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A Multicenter Prospective Comparison of the Accreditation Council for Graduate Medical Education Milestones: Clinical Competency Committee vs. Resident Self-Assessment

Ryan S. Watson, MD,[*] Andrew J. Borgert, PhD,[†] Colette T. O'Heron,[*] Kara J. Kallies, MS,[†] Richard A. Sidwell, MD,[‡] John D. Mellinger, MD,[§] Amit R. Joshi, MD,[‖] Joseph M. Galante, MD,[¶] Lowell W. Chambers, MD,[#] Jon B. Morris, MD,[**] Robert K. Josloff, MD,[††] Marc L. Melcher, MD,[‡‡] George M. Fuhrman, MD,[§§] Kyla P. Terhune, MD,[‖‖] Lily Chang, MD,[¶¶] Elizabeth M. Ferguson, MD,[##] Edward D. Auyang, MD,[***] Kevin R. Patel, MD,[†††] and Benjamin T. Jarman, MD[,‡‡‡]*

[*]Department of Medical Education, General Surgery Residency, Gundersen Medical Foundation, La Crosse, Wisconsin; [†]Department of Medical Research, Gundersen Medical Foundation, La Crosse, Wisconsin; [‡]General Surgery Residency Program, Iowa Methodist Medical Center, Des Moines, Iowa; [§]Department of Surgery, Southern Illinois University School of Medicine, Springfield, Illinois; [‖]Department of Surgery, Einstein Healthcare Network, Philadelphia, Pennsylvania; [¶]General Surgery Residency, University of California-Davis Health System, Sacramento, California; [#]Department of Surgery, Mount Carmel Health System, Columbus, Ohio; [**]Department of Surgery, Hospital of the University of Pennsylvania, Philadelphia, Pennsylvania; [††]Department of Surgery, Abington Memorial Hospital, Abington, Pennsylvania; [‡‡]Department of Surgery, Stanford University Medical Center, Palo Alto, California; [§§]Department of Surgery, Ochsner Clinic, New Orleans, Louisiana; [‖‖]Department of Surgery, Vanderbilt University Medical Center, Nashville, Tennessee; [¶¶]Department of Surgery, Virginia Mason Medical Center, Seattle, Washington; [##]Department of Surgery, Maricopa Medical Center, Phoenix, Arizona; [***]Department of Surgery, University of New Mexico, Albuquerque, New Mexico; [†††]Department of General Surgery, Kaiser Permanente Los Angeles Medical Center, Los Angeles, California; and [‡‡‡]Department of General Surgery, Gundersen Health System, La Crosse, Wisconsin

OBJECTIVE: The Accreditation Council for Graduate Medical Education requires accredited residency programs to implement competency-based assessments of medical trainees based upon nationally established Milestones. Clinical competency committees (CCC) are required to prepare biannual reports using the Milestones and ensure reporting to the Accreditation Council for Graduate Medical Education. Previous research demonstrated a strong correlation between CCC and resident scores on the Milestones at 1 institution. We sought to evaluate a national sampling of general surgery residency programs and hypothesized that CCC and resident assessments are similar.

DESIGN: Details regarding the makeup and process of each CCC were obtained. Major disparities were defined as an absolute mean difference of ≥ 0.5 on the 4-point scale. A negative assessment disparity indicated that the residents evaluated themselves at a lower level than did the CCC. Statistical analysis included Wilcoxon rank sum and Sign tests.

SETTING: CCCs and categorical general surgery residents from 15 residency programs completed the Milestones document independently during the spring of 2016.

Correspondence: Inquiries to Benjamin T. Jarman, MD, Department of General Surgery, Gundersen Health System, 1900 South Ave, C05-001, La Crosse, WI 54601 fax: +(608) 775-7327; e-mail: btjarman@gundersenhealth.org

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RESULTS: Overall, 334 residents were included; 44 (13%) and 43 (13%) residents scored themselves ≥ 0.5 points higher and lower than the CCC, respectively. Female residents scored themselves a mean of 0.08 points lower, and male residents scored themselves a mean of 0.03 points higher than the CCC. Median assessment differences for postgraduate year (PGY) 1-5 were 0.03 (range: −0.94 to 1.28), −0.11 (range: −1.22 to 1.22), −0.08 (range: −1.28 to 0.81), 0.02 (range: −0.91 to 1.00), and −0.19 (range: −1.16 to 0.50), respectively. Residents in university vs. independent programs had higher rates of negative assessment differences in medical knowledge (15% vs. 6%; $P = 0.015$), patient care (17% vs. 5%; $P = 0.002$), professionalism (23% vs. 14%; $P = 0.013$), and system-based practice (18% vs. 9%; $P = 0.031$) competencies. Major assessment disparities by sex or PGY were similar among individual competencies.

CONCLUSIONS: Surgery residents in this national cohort demonstrated self-awareness when compared to assessments by their respective CCCs. This was independent of program type, sex, or level of training. PGY 5 residents, female residents, and those from university programs consistently rated themselves lower than the CCC, but these were not major disparities and the significance of this is unclear. (J Surg Ed ▮:▮▮▮-▮▮▮. © 2017 Association of Program Directors in Surgery. Published by Elsevier Inc. All rights reserved.)

KEY WORDS: resident evaluation, Milestones, competencies, domains, clinical competency committee

COMPETENCIES: Practice-Based Learning and Improvement, Interpersonal and Communication Skills, Professionalism, Systems-Based Practice

INTRODUCTION

Formal resident assessment is integral to the training of resident surgeons in their transition to become independent surgeons. The Accreditation Council for Graduate Medical Education (ACGME) requires competency-based assessments of medical trainees based upon nationally established competencies.[1] Institutional clinical competency committees (CCC) must prepare biannual reports using the Milestones and submit them to the ACGME to assess resident performance within the 6 ACGME core competencies. The Milestones are broken down into the following competencies: medical knowledge (MK), patient care (PC) interpersonal and communication skills (ICS), professionalism (PROF), practice-based learning and improvement (PBLI), and systems-based practice (SBP).[2]

Numerous potential contributions to resident assessment exist and include instructor feedback, technical skills, clinical skills, nursing feedback, peer-review, patient feedback, self-assessment, and simulation laboratory performance. In an attempt to identify objective input, standardized written examinations and oral examination performance are integrated into surgical training. Self-assessment is an important tool for the resident to identify personal strengths or areas for improvement. Program directors assimilate all sources of data to synthesize a picture of resident progression, and self-assessment may help assure that residents have appropriate self-awareness of training progression. A previous single-institution study demonstrated a strong positive correlation between CCC assessment and resident self-evaluation using the Milestones.[3] This was reported to be consistent with adequate self-awareness on the part of residents and provided affirmative evidence for the validity of the Milestone assessments. The objective of this study was to evaluate data from multiple institutions to further assess the role of resident self-evaluation in Milestone assessment with the hypothesis that CCC and resident assessments would be similar.

METHODS

A prospective comparison of CCC assessment to categorical surgery resident self-assessment using the Milestones was accomplished in the spring of 2016 at 15 ACGME-accredited general surgery residency programs with 362 categorical residents. The participants included independent and university-based residencies of various sizes across the United States. The study protocol was reviewed by the Gundersen Health System Institutional Review Board and granted an exemption for the use of de-identified aggregate information. Resident consent to participate was obtained in medical centers in which this was required by their Institutional Review Board. Resident self-evaluations were excluded if they were unavailable at the time of analysis or if the corresponding CCC evaluation was unavailable or completed after the resident had completed their review, and the resident therefore knew how the CCC had evaluated them. A total of 28 resident evaluations were excluded. For each individual resident respondent, disparities in assessment of each Milestone were calculated by subtracting the CCC assessment score from the resident's self-assessment score. These disparities were then averaged across all Milestones to calculate the total average disparity, and also across each core competency and domain. The sign test was used to determine if residents consistently rated themselves higher (positive average disparity) or lower (negative average disparity) compared to the CCC, regardless of the magnitude of the disparities. Average disparities were further qualified as "major" or "minor." Major disparities in Milestone assessments were defined as a mean disparity of greater than or equal to 0.5 on the 4-point scale, with a positive disparity indicating that the residents rated themselves higher than the CCC, and a negative disparity