
RESIDENT SELF-ASSESSMENT AND FACULTY ASSESSMENT USING THE INTERNAL MEDICINE MILESTONES: EVALUATING TRENDS BY POST-GRADUATE YEAR AND GENDER

CU Educational Symposium
March 3, 2022

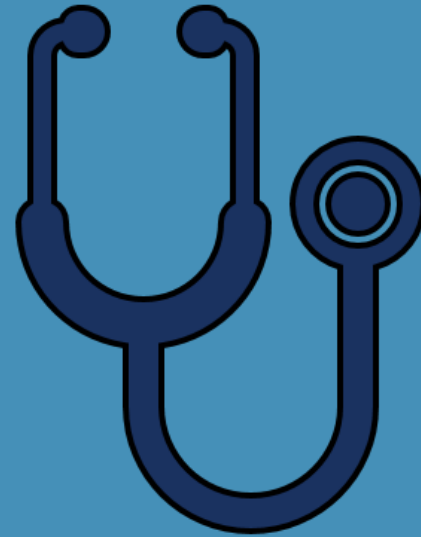


Internal Medicine Residency
Training Program


UNIVERSITY OF COLORADO
ANSCHUTZ MEDICAL CAMPUS

Yasmin Sacro, MD, Krithika Suresh, PhD,
Erin Murphy, MD, Janet Corral MD, Karen Chacko, MD

BACKGROUND



ASSESSMENT & RESIDENT SELF-ASSESSMENT

- 
- Self-Assessment as Important
 - Prior studies on Resident Self Assessment
 - Surgical resident-faculty matches assessments moderately accurate (J Surg 2021)
 - Women at risk of underestimating their abilities in comparison to male colleagues (J Surg 2005)
 - We investigated the concordance of resident self-assessment in comparison to faculty assessment at a large academic internal medicine program.

ACGME CORE COMPETENCIES: 2001

Patient Care

Medical
Knowledge

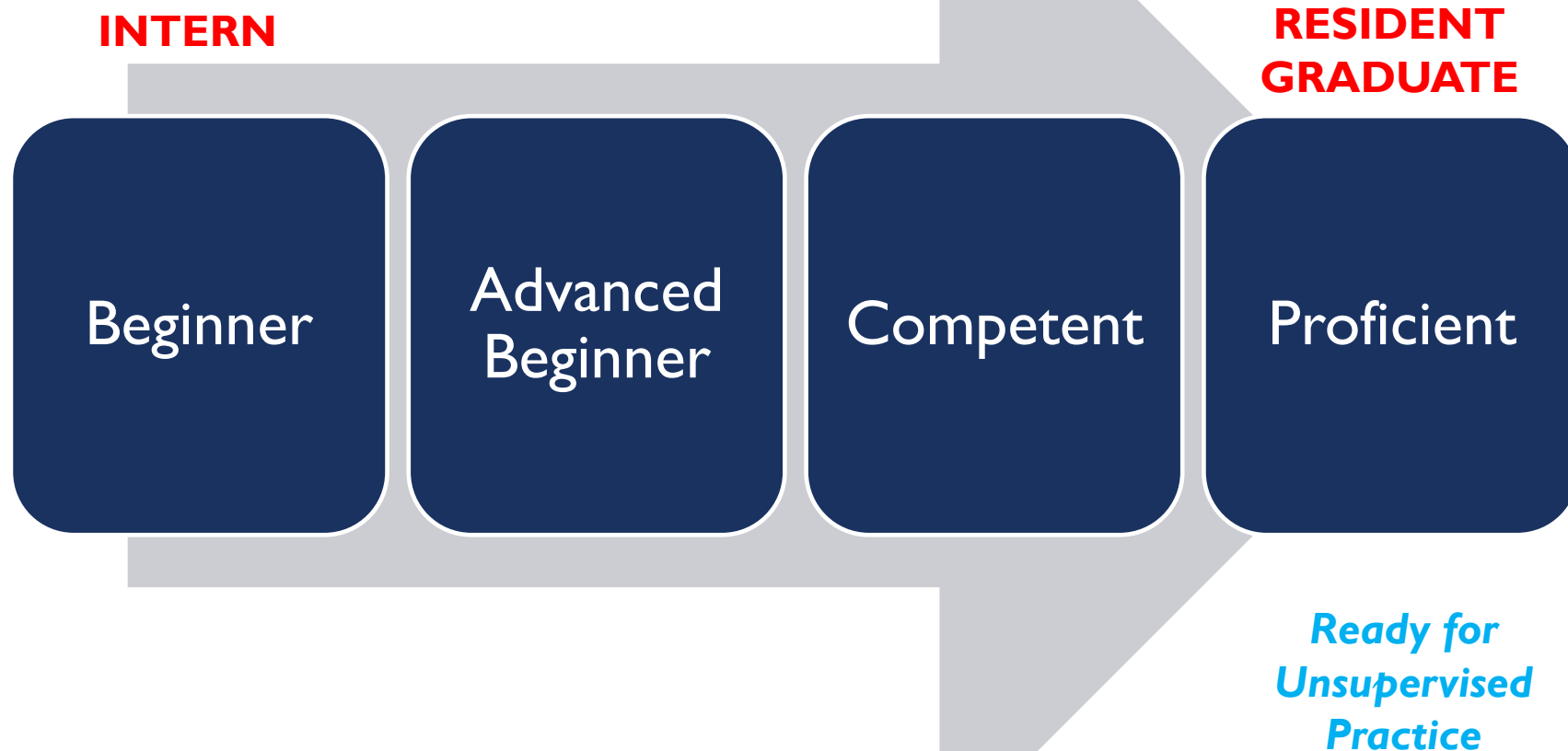
Systems Based
Practices

Problem-Based
Learning

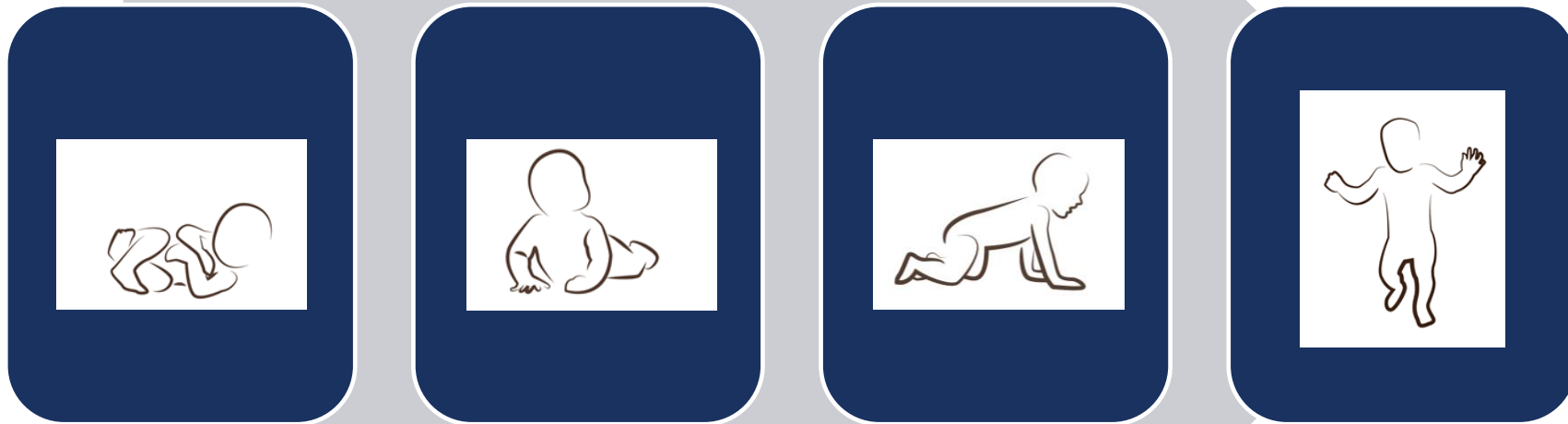
Professionalism

Interpersonal &
Communication
Skills

INTRODUCTION OF THE MILESTONES: 2013



INTRODUCTION OF THE MILESTONES: 2013



Measure the degree to which resident and faculty assessments agree using the milestones

Identify themes for milestone areas of strength and improvement as assessed by resident and faculty agreement at each post-graduate year of training.

Identify whether there are trends based on gender in resident milestone self-assessment.

OBJECTIVES

COMPETENCIES & MILESTONES

Competency Domains

Patient Care	Medical Knowledge	Systems Based Practices
Problem-Based Learning	Professionalism	Interpersonal & Communication Skills

PATIENT CARE

- 1 Gathers and synthesizes essential and accurate information to define each patient's clinical problem(s)
- 2 Develops and achieves comprehensive management plan for each patient
- 3 Manages patients with progressive responsibility and independence
- 4 Skill in performing procedures
- 5 Requests and provides consultative care

MEDICAL KNOWLEDGE

- 1 Clinical knowledge
- 2 Knowledge of diagnostic testing and

SYSTEMS BASED PRACTICES

- 1 Works effectively within an interprofessional team (e.g. peers, consultants, nursing, ancillary professionals and other support personnel)
- 2 Recognizes system error and advocates for system improvement
- 3 Identifies forces that impact the cost of health care, and advocates for, and practices cost-effective care
- 4 Transitions patients effectively within and across health delivery systems

PRACTICE BASED LEARNING & IMPROVEMENT

- 1 Monitors practice with a goal for improvement
- 2 Learns and improves via performance audit
- 3 Learns and improves via feedback
- 4 Learns and improves at the point of care

PROFESSIONALISM

- 1 Has professional and respectful interactions with patients, caregivers and members of the interprofessional team (e.g. peers, consultants, nursing, ancillary professionals and support personnel).
- 2 Accepts responsibility and follows through on tasks
- 3 Responds to each patient's unique characteristics and needs
- 4 Exhibits integrity and ethical behavior in professional conduct

INTERPERSONAL AND COMMUNICATION SKILLS

- 1 Communicates effectively with patients and caregivers
- 2 Communicates effectively in interprofessional teams (e.g. peers, consultants, nursing, ancillary professionals and other support personnel)
- 3 Appropriate utilization and completion of health records



**Resident independently identifies
2 areas of strength and 2 areas of
improvement for self**

**Mentor meetings held twice per year
between resident-faculty pair.
The pair agrees on 2 areas of strength and 2
areas of improvement**



**Faculty independently identifies
2 areas of strength and 2 areas of
improvement for resident**



RESIDENT-FACULTY SEMI-ANNUAL MEETINGS

RESULTS

OVERALL MEASURE OF RESIDENT-FACULTY AGREEMENT BY YEAR OF TRAINING

STRENGTHS					
		Overall	PGY1	PGY2	PGY3
	n	838	346	250	242
Individual	kappa	0.355	0.394	0.225	0.370
Domain	kappa	0.475	0.498	0.372	0.509

AREAS OF IMPROVEMENT					
		Overall	PGY1	PGY2	PGY3
	n	838	346	250	242
Individual	kappa	0.381	0.323	0.360	0.354
Domain	kappa	0.465	0.400	0.391	0.370

Kappa-value Degree of Agreement	
0-0.2	Slight
0.21-0.4	Fair
0.41-0.6	Moderate
0.61-0.8	Substantial
0.81-1.0	Almost Perfect

TOP RESIDENT-FACULTY AGREED UPON **STRENGTH**
BY YEAR OF TRAINING

	Milestone	N (%)
PGY-1	Patient Care 1- History	116 (18.9%)
PGY-2	Patient Care 2 – Management Plan	108 (20.7%)
PGY-3	Patient Care 3– Independent Management	148 (30.1%)

TOP RESIDENT-FACULTY AGREED UPON AREA OF IMPROVEMENT BY YEAR OF TRAINING


	Competency	N (%)
PGY-1	Patient Care 3 – Independent Management	123 (20.3%)
PGY-2	Patient Care 3 – Independent Management	91 (15.6%)
PGY-3	Systems Based Practices 3 – Identifies forces and practices cost-effective care	88 (17.9%)

MEASURE OF RESIDENT-FACULTY AGREEMENT FOR DOMAIN **AREA OF IMPROVEMENT** BY GENDER

	Kappa value for Female Residents	Kappa value for Male Residents
PGY1	0.256	0.487
PGY2	0.356	0.409
PGY3	0.462	0.284

Kappa-value Degree of Agreement	
0-0.2	Slight
0.21-0.4	Fair
0.41-0.6	Moderate
0.61-0.8	Substantial
0.81-1.0	Almost Perfect

DISCUSSION

- 
- **Patient care** is a foundational strength that both residents and faculty had the most concordance in assessment throughout internal medicine training.
 - Once independent patient care is no longer a top concern for improvement, resident focus broadens to the larger picture of **systems-based practices**.
 - The gendered trends of resident-faculty concordance for domains of improvement may be taken into consideration when providing feedback to residents.
 - Future studies should take into account the new ACGME Milestones 2.0 which include other systems-based changes (digital health) and reflective practice and commitment to personal growth, further emphasizing the **importance of resident self-assessment** reliability.

ACKNOWLEDGEMENTS & REFERENCES

- Krithika Suresh, PhD
- Erin Murphy, MD
- Janet Corral MD
- Brian Graham, MD
- Karen Chacko, MD
- Geoff Conors, MD
- Jennifer Weber
- CU IMRP Assistant Program Directors
- CU Internal Medicine Residents

-Stahl et al. Entustable Professional Activities in General Surgery: Trends in Self Assessment. J Surg Educ. Nov-Dec 2020;77(6):1562-1567. [10.1016/j.jsurg.2020.05.005](https://doi.org/10.1016/j.jsurg.2020.05.005) Epub 2020 Jun 13.

-Minter et al. Gender differences in the self-assessment of surgical residents. Am J Surg. 2005 Jun;189(6):647-50. DOI: [10.1016/j.amjsurg.2004.11.035](https://doi.org/10.1016/j.amjsurg.2004.11.035)