Assessing the Competencies in General Surgery Residency Training

Cheryl I. Anderson, RN, Amy B. Jentz, MD, L. Rao Kareti, MD, James M. Harkema, MD, Keith N. Apelgren, MD, and Carol A. Slomski, MD

Department of Surgery, Michigan State University, East Lansing, Michigan

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BACKGROUND

The ACGME endorsed 6 competencies in 1999 for residency training programs. The competencies include Patient Care, Medical Knowledge, Professionalism, Interpersonal and Communication Skills, Practice-Based Learning and Improvement, and Systems-Based Practice.[1] The Michigan State University Integrated Residency Program in General Surgery implemented assessment of the competencies in September 2002.

A department competency committee was established that included several senior faculty, residents, and quality improvement staff. Members were asked to (1) review the ACGME requirements, (2) assess current department evaluation methods, and (3) develop a plan to assess and develop a curriculum. Familiarity with the competencies occured with time. Resident evaluations were primarily concluded through an Internet-based program that assessed some components of the competencies. However, emphasis was placed on end-of-rotation summative reviews.

Initial committee efforts focused on the practice-based learning (PBL) and systems-based practice (SBP) competencies.[2-5] As one component of PBL, a resident must "apply knowledge of study designs and statistical methods to the appraisal of clinical studies and other information of diagnostic and therapeutic effectiveness."[1] To address this objective, an evaluation form was developed to assist in critically evaluating Journal Club articles. Participants score each article in 9 fields (ie, Statement of Hypothesis, Design, Statistical Analysis). Differences among reviewer scores are discussed. A second PBL objective requires the resident to "locate, appraise, and assimilate evidence from scientific studies related to their patients' health problems."[1] This objective is addressed by (1) requiring presenters at Morbidity and Mortality conference to provide evidence-based data pertaining to their cases being discussed, and (2) having faculty assign personal learning projects to residents, where resident knowledge deficits are identified. Residents are required to seek evidence from the literature or textbooks to support their answers. Results are placed in individual portfolios.

The SBP competency requires residents to "demonstrate an awareness of and responsiveness to the larger context and system of health care and the ability to effectively call on system resources to provide care that is of optimal value."[1] Initial efforts were focused on identifying health systems and health-related professions that interface with resident patient care activities. For example, attorneys presented information on the importance of accurate and timely medical record documentation and the legal/economic implications when this does not occur.

Surgical billing representatives discussed current procedural terminology (CPT) and Evaluation and Management codes and how improper coding can impact the financial health of an organization. Pretests and posttests were administered to assess learning.

The SBP competency also requires that residents assist patients in dealing with system complexities and partner with health care managers. Residents on trauma rotations learn of system problems by leading a multidisciplinary trauma conference three times per week. Emphasis is placed on coordinating the physical, financial, emotional, and spiritual care of the patients and their families. Plans of care are developed that emphasize quality and value.

Research projects are being initiated that investigate the cost effectiveness and clinical benefits of current practice patterns. For example, the efficacy of CT in the emergency department for patients exhibiting signs of appendicitis is being studied. Residents have assisted in development of a comprehensive discharge planning process that should eliminate patient telephone calls to the office. Rotations with Hospice care are being planned.

Next, committee members discussed assessment of the patient care (PC) and medical knowledge (MK) competencies. The PC competency requires that residents "must be able to provide patient care that is compassionate, appropriate, and effective for the treatment of health problems and

Correspondence: Inquiries to Cheryl I. Anderson, RN, Department of Surgery, Michigan State University, 1200 East Michigan Avenue, Lansing, MI 48912; fax: (517) 267-2488; e-mail: cheryl.anderson@ht.msu.edu

TABLE 1. "Point of Observation" Assessment for Acute Appendicitis

ACUTE APPENDICITIS ASSESSMENT **MICHIGAN STATE UNIVERSITY** **Pt. NAME:**_____

RES:_____ **SURG:**_____ **DEPARTMENT OF SURGERY** **SITE:**_____ **DOS:**_____

ASSESS EXTENT OF RESIDENT: Oral/Written Communication, Knowledge, Independence, Analytical Skills, Attitude, etc

A. KNOWLEDGE ASSESSMENT: PERCENTAGE:	n/a	10%	20%	30%	40%	50%	60%	70%	80%	90%	100%
◆ Knowledge of appendiceal anatomy	n/a	10	20	30	40	50	60	70	80	90	100
◆ Describes systemic symptoms of inflammation	n/a	10	20	30	40	50	60	70	80	90	100
◆ Knowledge of classic presentation	n/a	10	20	30	40	50	60	70	80	90	100
◆ Knowledge of differentiation of visceral & parietal pain	n/a	10	20	30	40	50	60	70	80	90	100
B. HISTORY ASSESSMENT:											
◆ Pain assessment: location, type, what makes it worse	n/a	10	20	30	40	50	60	70	80	90	100
◆ GI/GU history/S&S: anorexia, N & V, bowel habits	n/a	10	20	30	40	50	60	70	80	90	100
◆ Temporal history/lists co-morbidities	n/a	10	20	30	40	50	60	70	80	90	100
◆ Generates differential diagnosis & assesses related ROS	n/a	10	20	30	40	50	60	70	80	90	100
C. PHYSICAL EXAMINATION:											
◆ General appearance/vital signs/hydration status	n/a	10	20	30	40	50	60	70	80	90	100
◆ Identifies peritoneal signs & localized/rebound tenderness	n/a	10	20	30	40	50	60	70	80	90	100
◆ Recognizes need for pelvic &/or rectal examination	n/a	10	20	30	40	50	60	70	80	90	100
◆ Assesses differential status & co-morbidities	n/a	10	20	30	40	50	60	70	80	90	100
D. PREOPERATIVE PREPARATION:											
◆ Laboratory tests (includes pregnancy status)	n/a	10	20	30	40	50	60	70	80	90	100
◆ Radiologic tests	n/a	10	20	30	40	50	60	70	80	90	100
◆ Informed consent (description of planned procedure, potential complications, benefits, type of anesthesia)	n/a	10	20	30	40	50	60	70	80	90	100
◆ Appropriate orders/documentation: Pre op antibiotics, pain mgmt, hydration	n/a	10	20	30	40	50	60	70	80	90	100
E. OPERATIVE INTERVENTION/INTRAOP. DECISION MAKING:											
◆ Indications for open vs. laparoscopic appendectomy	n/a	10	20	30	40	50	60	70	80	90	100
◆ Patient anatomy/port placement & use	n/a	10	20	30	40	50	60	70	80	90	100
◆ Operative skills/dexterity - (open or lap; mobilization of appendix; muscle splitting incision)	n/a	10	20	30	40	50	60	70	80	90	100
◆ Suturing skills (include alternative/difficult stump closure)	n/a	10	20	30	40	50	60	70	80	90	100
◆ Identification of inflammatory bowel disease	n/a	10	20	30	40	50	60	70	80	90	100
◆ Ability to identify operative findings: (Choose one) Appendicitis Normal Perforated Gangrenous Appendiceal mass (carcinoid, CA) Periappendicitis	n/a	10	20	30	40	50	60	70	80	90	100
◆ Wound care: primary, delay-primary closure vs. 2ndary intent	n/a	10	20	30	40	50	60	70	80	90	100
F. POST OPERATIVE CARE/DECISION MAKING:											
◆ Operative dictation/quality of progress notes	n/a	10	20	30	40	50	60	70	80	90	100
◆ Antibiotics (algorithm)	n/a	10	20	30	40	50	60	70	80	90	100
◆ Wound care evaluation/signs of infection	n/a	10	20	30	40	50	60	70	80	90	100
◆ Discharge criteria	n/a	10	20	30	40	50	60	70	80	90	100
◆ Follow-up care, appointment, pathology results	n/a	10	20	30	40	50	60	70	80	90	100
G. COMMENTS/IMPROVEMENTS:											

☐ CHECK IF RESIDENT GIVEN VERBAL FEEDBACK

Your score of resident written H & P:(use scale below) _____

Your score of resident Op Note dictation: _____

H OVERALL SCORE FOR LEVEL OF TRAINING:	A+	A	B+	B	C+	C	D	F
	Best resident ever	Superb	Exceeds expectations	Solid	Below expectations	Marginal, needs improvement	Poor performance	Failure
Faculty signature:							**Date:**	

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