

Mapping Direct Observations From Objective Structured Clinical Examinations to the Milestones Across Specialties

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ABSTRACT

Background Little is known about residents' performance on the milestones at the institutional level. Our institution formed a work group to explore this using an institutional-level curriculum and residents' evaluation of the milestones.

Objective We assessed whether beginner-level milestones for interpersonal and communication skills (ICS) related to observable behaviors in ICS-focused objective structured clinical examinations (OSCEs) for postgraduate year (PGY) 1 residents across specialties.

Methods The work group compared ICS subcompetencies across 12 programs to identify common beginner-level physician-patient communication milestones. The selected ICS milestone sets were compared for common language with the ICS-OSCE assessment tool—the Kalamazoo Essential Elements of Communication Checklist-Adapted (KEECC-A). To assess whether OSCE scores related to ICS milestone scores, all PGY-1 residents from programs that were part of Next Accreditation System Phase 1 were identified; their OSCE scores from July 2013 to June 2014 and ICS subcompetency scores from December 2014 were compared.

Results The milestones for 10 specialties and the transitional year had at least 1 ICS subcompetency that related to physician-patient communication. The language of the ICS beginner-level milestones appears similar to behaviors outlined in the KEECC-A. All 60 residents with complete data received at least a beginner-level ICS subcompetency score and at least a satisfactory score on all 3 OSCEs.

Conclusions The ICS-OSCE scores for PGY-1 residents appear to relate to beginner-level milestones for physician-patient communication across multiple specialties.

Introduction

When the Accreditation Council for Graduate Medical Education (ACGME) identified 6 core competencies to evaluate postgraduate trainees,¹ teaching institutions incorporated various methods to assess these competencies, including objective structured clinical examinations (OSCEs). In the Next Accreditation System (NAS), milestones were developed for each specialty to define learning progression from beginner to expert within the core competencies.² Few institutions have reported on how to use current assessment tools to evaluate trainees on milestones. Some individual specialties have discussed the incorporation of milestones,^{3–6} but to date no reports have described developments at the institutional curriculum level.

The Henry Ford Hospital in Detroit, Michigan, developed an institutional curriculum in 2008 that included OSCEs to assess interpersonal and communication skills (ICS). The ICS-OSCEs are offered to the institution's 18 ACGME-accredited residency programs, with most postgraduate year (PGY) 1 residents participating annually. OSCEs are a recommended assessment method by the ACGME and accepted as part of the multisource assessment used for postgraduate trainees.^{7,8}

OSCE evaluations may be used by clinical competency committees to determine milestone progression for residents. We explored whether ICS-OSCEs could be linked to multiple specialties' ICS milestones. Our primary aim was to assess how to use existing institutional curriculum OSCEs for milestones without additional time or expenditure. This quantitative study assessed 2 questions: Do multiple specialties have ICS milestones in common that relate to our

DOI: <http://dx.doi.org/10.4300/JGME-D-15-00385.1>

TABLE
Specialty Milestones for Interpersonal and Communication Skills (ICS) Related to Physician-Patient Communication

Specialty	Total ICS Subcompetencies	ICS Subcompetency Description	Beginner Milestone Level	Milestone Descriptors ^a
Emergency medicine	2	ICS-1: Demonstrates interpersonal and communication skills that result in the effective exchange of information and collaboration with patients and their families	1	Establishes rapport with and demonstrates empathy toward patients and their families Listens effectively to patients and their families
Family medicine	4	C-2: Communicates effectively with patients, families, and the public	1	Establishes rapport and facilitates patient-centered information exchange Recognizes that respectful communication is important to quality care Identifies physical, cultural, psychological, and social barriers to communication
Internal medicine	3	ICS-1: Communicates effectively with patients and caregivers	2	Engages patients in discussions of care plans and respects patient preferences when offered by the patient; but does not actively solicit preferences Attempts to develop therapeutic relationships with patients and caregivers but is inconsistently successful Defers difficult or ambiguous conversations to others
Neurological surgery	2	Relational–Interpersonal and Communication Skills	1	Describes ethical principles of informed consent Describes methods to compassionately break bad news Identifies elements of safe handoffs and pause Prioritizes and conveys critical events
Obstetrics and gynecology	3	Communication with Patients and Families–Interpersonal and Communication Skills	1	Demonstrates adequate listening skills Communicates effectively in routine clinical situations
Orthopedic surgery	2	Communication–Interpersonal and Communication Skills	1	Communicates with patients about routine care (eg, actively seeks and understands the patient's/family's perspective ; able to focus in on the patient's chief complaint and ask pertinent questions related to that complaint)

TABLE
Specialty Milestones for Interpersonal and Communication Skills (ICS) Related to Physician-Patient Communication (continued)

Specialty	Total ICS Subcompetencies	ICS Subcompetency Description	Beginner Milestone Level	Milestone Descriptors ^a
Ophthalmology	4	ICS-1: Communicate effectively with patients and families with diverse socioeconomic and cultural backgrounds	1	Develops positive relationships with patients in uncomplicated situations Describes factors that affect communication (eg, language, use of interpreters, other family in the room, anger, depression, anxiety, and cognitive impairments) Engages in active listening , teach-back, and other strategies to ensure patient understanding
Otolaryngology	1	Interpersonal Communication Skills	1	Develops a positive relationship with patients and understands patients' and families' perspectives Utilizes interpreters as needed
Pathology	2	None related to patient communication		
Psychiatry	2	ICS-1: Relationship development and conflict management with patients, families, colleagues, and members of the health care team	1	Cultivates positive relationships with patients , families, and team members Recognizes communication conflicts in work relationships Identifies team-based care as preferred treatment approach and collaborates as a team member
General surgery	3	ICS-1: Interpersonal and Communication Skills	1	Uses a variety of techniques to ensure that communication with patients and their families is understandable and respectful (eg, nontechnical language, teach back, appropriate pacing, and small pieces of information) Effectively communicates basic health care information to patients and their families
Transitional year	4	ICS-1: Communicates effectively with patients, family, and the public as appropriate across a broad range of socioeconomic and cultural backgrounds	1	Seeks and understands patient and family perspectives. Develops a positive relationship with patients in uncomplicated situations Demonstrates an awareness of vulnerable populations Is aware of effects of computer use on potential disruption of the physician-patient relationship

^a Bolded phrases were considered reliable to language of the ICS-OSCEs measurement tool.

ICS-OSCEs? Do trainees' ICS-OSCE scores relate to their ICS milestone scores?

Methods

Program directors (or their appointee) from the institution's 18 ACGME-accredited residency programs were invited to form a work group to determine whether observable behaviors from the ICS-OSCEs could be mapped to ICS milestones across specialties. No fellowships were included, as the ICS-OSCEs assess beginner-level skills. Twelve programs participated: emergency medicine (EM), family medicine, general surgery, internal medicine (IM), neurological surgery (NS), obstetrics-gynecology, ophthalmology, orthopedic surgery (OS), otolaryngology, pathology, psychiatry, and the transitional year. PGY-1 residents of these 12 programs were considered eligible for the study's analyses.

ICS-OSCE Setting

The ICS-OSCEs start with a faculty-led didactic learning activity. Residents then practice the reviewed communication skills in 2 video-recorded clinical stations with standardized patients. Our institution recruits its standardized patients from a school of medicine program. The standardized patients give verbal feedback to the residents after each OSCE station and complete the written assessment after the OSCE is finished. The faculty facilitator then debriefs the residents using portions of the video-recorded sessions, and the residents complete the online self-evaluation. Residents, faculty, and the standardized patients use the Kalamazoo Essential Elements Communication Checklist-Adapted,⁹ which has evidence of validity in other settings testing resident communication skills.^{10,11} The ICS-OSCEs (sharing bad news, informed consent, and error disclosure) are generally completed by PGY-1 residents in the first half of the academic year.

Exploration of the Relationship Between ICS-OSCEs and ICS Milestones

To assess whether the study's specialties have ICS milestones in common, we obtained these milestones from the ACGME website and compared ICS subcompetencies and milestone sets for common phrases, word usage, and similarity in learning progression. Because our ICS-OSCEs focus on physician-patient communication for PGY-1 residents, the work group looked for these specific ICS milestone descriptors for the beginner level across the specialties.

To assess whether ICS-OSCE scores related to ICS milestone scores, 4 programs in NAS Phase 1 milestone reporting were eligible for inclusion. All PGY-1 residents in EM, IM, NS, and OS were included. We obtained their scores from the 3 ICS-OSCEs completed during academic year 2013–2014, as well as their ICS subcompetency scores from the December 2014 reported milestones.

Our institution's ICS-OSCE scores are based on a 5-point Likert scale (1, poor; 2, fair; 3, good; 4, very good; and 5, excellent). Because this study aimed to assess beginner-level achievement, we established that an OSCE score ≥ 3 would meet the beginner requirement. Only standardized patients' scores were analyzed, as they are considered to offer more accurate assessments than health care professionals' scores.^{10,12–14} For each of the 3 ICS-OSCEs, residents had 2 standardized patient scores, 1 for each station: these 2 scores were averaged to obtain 1 score per ICS-OSCE for comparison. For milestone scores, EM, NS, and OS used level 1 to define beginner achievement, while IM used level 2.

The July 2013 to June 2014 ICS-OSCE scores were quantitatively compared to the December 2014 ICS subcompetency scores. OSCE scores ≥ 3 and ICS subcompetency scores ≥ 1 for EM, NS, and OS and ≥ 2 for IM were defined as relatable to beginner level.

This study was approved by Henry Ford Hospital's Institutional Review Board.

Results

The TABLE shows the varied ICS subcompetencies and beginner-level milestones determined to relate best to the physician-patient communication focus of our ICS-OSCEs. Pathology has no ICS milestones related to physician-patient communication.

The ICS milestone descriptors identified as similar to behaviors outlined in the ICS-OSCE scoring tool included “establishes rapport,” “engages patient,” “develops positive relationship with patient,” and “seeks and understands patient's perspective” (TABLE). Although neurological surgery's ICS beginner-level milestones did not specify engagement of the patient in the “ICS-Relational” subcompetency, residents must be able to “describe methods to compassionately break bad news,” which the work group considered relatable to our ICS-OSCE on sharing bad news.

Of the 63 PGY-1 residents identified for the second part of the study, 18 were from EM (3 of whom were EM-IM), 37 IM, 2 NS, and 6 OS. Three residents (2 EM, 1 EM-IM) were excluded for lack of complete data. Of the 60 residents included in the quantitative comparison, all received at least a beginner-level ICS subcompetency score and ICS-OSCE scores of ≥ 3 .

Discussion

Our findings suggest that ICS-OSCE scores for PGY-1 residents appear to relate to beginner-level milestones for specific ICS subcompetencies across multiple specialties. The PGY-1 residents scored at least at the beginner level for physician-patient ICS milestones, as submitted by programs, and also scored at least at a satisfactory level on physician-patient ICS-OSCEs.

A literature search did not show any institutional-level studies that incorporated the milestones into assessments.^{3–6} In an overview of the milestones, Sullivan et al¹⁵ described how interpersonal and communication skills, as well as some of the other competencies, appear to be generic enough to invite multiple program interaction.

Our study of multiple specialties had an unexpected finding of variation in the number and detail of ICS subcompetencies across specialties. The ICS subcompetencies range from 1 to 4, with a wide variation in focus (eg, communication with patients and families versus health professionals versus medical records/technology communications, operating room communication, and team communication). For example, otolaryngology has 1 ICS subcompetency defined as “Interpersonal and Communication Skills,” whereas the transitional year has 4 ICS subcompetencies, each of which has a separate focus (medical records, teams, health professionals, and patients/families/public).

A limitation of our study was the small sample size of the NAS Phase 1 group. In addition, while we used standardized patient OSCE scores for comparison because they may be more accurate than faculty or resident self-assessments, these scores did not distinguish any residents who did not meet the beginner level. This finding may have surfaced because our PGY-1 residents legitimately acquired and demonstrated beginner communication skills, or the assessment may not be able to detect variations in communication skills with more specificity. Future studies may target other milestones, which might lend themselves more to assessment variability and ultimately identify residents who need additional time to meet particular milestones.

Use of the centralized graduate medical education office helped to provide structure and bring together program directors across specialties for scholarly activity. However, results from 1 institution may not be generalizable, as ICS-OSCEs vary across institutions. We tested the feasibility of mapping observable behaviors to beginner-level milestones and cannot comment on the adaptability of a similar mapping process for higher-level milestones across specialties, as expected achievement levels vary among specialties.

Conclusion

The ICS-OSCE scores for PGY-1 residents appear related to beginner-level milestones for specific physician-patient related ICS subcompetencies across multiple specialties. Our findings show that existing ICS-OSCEs can be used to assess residents' ICS performance at the institutional level without additional expense or time required for implementation.

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Funding: The authors report no external funding source for this study.

Conflict of interest: The authors declare they have no competing interests.

These data were presented in part at the Accreditation Council for Graduate Medical Education Annual Educational Conference, in San Diego, California, February 26–March 1, 2015.

The authors would like to thank Sarah Whitehouse, Departments of Medicine and Medical Education, for writing assistance.

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Received August 14, 2015; revision received December 14, 2015; accepted January 4, 2016.