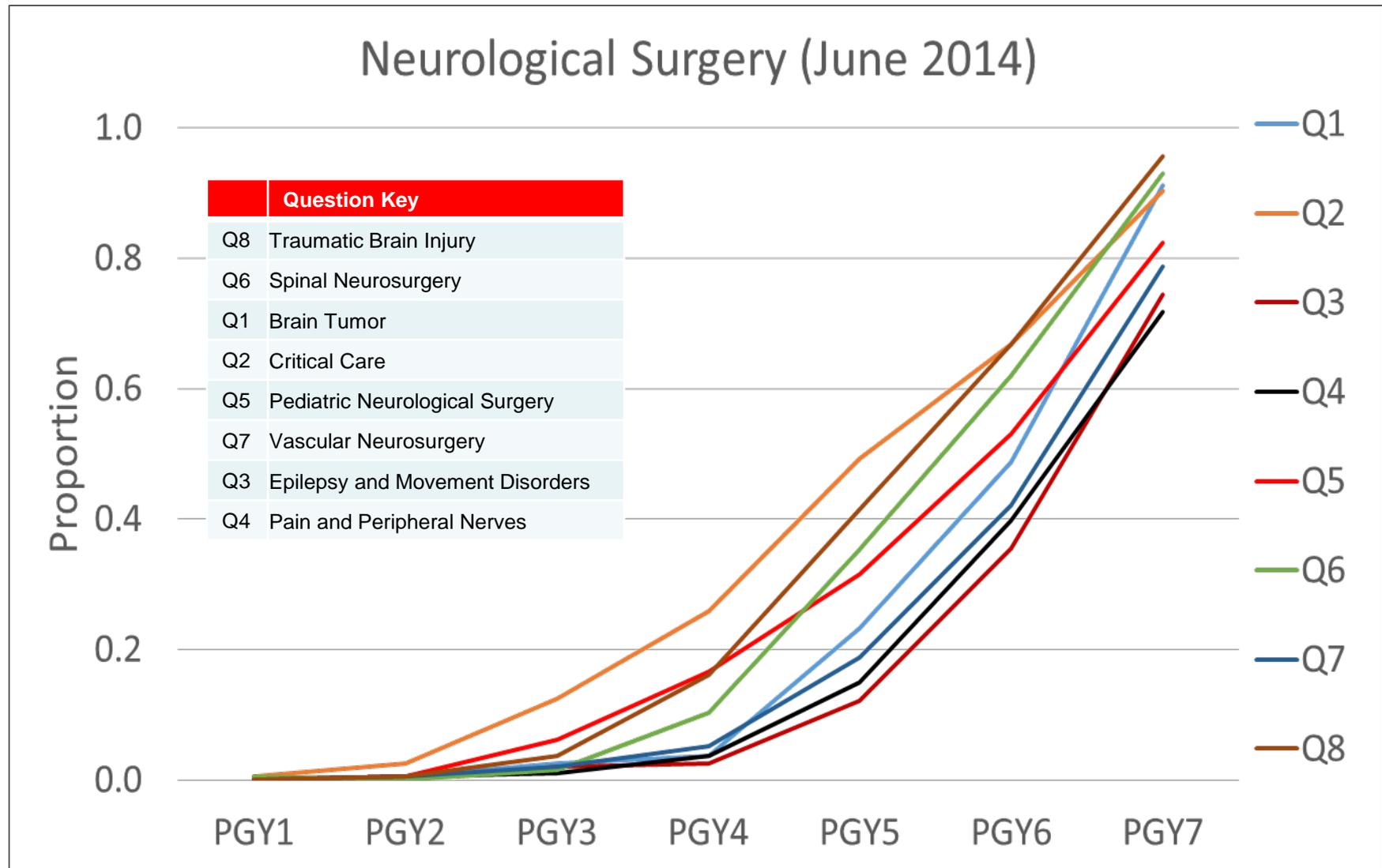


Residents Attaining Level 4 or Higher in All Sub-Competencies



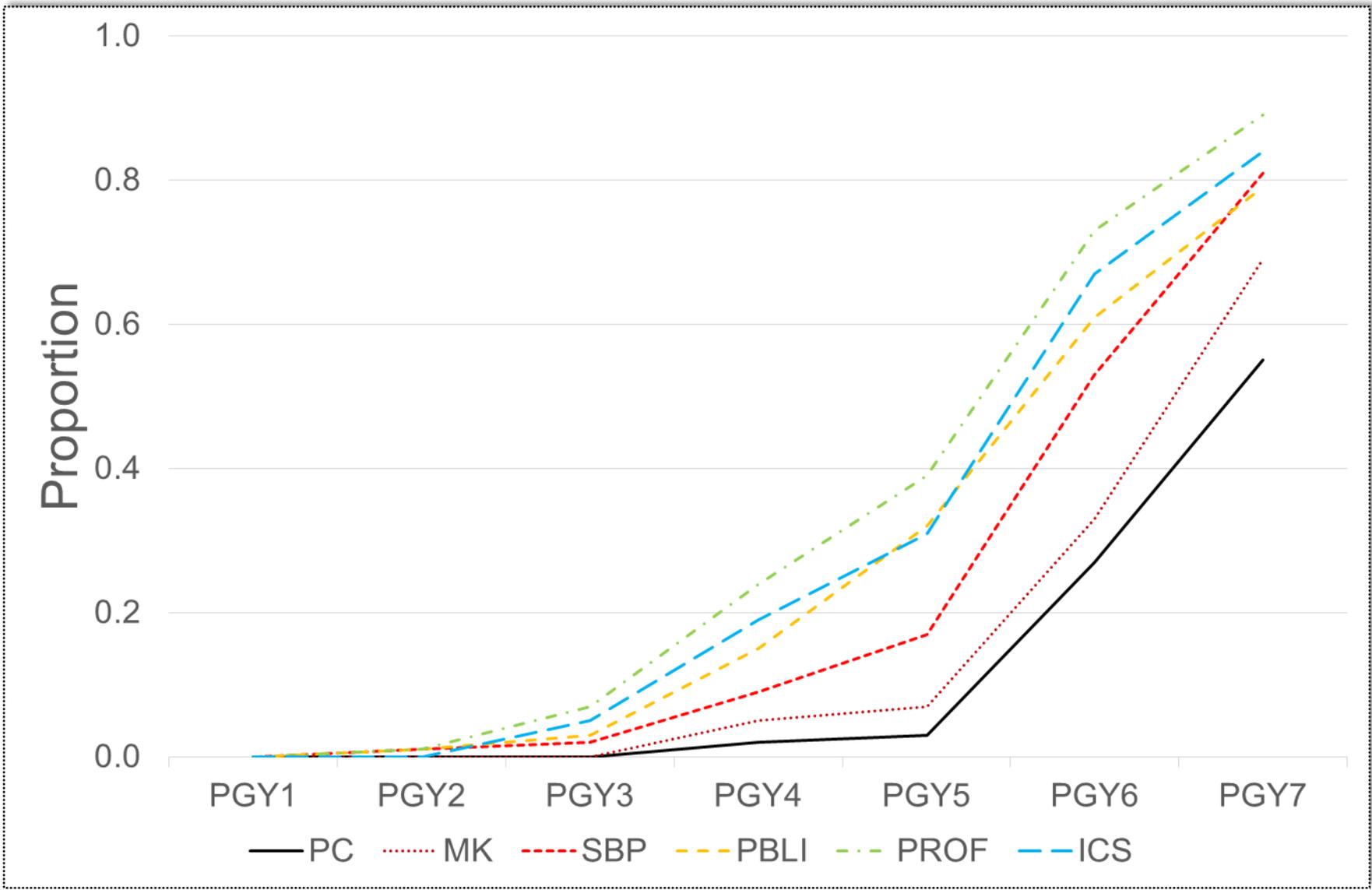
Neurological Surgery, June 2014

Level 4 Attainment per Patient Care Sub-Competency



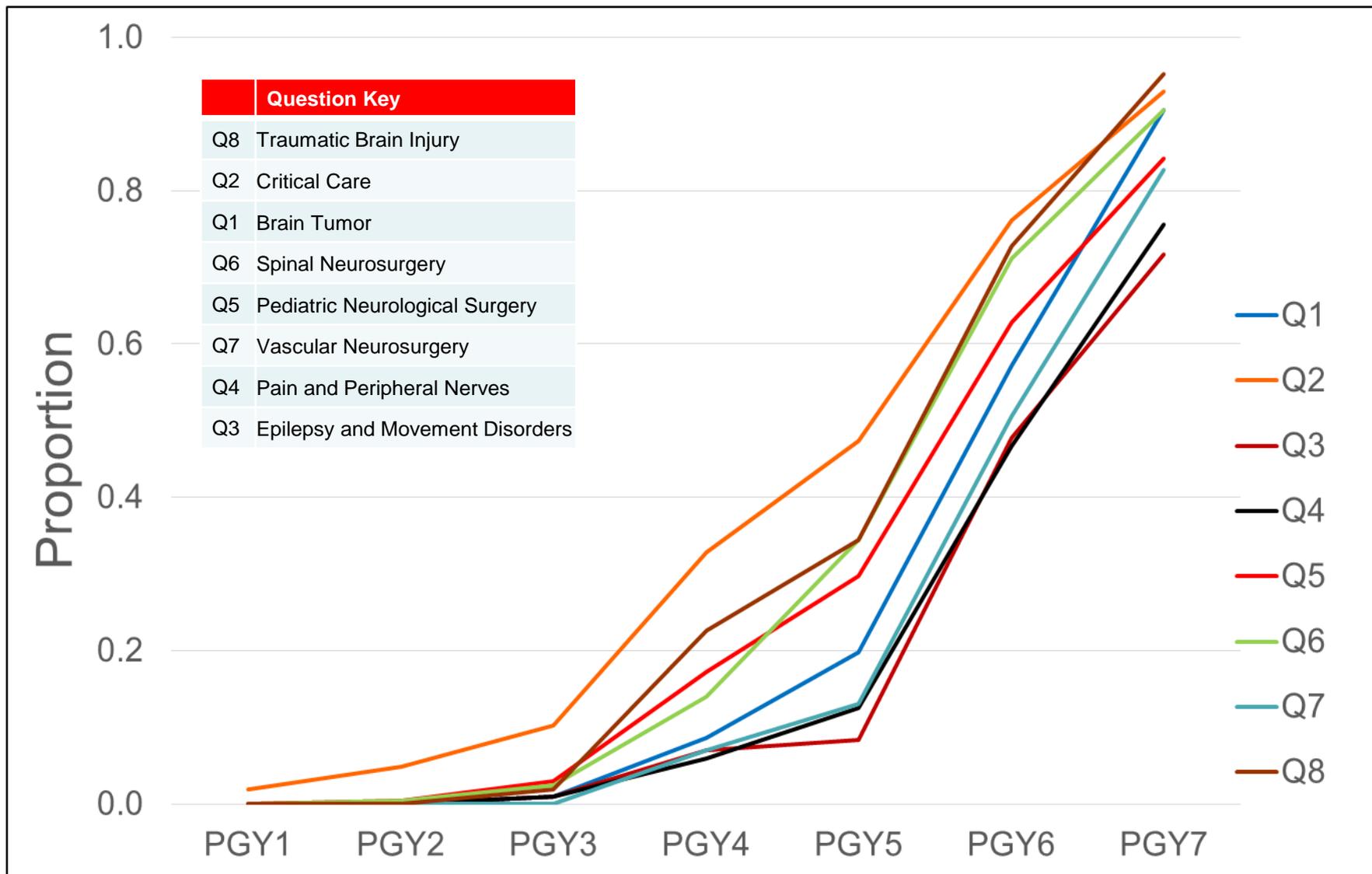
Neurological Surgery, June 2015

Level 4 Attainment per Patient Care Sub-Competency



Neurological Surgery, June 2015

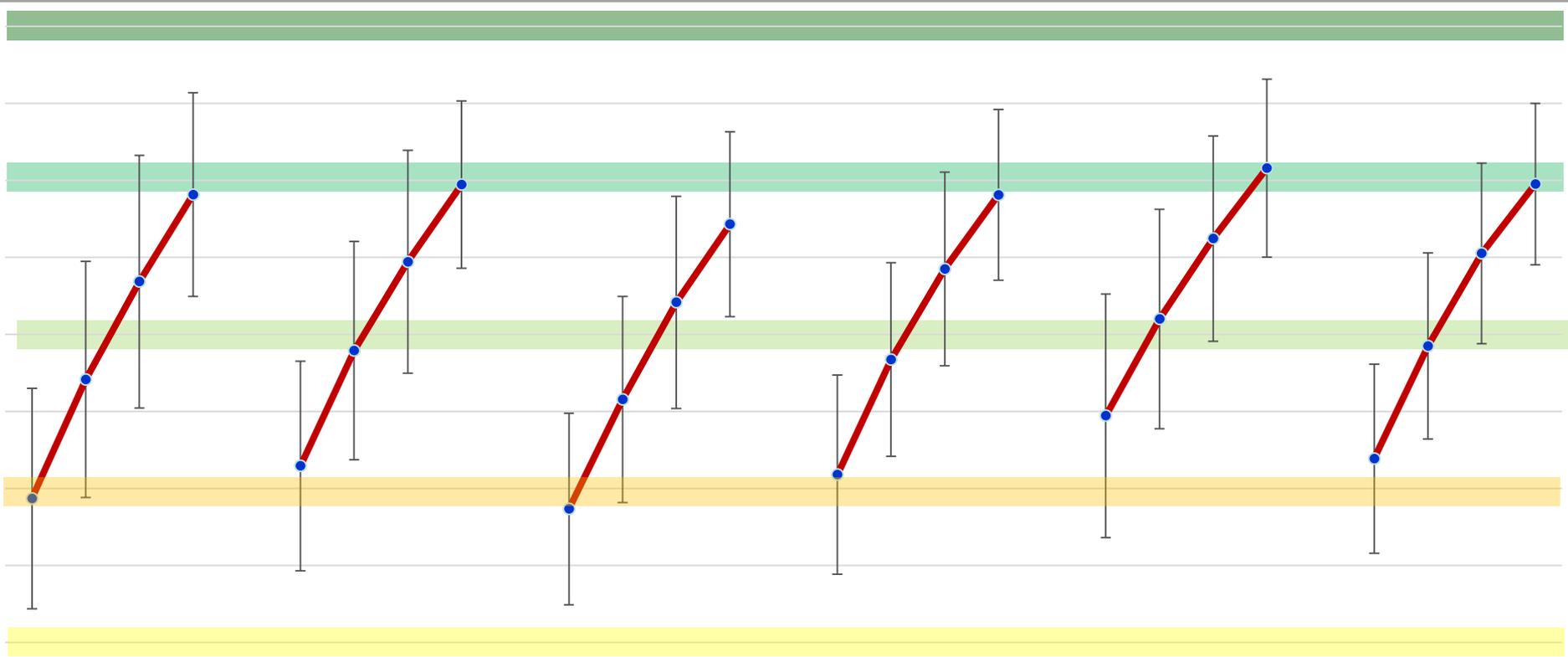
Level 4 Attainment per Patient Care Sub-Competency



All Pathology Residents, May/June 2015

Overall Competency Assessment

$n=2351^*$

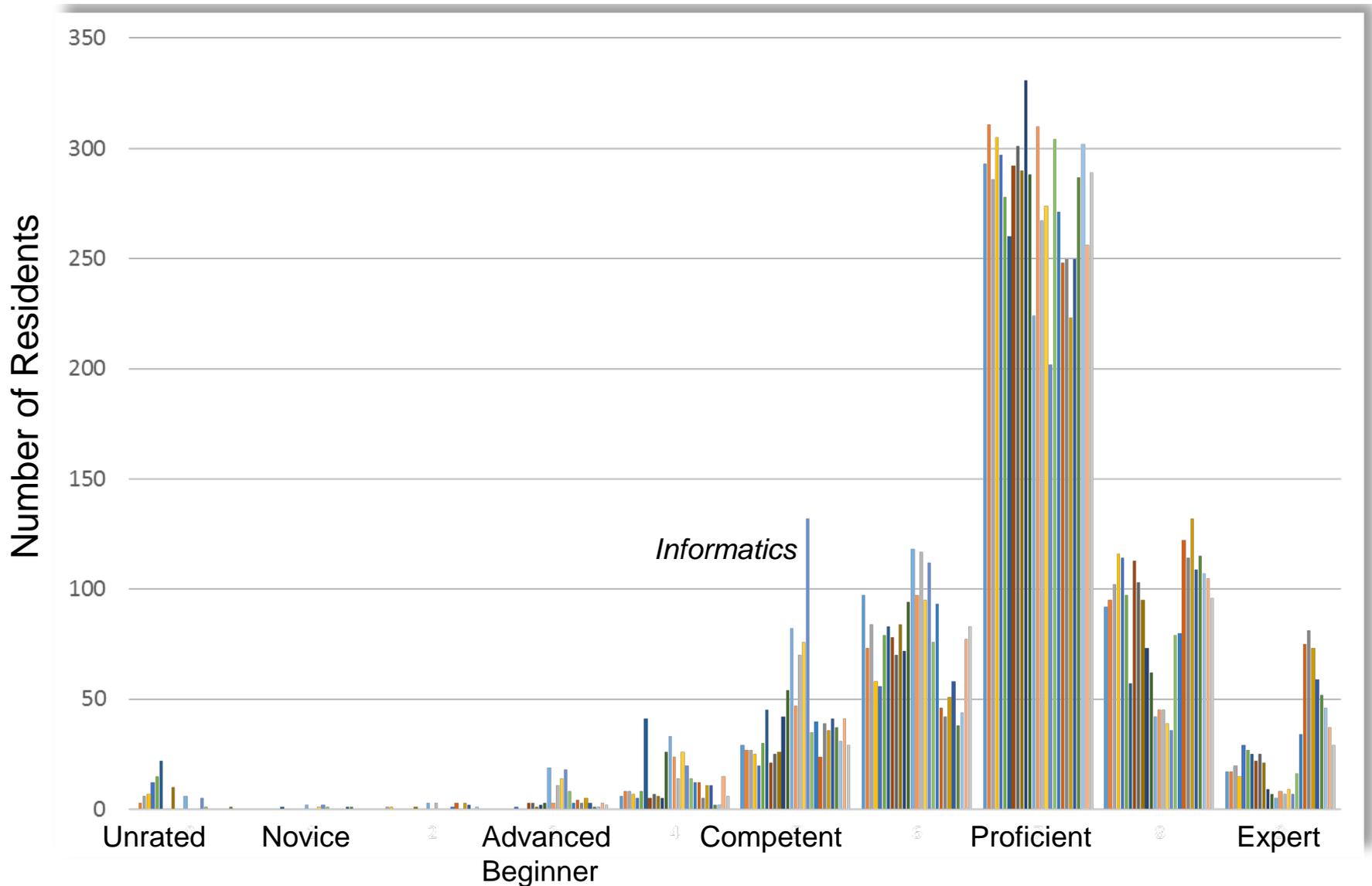


Year1	Year2	Year3	Year4	Year1	Year2	Year3	Year4	Year1	Year2	Year3	Year4	Year1	Year2	Year3	Year4	Year1	Year2	Year3	Year4	Year1	Year2	Year3	Year4
Patient Care				Medical Knowledge				Systems-Based Practice				Practice-Based Learning and Improvement				Professionalism				Interpersonal and Communication Skills			

$n^* = \text{Year 1, 626; Year 2, 617; Year 3, 574; Year 4, 534.}$

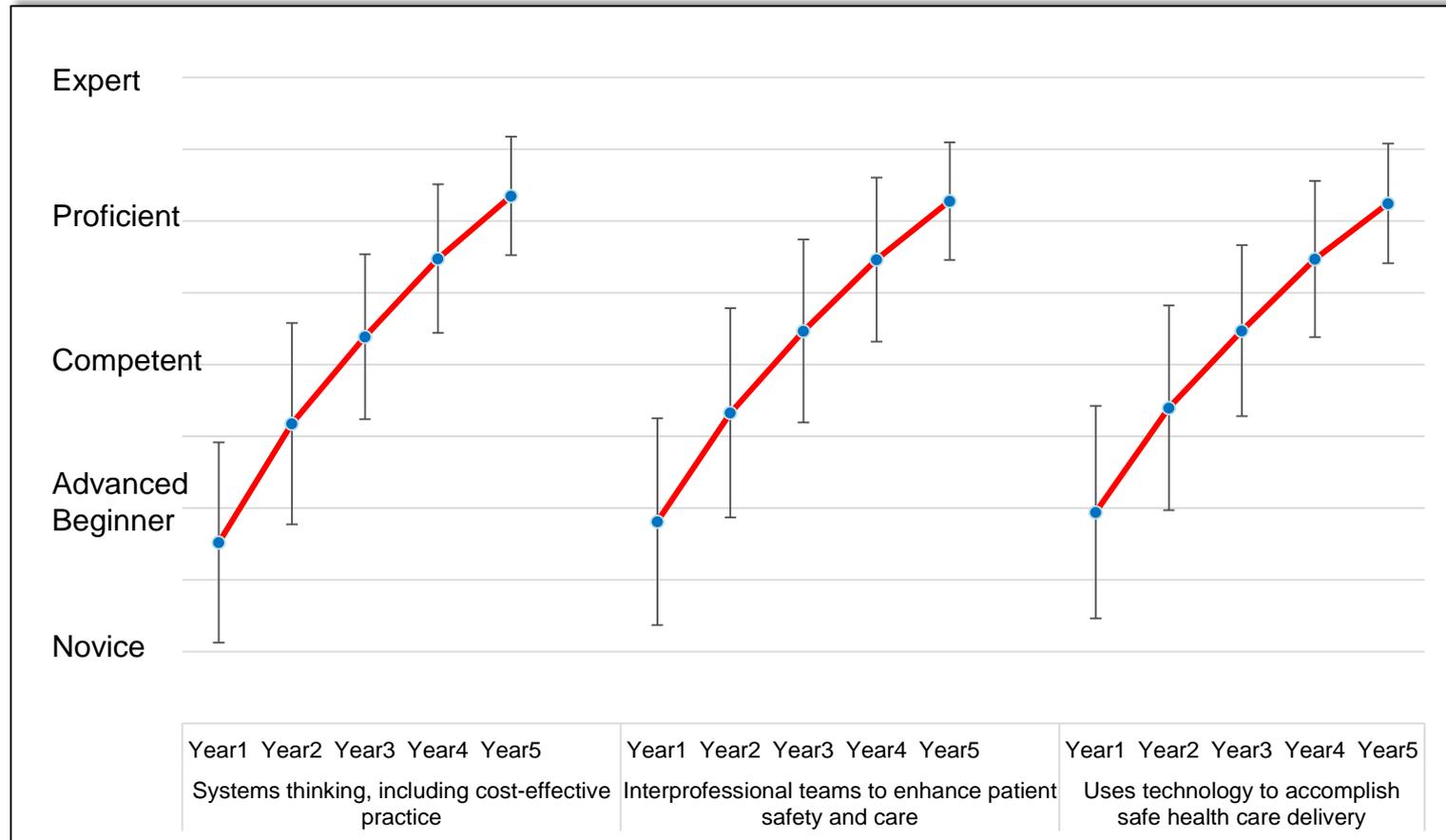
Graduating Pathology Residents, 2015

n = 534 (100%); 27 Sub-competencies



Orthopaedic Surgery 2014

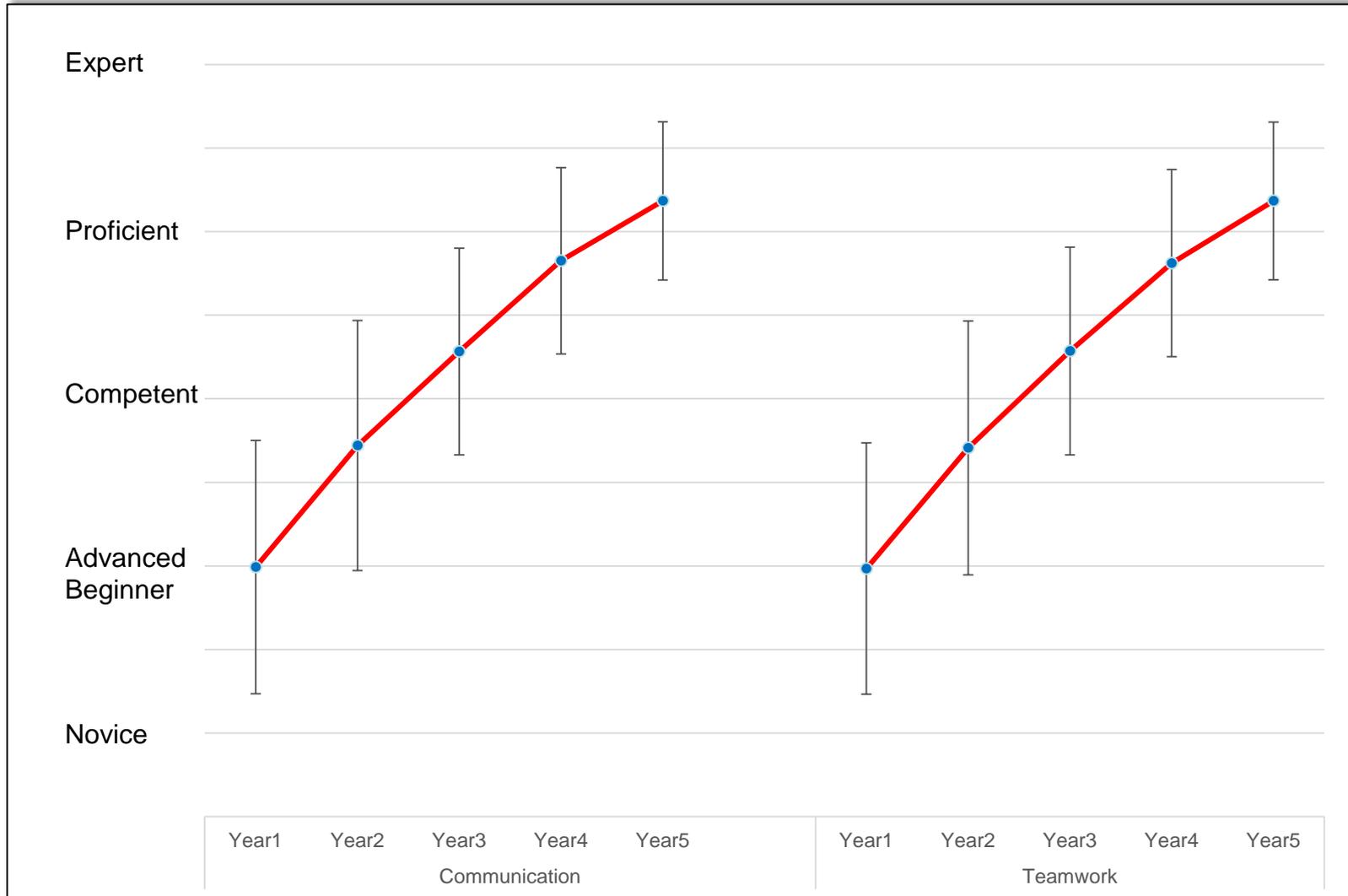
System Based Practice Subcompetencies*



*n** = Year 1, 726; Year 2, 735; Year 3, 711; Year 4, 704; Year 5, 691

Orthopaedic Surgery 2014

Interpersonal and Communication Skills Subcompetencies*



*n** = Year 1, 726; Year 2, 735; Year 3, 711; Year 4, 704; Year 5, 691

Summary

- Positive Developmental Trajectory observed across System Based Practice and Interpersonal and Communication Skills in all specialties
- These observations are likely influenced by current definitions of “Teamwork” in each Clinical Learning Environment
- Structural dimensions of programs/institutions must be examined/modified to manifest opportunities for residents to experience “Optimal Teamwork”
- CLER data would suggest that current conceptualization of teamwork, at least around quality and safety, are less than ideally implemented in some CLE’s

Thank You!

Current and Future Uses of Milestones

- Systematically improve outcomes through national study (research), linking educational outcomes to clinical outcomes of graduates in practice
- Correlate outcomes with attributes of programs and clinical learning environments – to further inform future standard setting
- Provide national comparisons and concrete descriptions of levels of performance for residents, enhancing formative feedback and mentored practice

Current and Future Uses of Milestones

- Provide direct feedback to program directors and faculty to improve their educational efforts.
- Aid in the development of individual physician competence
- Move from idiosyncratic satisfaction of minimal standards to a *“Decentralized but coordinated national educational effort to achieve excellence in preparing the next generation of physicians.”*
- Provide national accountability for our outcomes (*aggregate*) to the Public, justifying ongoing support of our collective efforts

The Accreditation System *After* the “Next Accreditation System”

Thomas J. Nasca, MD, MACP, Kevin B. Weiss, MD, James P. Bagian, MD, PE, and Timothy P. Brigham, MDiv, PhD

Abstract

The Accreditation Council for Graduate Medical Education (ACGME) and the American Board of Medical Specialties and its member boards introduced the six domains of physician competency in 1999. This initiated a national dialogue concerning the elements of competency of the physician,

and incorporation of these elements into the framework of evaluation of residents and fellows, as well as the educational programs within which they are trained. The next step in this process will be the ACGME’s Next Accreditation System, which the authors describe in this commentary.

Recognizing that there are already developments in the assessment of medical education that will influence future models of accreditation, the authors consider some of these innovations and discuss how they may shape the next accreditation system *after* the Next Accreditation System.

Editor’s Note: This is a commentary on Asch DA, Nicholson S, Srinivas SK, Herrin J, Epstein AJ. How do you deliver a good obstetrician? Outcome-based evaluation of medical education. Acad Med. 2014;89:24–26.

In 1999, the Accreditation Council for Graduate Medical Education (ACGME) and the American Board of Medical Specialties (ABMS) described six domains

certification (IC) and maintenance of certification (MOC) processes in the six competencies, and the ACGME required residency and fellowship programs to configure curricula and evaluation processes in the rubric of the six competencies under the umbrella of the Outcome Project.¹ The implied goal of these tandem efforts was to establish desired outcomes of physician training and to maintain and enhance

next accreditation system *after* the Next Accreditation System.

The NAS

Coincident with the efforts of the Outcome Project and an increased focus on physician performance over time, the ACGME has redefined the accreditation process, moving to a model of continuous oversight of key parameters, while

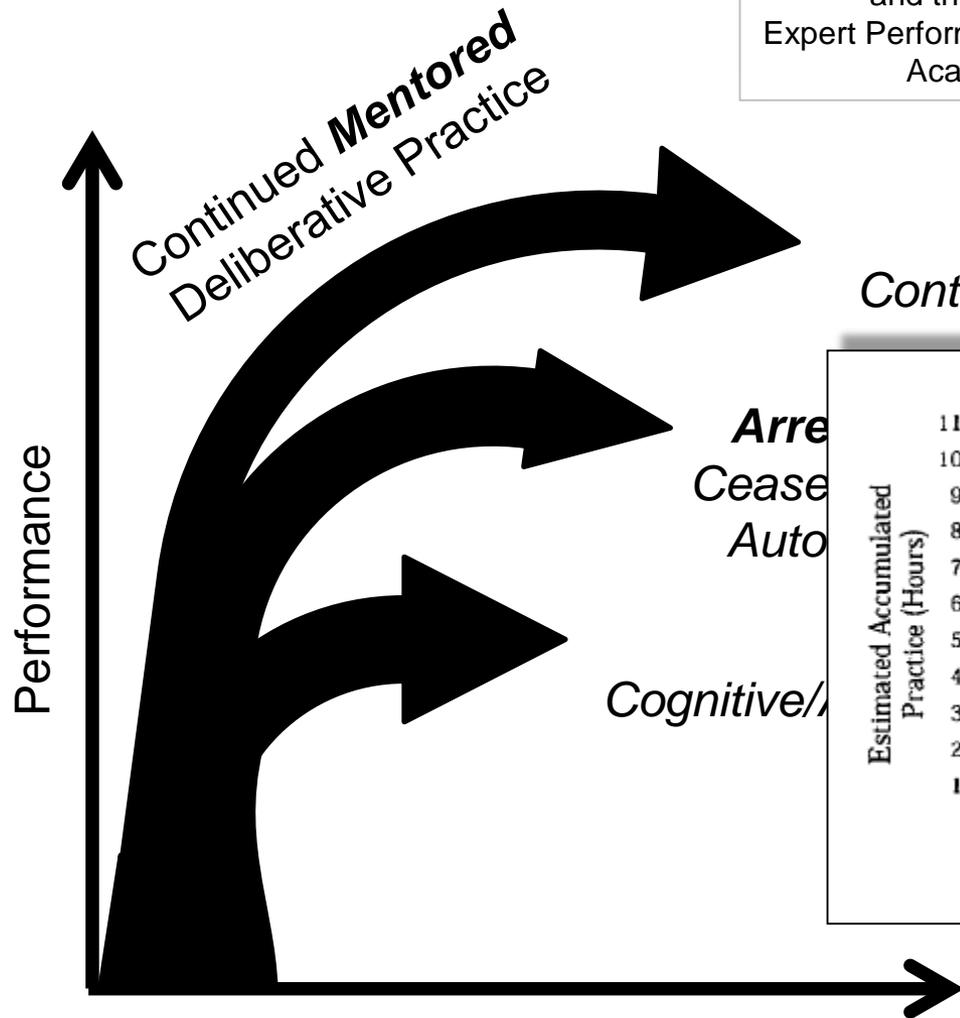


The Challenges in Moving from Time-Based to Competency-Based Medical Education (CBME) at the GME level

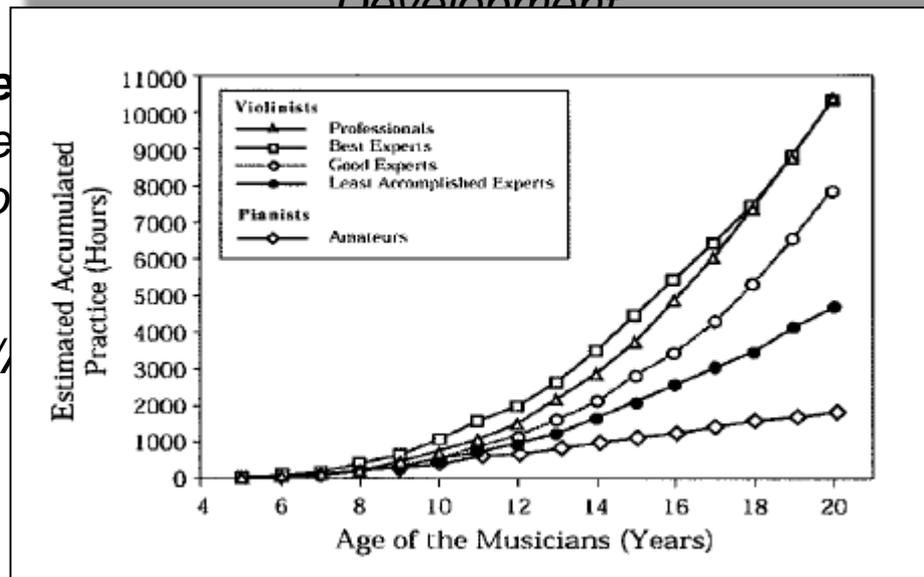
- Need for well-defined and agreed upon outcomes
- Rigorous Pilot studies to examine feasibility
- Must address “deceleration as well as acceleration” in CBME
- Must address attainment of Mastery, not merely Proficiency
- Must first address heterogeneity in Clinical Learning Environment
- ACGME’s CMBE Pilot Process

Issues with “Competency Based” Threshold Decisions for Completion of Training

Derived from K. Anders Ericsson. Deliberate Practice and the Acquisition and Maintenance of Expert Performance in Medicine and Related Domains. Acad. Med. 79(10), S70-S81, 2004

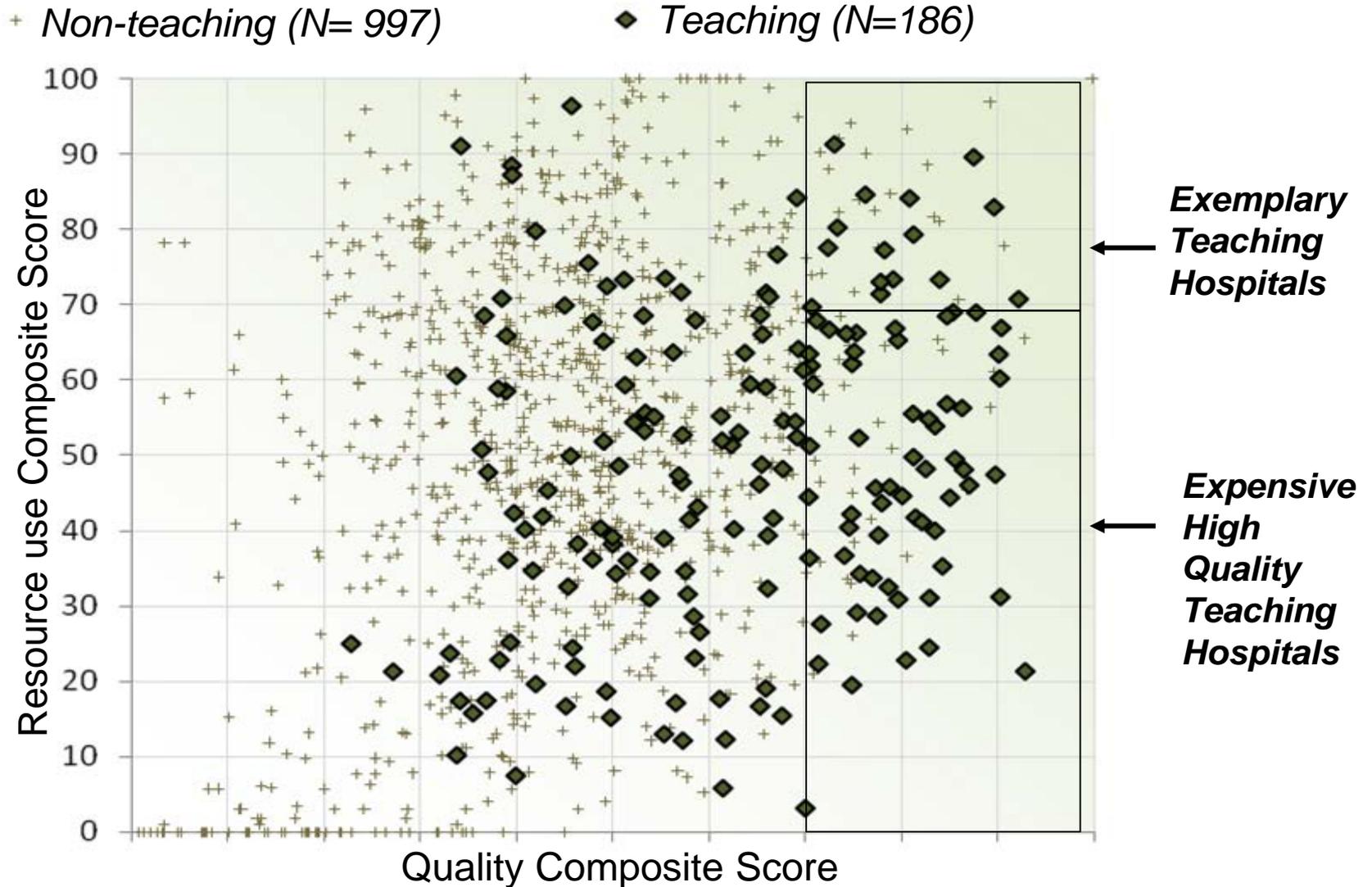


Expert Performance
 Continue Deliberative Practice
 Continue Complex Cognitive/Associative Development



US Hospital Comparisons on Quality and Resource Use

(Higher scores represent better performance)



Source: L. Binder, CEO of Leapfrog Group, email communication, March 2010, Courtesy of Eric Holmboe, MD

Optimism

“What lies behind us
and what lies before us
are tiny matters compared to
what lies within us.”

Oliver Wendell Holmes

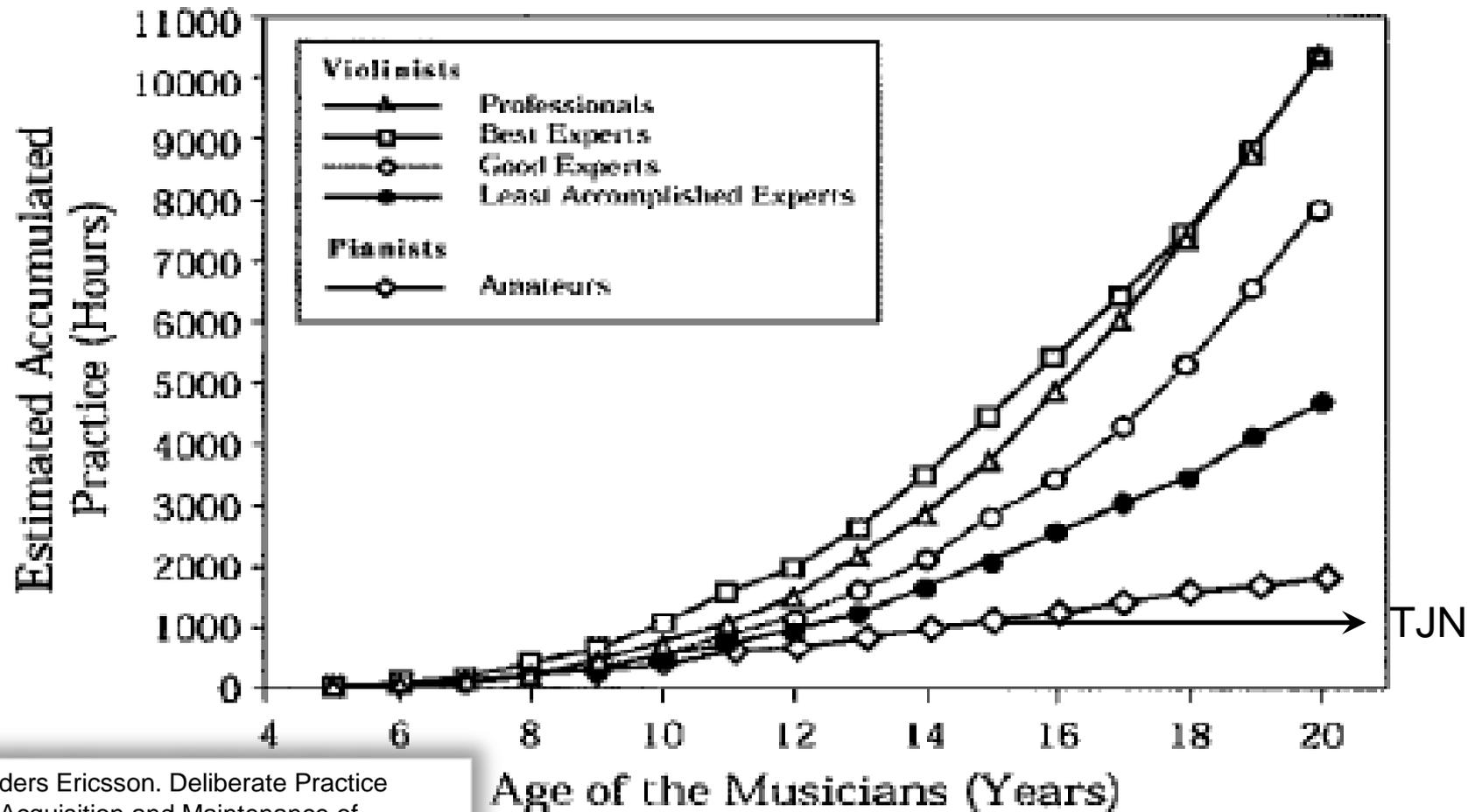
“The Future ain’t
what it used to be!”



Yogi Berra

Philosopher, New York Yankees Catcher

Deliberative Practice in the Development of Professional Violinists



TJN

from K. Anders Ericsson. Deliberate Practice and the Acquisition and Maintenance of Expert Performance in Medicine and Related Domains. Acad. Med. 79(10), S70-S81, 2004

Age of the Musicians (Years)

Reliability Across Evaluation Methods

Slide derived from that created by Cees van der Vleuten, 2010
as presented by Brian Hodges, ACGME Annual Educational Conference, 3/2/2013

Testing Time (hrs)	Multiple Choice Questions ¹	Case Based Short Essay ²	Patient Management Problems ¹	Oral Examination ³	Long Case ⁴	Objective Structured Clinical Evaluation (OSCE) ⁵
1	0.62	0.68	0.36	0.50	0.60	0.47
2	0.76	0.73	0.53	0.69	0.75	0.64
4	0.93	0.84	0.69	0.82	0.86	0.78
8	0.93	0.82	0.82	0.90	0.90	0.88

Review Article Reference: van der Vleuten, CPM, Schuwirth, LWT. Assessing professional competence: from methods to Programmes. *Medical Education* 2005; 39: 309–317

¹ **Norcini JJ.** Reliability, validity and efficiency of multiple choice question and patient management problem item formats in assessment of clinical competence. *Medical education*. 1985;19(5):238-47.

² **Stalenhoef-Halling et al.,** 1990

³ **Swanson, David B.** A measurement framework for performance-based tests. In: Hart I, Harden R, eds, *Further Developments in Assessing Clinical Competence*. Montreal: Can-Heal publications 1987;13–45.

⁴ **Wass, V., Jolly, B.** Does observation add to the validity of the long case? *Medical Education* 2001;35:729±734

⁵ **Petrusa, ER.** Status of Standardized Patient Assessment. *Teaching and Learning in Medicine*, 16(1), 98–110 and: Clinical performance assessments. In *International handbook of research in medical education*.

Dordrecht, The Netherlands:

Kluwer Academic, 2002.

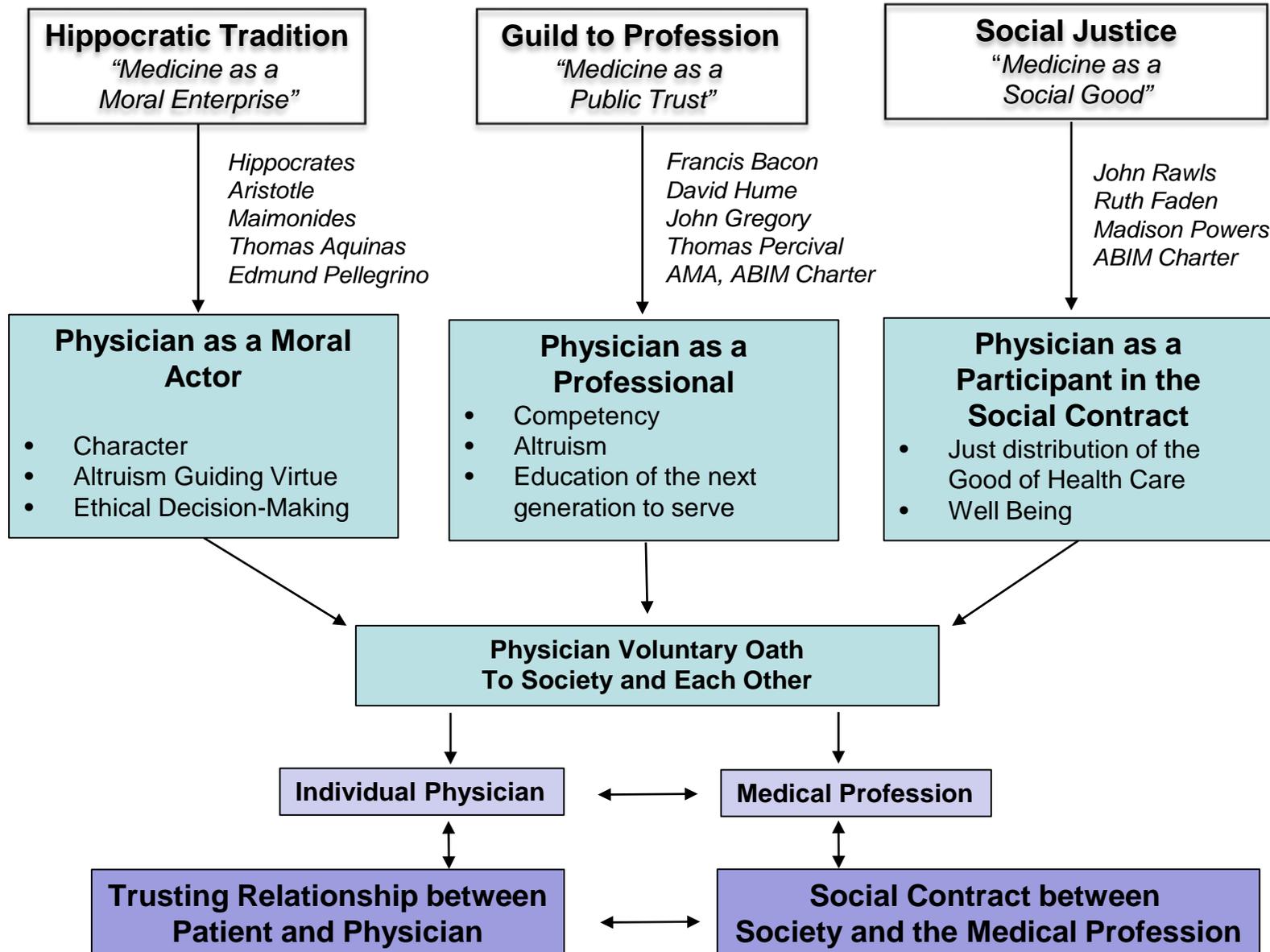
Reliability of Oral Examinations¹

Slide derived from that created by Cees van der Vleuten, 2010
as presented by Brian Hodges, ACGME Annual Educational Conference, 3/2/2013

Testing Time (hrs)	Number of Cases	Same Examiner for All Cases	New Examiner for Each Case	Two New Examiners for Each Case
1	2	0.31	0.50	0.61
2	4	0.47	0.69	0.76
4	8	0.47	0.82	0.86
8	12	0.48	0.90	0.93

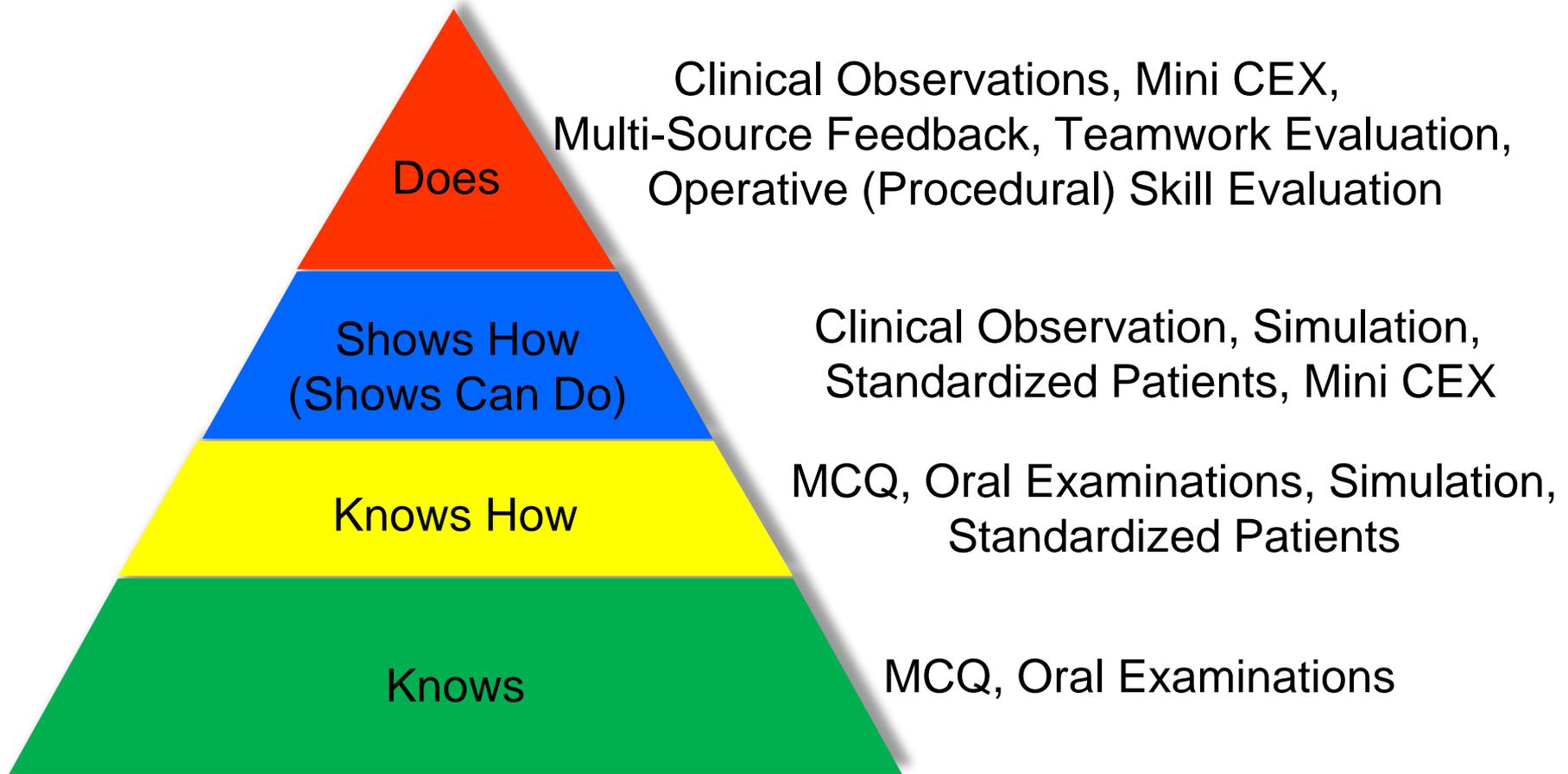
¹ **Swanson, David B.** A measurement framework for performance-based tests. In: Hart I, Harden R, eds, Further Developments in Assessing Clinical Competence. Montreal: Can-Heal publications 1987;13–45.
See also, **Swanson, DB.** Arch Intern Med 1987;147:1981-1985.

Traditions Contributing to the American Concept of Professionalism



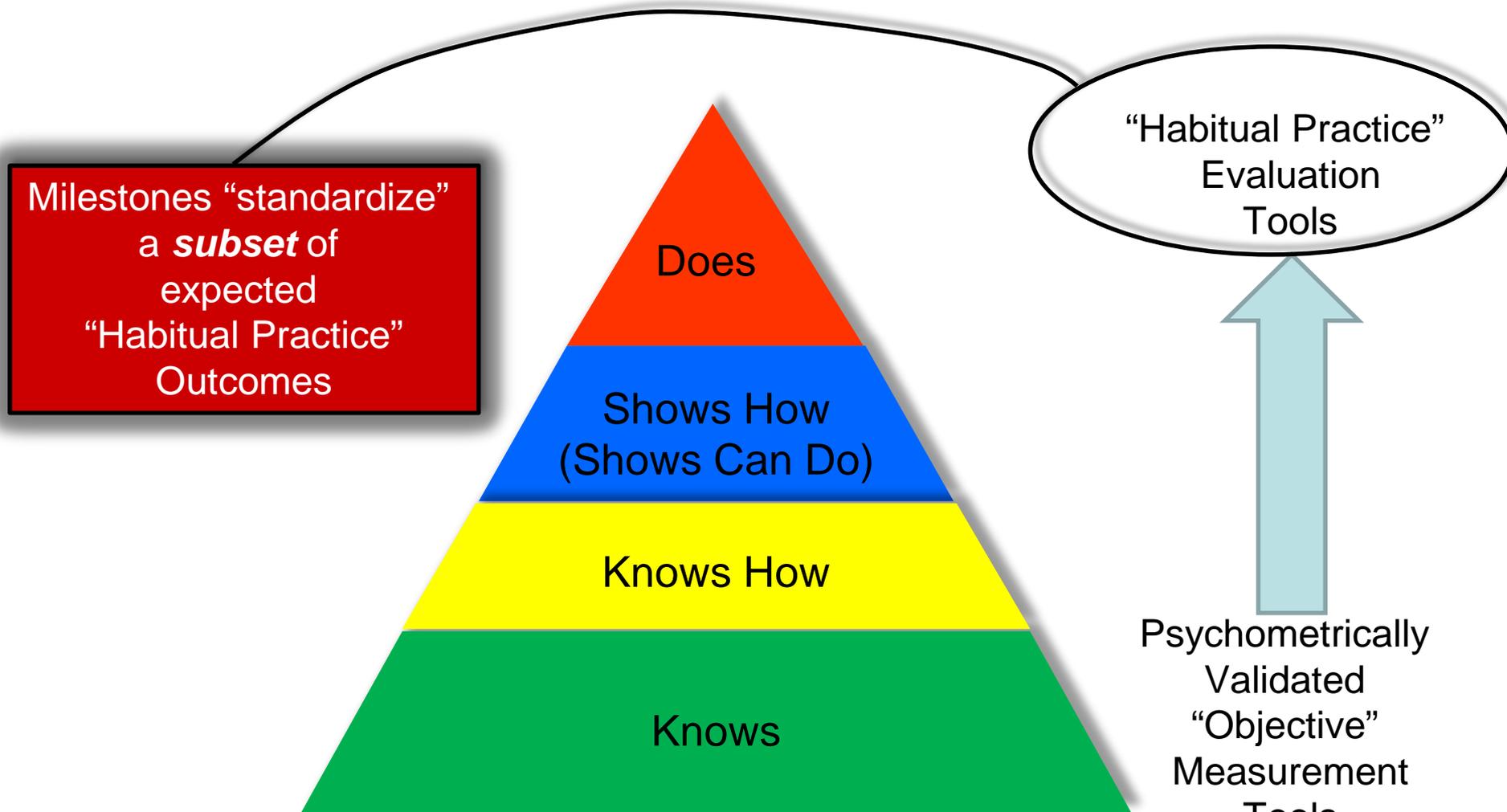
Miller's Pyramid of Clinical Competence¹

¹Miller, GE. Assessment of Clinical Skills/Competence/Performance. Academic Medicine (Supplement) 1990. 65. (S63-S67)



¹ van der Vleuten, CPM, Schuwirth, LWT. Assessing professional competence: from Methods to Programmes. **Medical Education** 2005; 39: 309–317

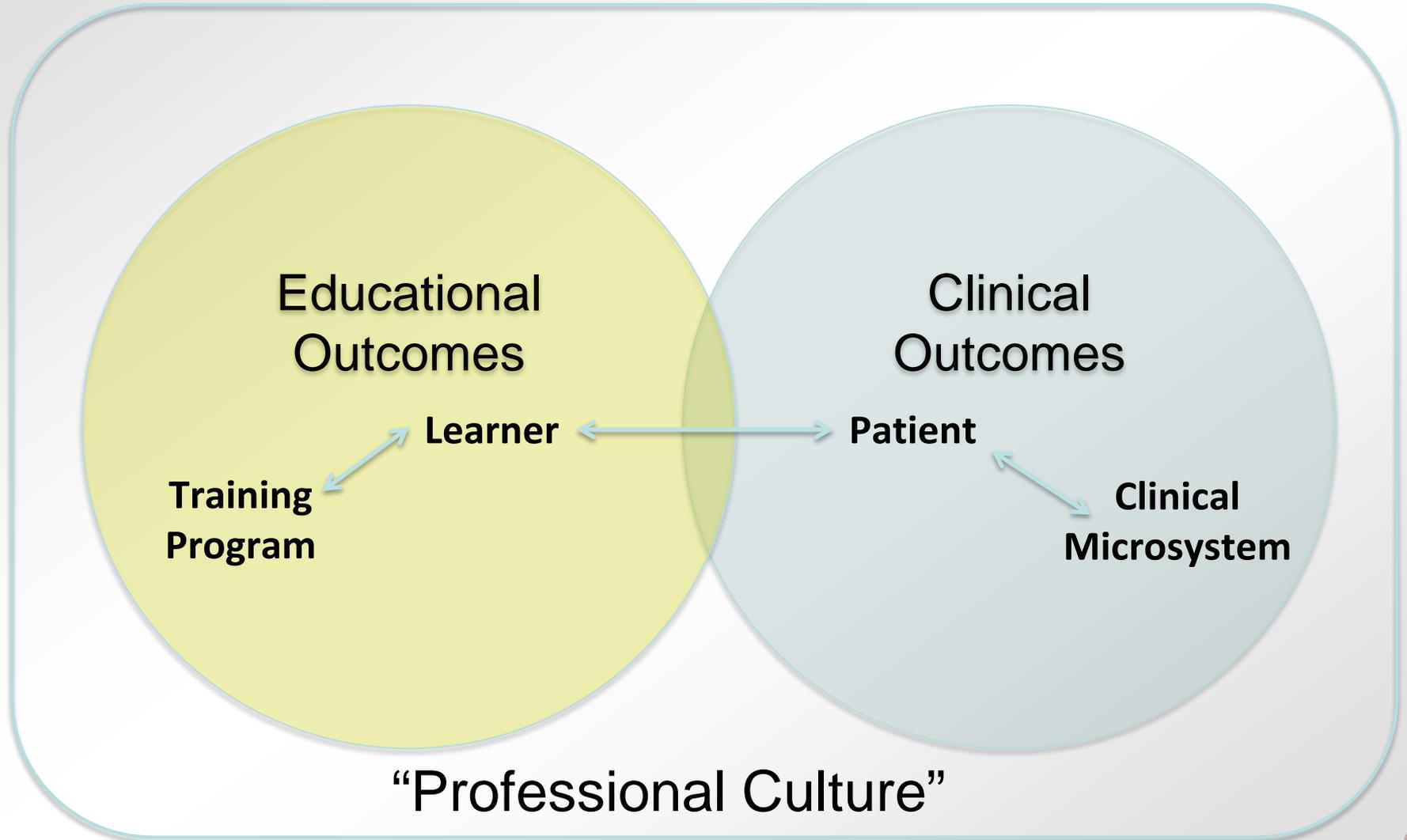
Miller's Model of Clinical Competence



Miller, GE. **Assessment of Clinical Skills/Competence/Performance.** Academic Medicine (Supplement) 1990. 65. (S63-S67)

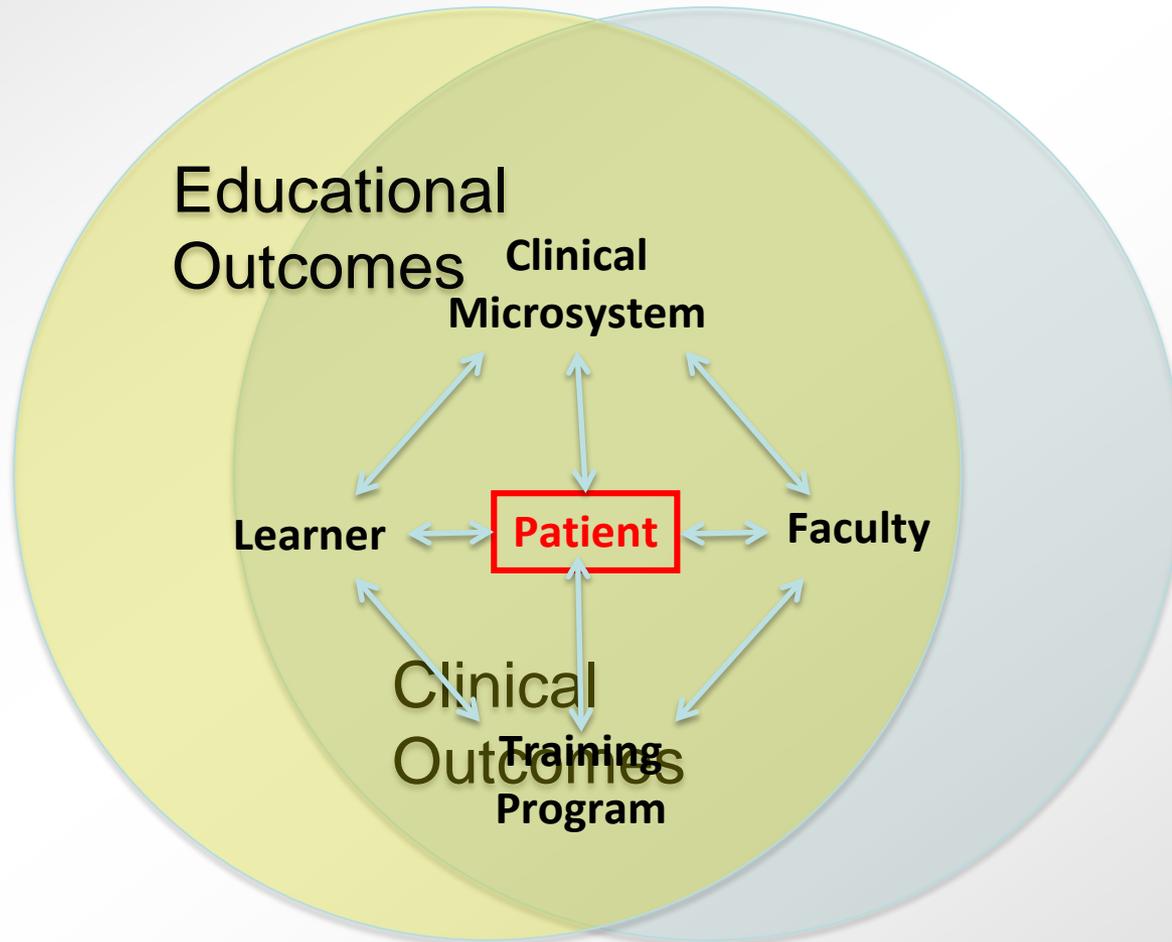
van der Vleuten, CPM, Schuwirth, LWT, Scheele, F, Driessen, EW, Hodges, B. **The assessment of professional competence: building blocks for theory development.** Best Practice & Research Clinical Obstetrics and Gynaecology 24 (2010) 703–719

Traditional Medical Education Perspective

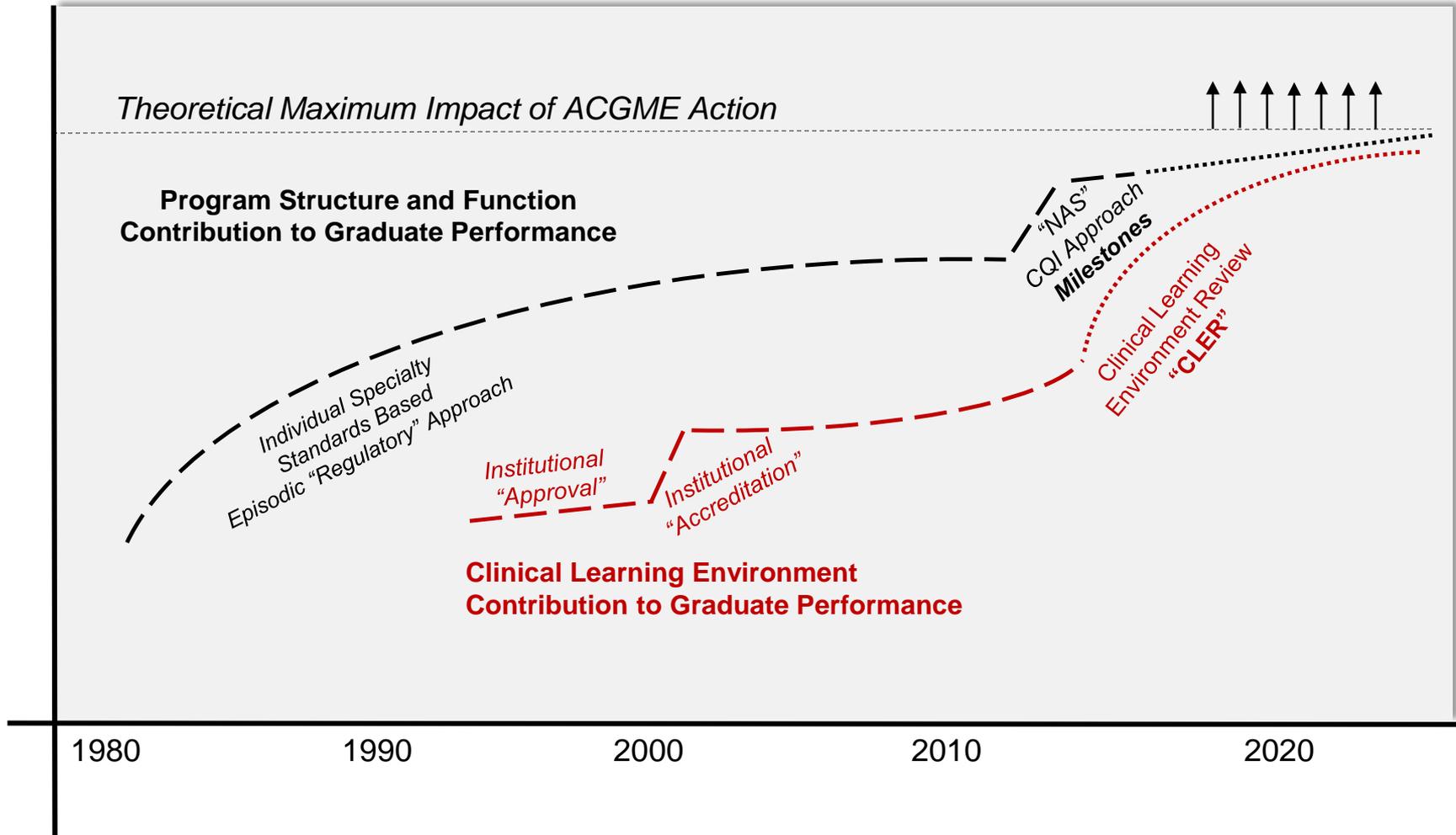


Needed Perspective

Institutional and System Professionalism



Elements of ACGME Accreditation Contribution to Graduate Performance





The Way Ahead Is Difficult But Not Impossible

©Heidi Baikie

Thank You!



Advancing for Quality: Evolution in CME

Graham McMahon, MD, MMSc
President and CEO, ACCME



Disclosure of relevant financial relationships

- **Nothing to disclose**

Federation of
**STATE
MEDICAL
BOARDS**

AMA
AMERICAN MEDICAL
ASSOCIATION

AHME

ASSOCIATION FOR HOSPITAL MEDICAL EDUCATION



**American Board
of Medical Specialties**

Higher standards. Better care.®



CMSS

Council of Medical
Specialty Societies



**American Hospital
Association**



AAMC

Tomorrow's Doctors, Tomorrow's Cures®

Scope of the Enterprise



2014 Reporting Year

Physician Interactions	Other Learner Interactions
13,599,687	11,587,518

Activities	Hours of Instruction
147,024	1,033,615



Providers:

1,225 SMS-accredited
683 ACCME-accredited

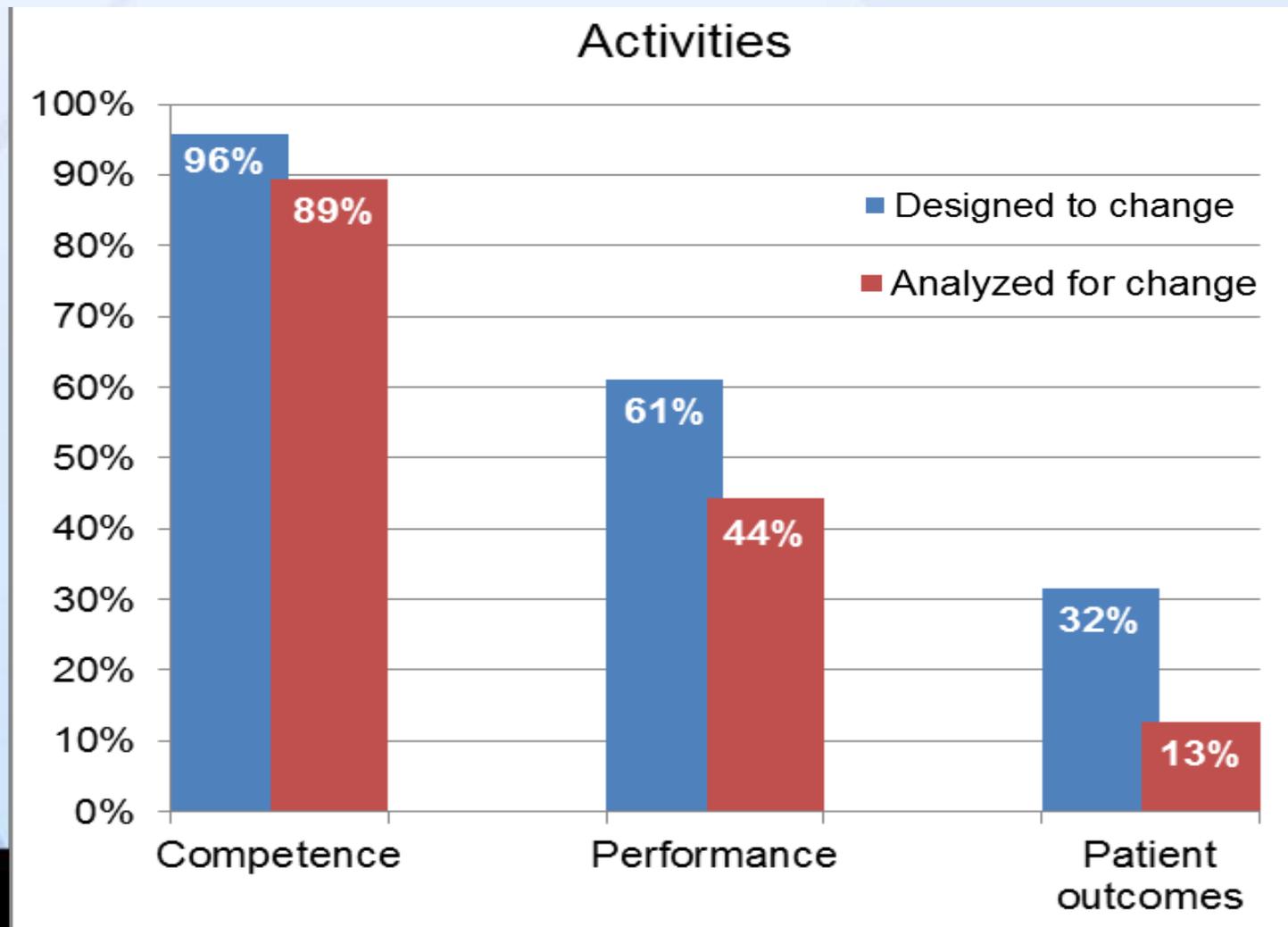


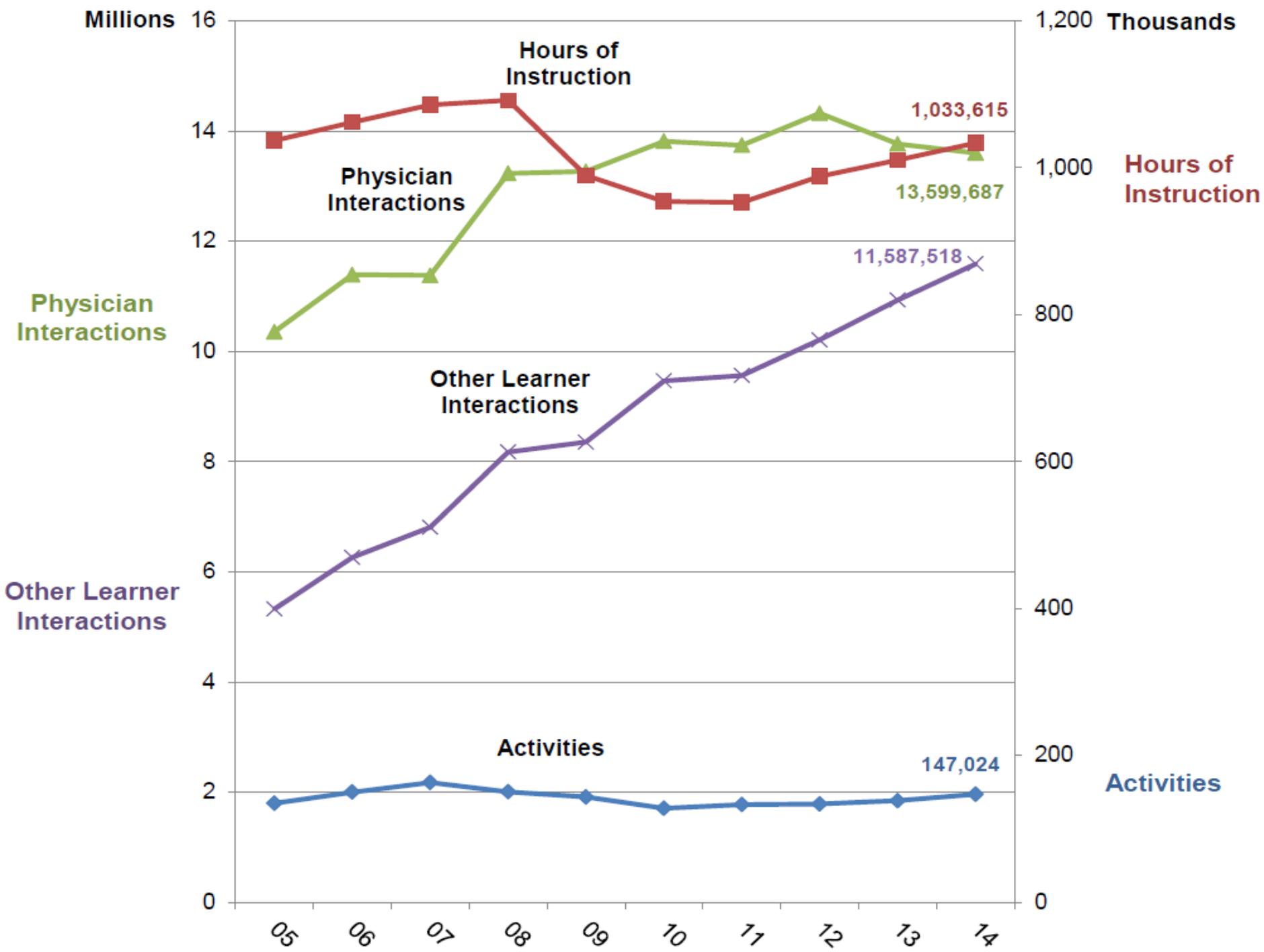
Types of Activities in 2014

	Activities
Courses	71,047
Regularly scheduled series	23,427
Internet (live)	4,063
Test-item writing	87
Committee learning	575
Performance improvement	470
Internet searching and learning	82
Internet (enduring materials)	34,006
Enduring materials (other)	8,452
Learning from teaching	149
Journal CME	4,596
Manuscript review	70

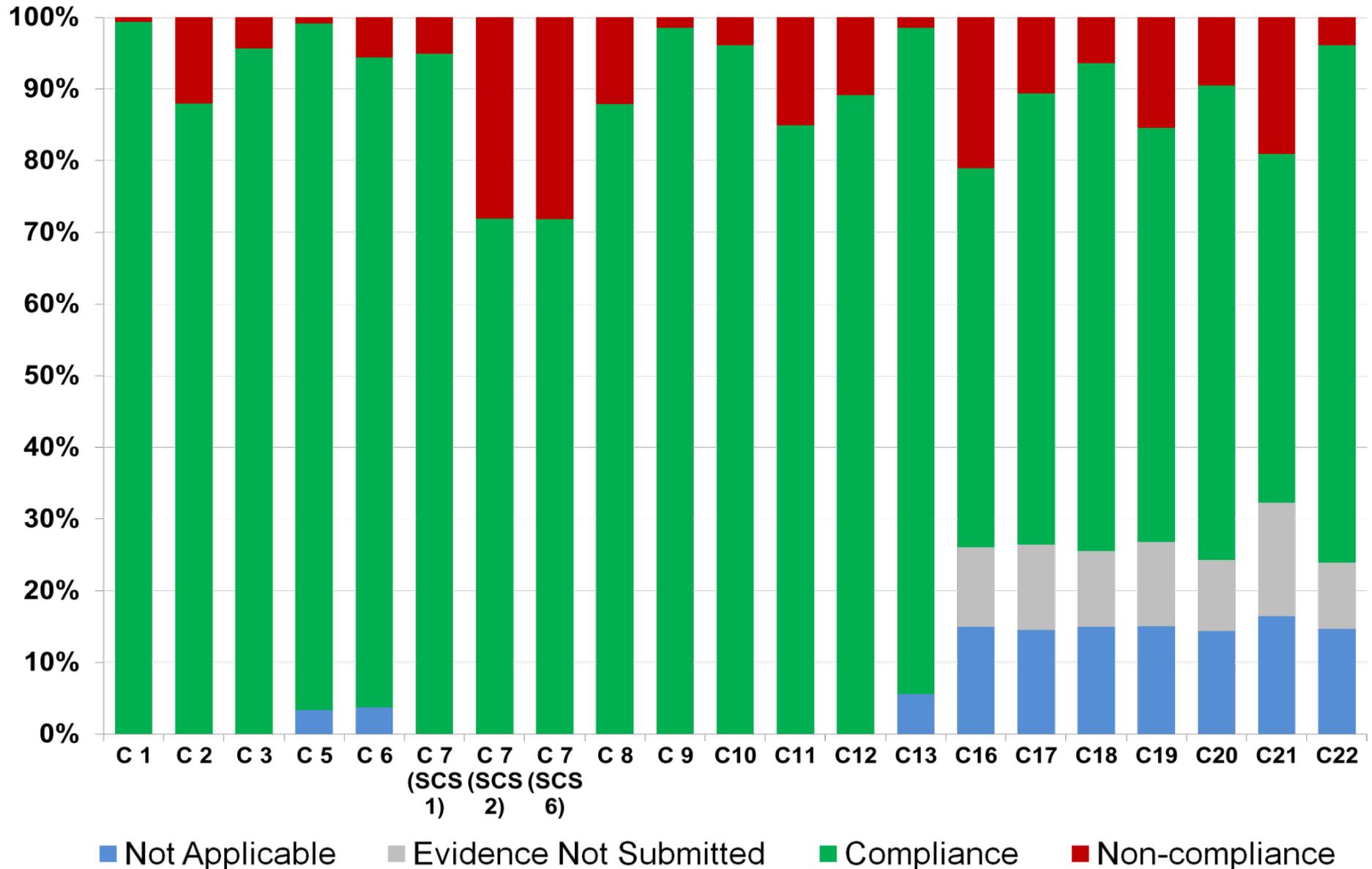


CME Presented by Providers Accredited in the ACCME System - 2014





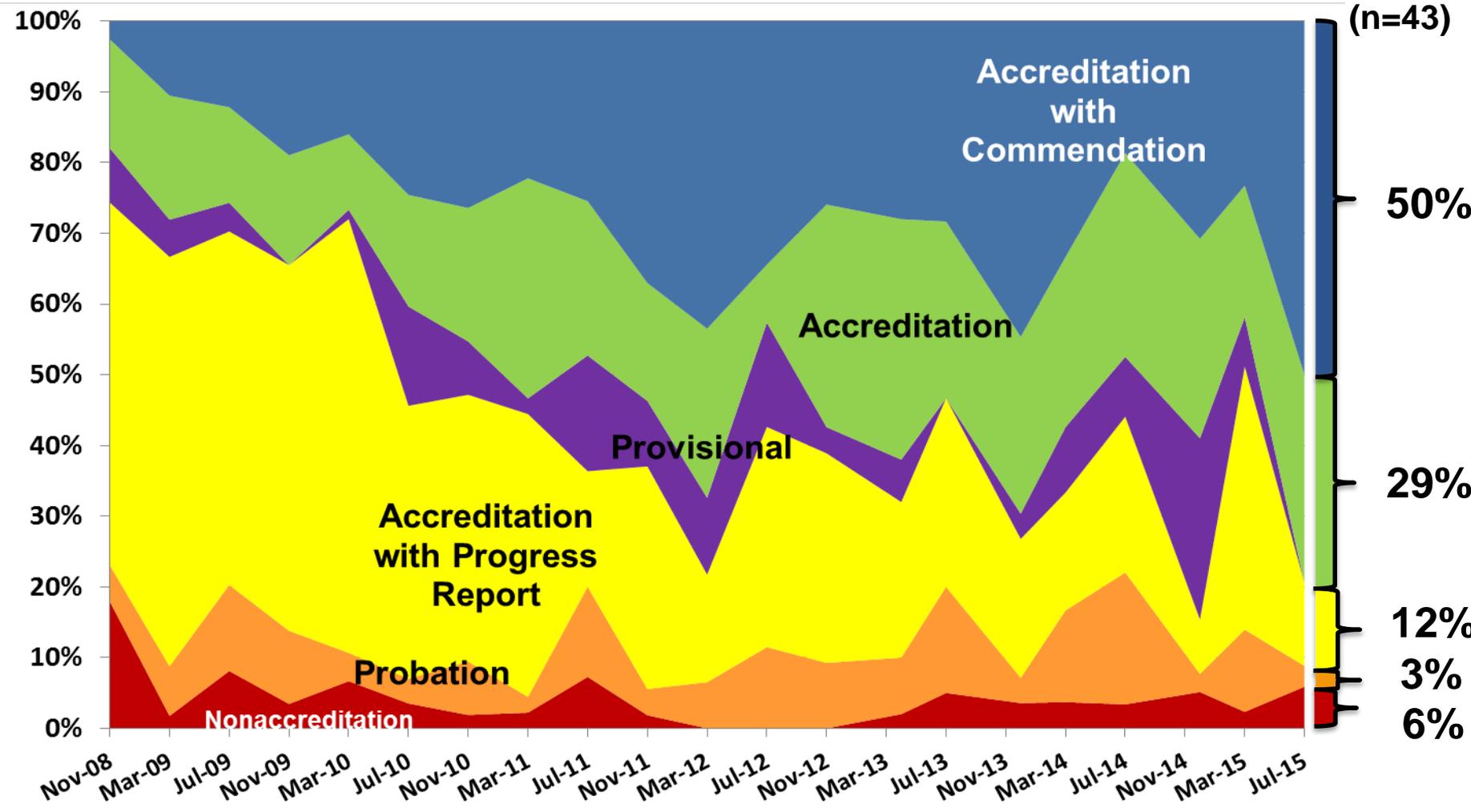
Overall Compliance Results for November 2008 through July 2015 (n=1,123)



Accreditation Decisions

November 2008 to July 2015

(n=1,123)



A new approach...



Revised Accreditation with Commendation Criteria: A work in progress...

CME That Counts for MOC



“By collaborating with ACCME, ABIM will open the door to even more options for physicians engaged in MOC and will allow them to get MOC credit for high-quality CME activities they are already doing.”



American Board
of Internal Medicine®



Richard J. Baron, MD

President and CEO

American Board of Internal Medicine

ACCME-ACGME Alignment



- Integration with CLER (Clinical Learning Environment Review);
- Share milestone data
- Wellness curriculum
- Educational leadership/CLO
- Operational alignment



ACCME-AMA alignment



- Commitment by ACCME and AMA governance to move forward on alignment process
- Preliminary review of AMA PRA format with stakeholders
- Agreement on principles of alignment
- Listening sessions
- Forming a “Bridge Committee”



INTERPROFESSIONAL CONTINUING EDUCATION (IPCE)



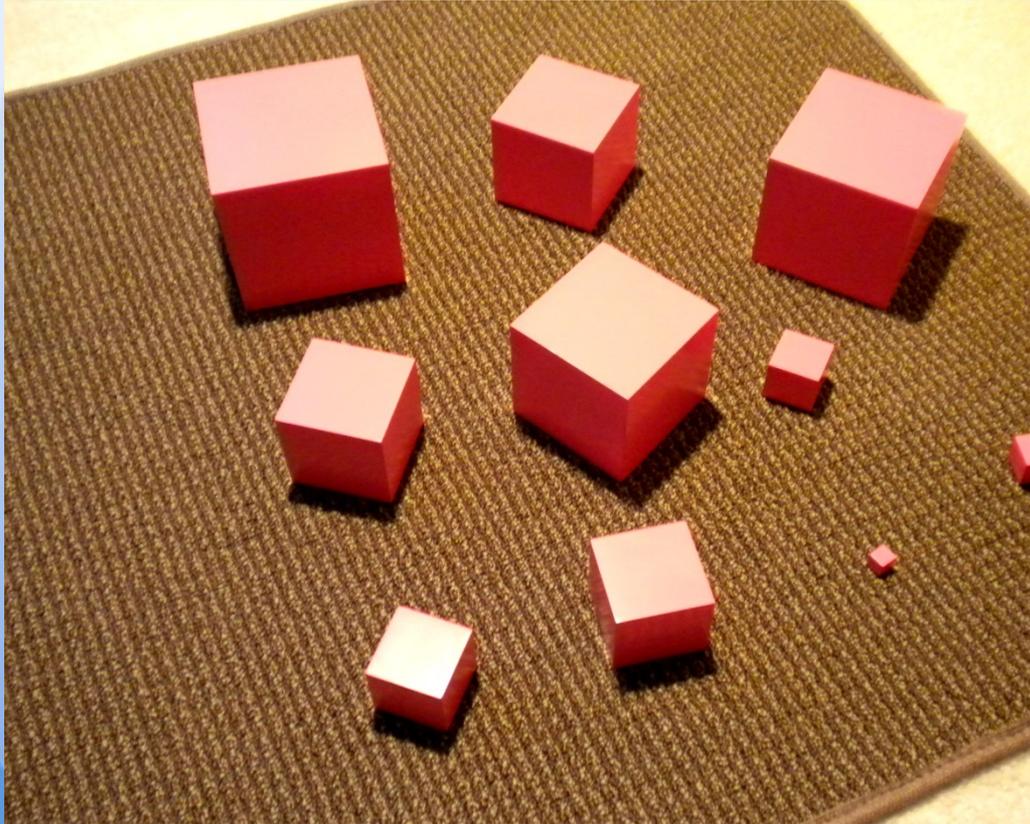
JOINT ACCREDITATION™

INTERPROFESSIONAL CONTINUING EDUCATION



vs.





Meeting Learners' Needs



Health professionals want a learning system that is:



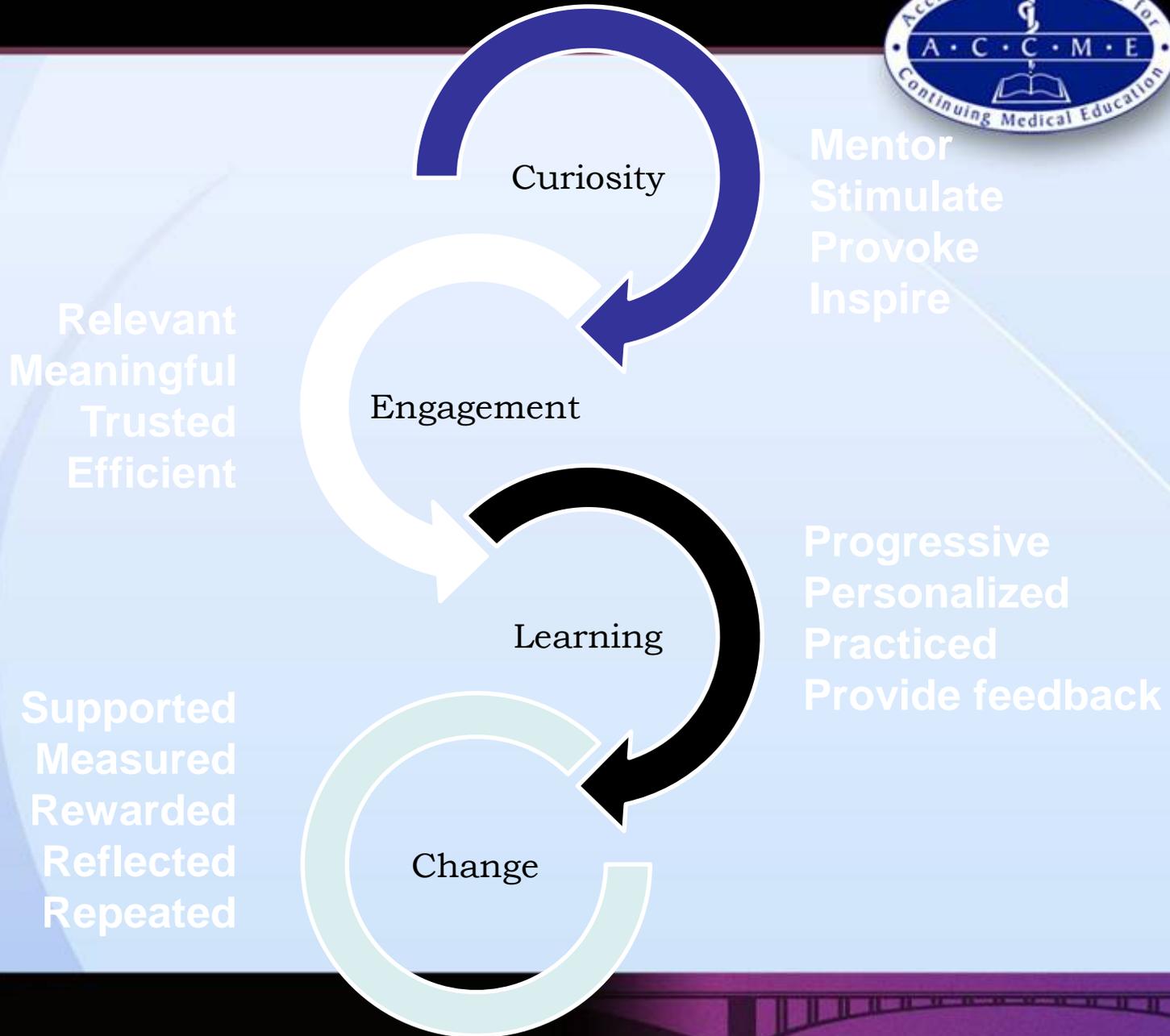
Relevant

Efficient

Effective

Rewarding

Personalized





Emerging Changes in Post-Graduate Education

- Passive → Active Learning
- Single interaction → Series of interactions
- Physician → Team
- Attendance → Participation
- Single modality → Blended learning
- Satisfaction → Higher level outcomes



Evolution for Learners

- Become more self-aware
- Deliberately choose activities
- Avoid promotion & marketing
- Balance online and peer learning
- Actively participate
- Complete evaluations



Evolution for Health Institutions

- Appreciate the strategic power of education
- Recognize the ROI with local CME
 - quality, efficiency, teams, burnout, turnover
- Ensure clinicians have the time and resources to engage in CME
- Nurture teachers and CME professionals



Evolution for Providers

- Change passive to active learning environments
 - Include simulation opportunities
- Involve patients
- Focus on institutional quality goals
- Collaborate with system leadership
- Generate long-term relationships with learners and other organizations



Evolution for Regulators

- Focus on outcomes rather than process or time spent
- Recognize wide diversity of learning approaches
- Encourage and facilitate innovation
- Align regulators and systems
- Provide services to the community



Thank you

Contact me:
gmcmaahon@accme.org