Beyond Fulfilling the Core Competencies: An Objective Structured Clinical Examination to Assess Communication and Interpersonal Skills in a Surgical Residency

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OBJECTIVE: The Accreditation Council for Graduate Medical Education (ACGME) has challenged program directors to assess their residents’ core competencies, including communication and interpersonal skills (CIS). We report our institution’s experience using a series of standardized patient encounters in an objective structured clinical examination (OSCE) to evaluate CIS in surgical residents.

METHODS: Standardized patients rated the residents’ ability to maintain a patient-centered approach across 6 challenging communication tasks. Residents received verbal feedback from the patients after each encounter and completed a survey indicating their experience and comfort with each task. Individual and group reports documented resident competency and provided aggregate information for curriculum review. Formal grades were not assigned.

RESULTS: Twenty-two residents in 2 surgical residency programs piloted the assessment. The Generalizability of the assessment was 0.81. Scores of second- and third-year residents were not significantly different. Residents found the program to be helpful and able to assess their skills.

CONCLUSIONS: The standardized patient-based OSCE is an effective method to assess communication and interpersonal skills and provides useful information for curriculum review. (Curr Surg 61:499-503. © 2004 by the Association of Program Directors in Surgery.)

KEY WORDS: communication skills, interpersonal skills, competency assessment, resident assessment, OSCE, simulation

INTRODUCTION

The Accreditation Council for Graduate Medical Education (ACGME) has mandated that resident performance be assessed across 6 competency domains. The ACGME “assessment toolbox” suggests the use of standardized patients to provide reliable, valid, and fair assessments of several of these competencies.1

 Standardized patients (SPs) are lay persons who are trained to portray a scripted patient presentation accurately and consistently across many encounters. Standardized patient encounters have been used to teach and assess medical students in history taking, physical examination techniques, effective interpersonal and communication skills, and clinical reasoning.2 Extensive research has established that SP encounters are both credible and reliable.3 As performance is always case-specific, several encounters are required to obtain a reliable estimate of a persons’ competence. Accordingly SP assessments are frequently organized as a set of cases or stations; this series of encounters is known as an Objective Structured Clinical Examination or OSCE.4

Studies have shown that SP ratings of communication and interpersonal skills (CIS) provide a good proxy for actual patient satisfaction.5 Patient-centered communication, which has been shown to increase patient satisfaction, facilitates the doctor–patient relationship, increase compliance, and decrease malpractice claims, is the basis for several CIS instruments.6,7 Several programs have begun developing SP-based assessments of communication and interpersonal skills for residents, extending the use of this approach that has been so successful with medical students.8-13 This paper describes our own experience in using a standardized patient-based OSCE to evaluate the CIS of second- and third-year surgical residents as part of an institution-wide program to develop formative assessments of residents’ communication and interpersonal skills.

METHOD

We assessed the CIS of PGY2 and PGY3 residents from 2 general surgery residency programs. Standardized patients rated the residents’ ability to maintain a patient-centered approach across 6 different communication tasks selected based on a review of communication skills literature. The 6 tasks were giving
The programs completed a self-report survey providing information and discussion of the encounter (see Table 2).

Communication skills. At the end of the post-encounter interval, the SP completed a 17-item 5-point rating scale. All encounters were videotaped. The assessment was conducted in the UIC-COM Clinical Performance Center, an established standardized patient facility. Actors were trained to portray the patients, complete the rating scale, and provide feedback to the residents according to the CPC protocol. All SPs were experienced veterans of prior CPC assessments. All encounters were videotaped.

Each of the 6 stations began with a 10-minute encounter with the standardized patient. During a 5-minute post-encounter interval, the SP completed a 17-item 5-point rating scale based on the ABIM patient perception scale (see Appendix A). Items on the original ABIM scale were broken down into more detailed items to assist the SPs in giving specific behavioral feedback to the residents. A final, global item read: “If given a choice in the future, I would choose this resident as my personal physician.” While the SP completed the rating scale, the resident reviewed case-related written material such as guidelines on giving bad news. After the H&P case, the resident was asked to write a chart note documenting the encounter. These notes were given to the program director for optional scoring by the CPC assessments. All statistical analyses were done using SPSS Version 11.5.0 (SPSS Corporation, Chicago, Illinois).

RESULTS

Twenty-two residents from 2 general surgery programs (10 from 1 program, 12 from the other) participated in the assessment. PGY levels were evenly distributed across the programs, with 12 PGY2 residents and 10 PGY3s.

Individual resident case scores ranged from 2.1 to 5.0. Overall case scores ranged from 3.5 to 4.8, mean overall score 4.1 (SD .33). Global scores ranged from 2.2 to 4.7, mean global score 3.7 (SD .71). Case scores were highly correlated with global scores, median correlation of 0.86. See Table 3. There was no significant difference between the scores of PGY2 vs PGY3 residents: PGY2 mean overall score = 4.15, PGY3 = 4.10, t-test, t(0.298, 20), p = 0.769; PGY2 mean global score = 3.67, PGY3 = 3.68, t-test, t(-0.043, 20), p = 0.966.

Test Reliability: Coefficient Alpha, a measure of internal consistency, ranged from 0.82 to 0.92 for each station, median alpha 0.87. Generalizability across 6 cases was G = 0.81 using case scores, or G = 0.82 using global scores.

Resident Survey Results: Survey results are available for only 1 program (12 residents). Eleven residents (92%) had prior experience with SPs. Ten (83%) had prior training in patient-centered interviewing. Most residents had substantial experience with each of the tasks, with the exception of HIV consent and domestic violence. Half of the residents had never encountered (or recognized) a case of elder abuse, and the other half had done so only 1 to 3 times. In this very small sample, most tasks showed no significant correlation between experience and comfort, or between experience or comfort and either global or case scores.

### TABLE 1. Surgical Scenarios for Six Communication Tasks

<table>
<thead>
<tr>
<th>Task</th>
<th>Description</th>
</tr>
</thead>
<tbody>
<tr>
<td>Bad News</td>
<td>Inform patient of a breast biopsy that shows infiltrating intraductal adenocarcinoma.</td>
</tr>
<tr>
<td>Informed Consent</td>
<td>Residents encounter a patient with a history of sexually transmitted disease and must help the patient make an informed choice about HIV testing.</td>
</tr>
<tr>
<td>Treatment Refusal</td>
<td>A patient with an acute GI bleed refuses transfusion because of his beliefs as a Jehovah’s Witness.</td>
</tr>
<tr>
<td>Domestic Violence</td>
<td>An elderly woman seen for follow-up of a recent stroke tells of her neglect and abuse by her son’s family.</td>
</tr>
<tr>
<td>Pt Education</td>
<td>Residents provide counseling regarding colorectal screening.</td>
</tr>
<tr>
<td>History and Physical Exam</td>
<td>Residents encounter a young woman with abdominal pain consistent with acute appendicitis, and must obtain the history, conduct a physical exam, and explain the management plan while being sensitive to her acute pain.</td>
</tr>
</tbody>
</table>

### TABLE 2. Timetable per SP Station

<table>
<thead>
<tr>
<th>Time</th>
<th>Activity</th>
</tr>
</thead>
<tbody>
<tr>
<td>10 min</td>
<td>SP-resident encounter</td>
</tr>
<tr>
<td>5 min</td>
<td>SP rates resident</td>
</tr>
<tr>
<td></td>
<td>Resident reviews case-related</td>
</tr>
<tr>
<td></td>
<td>handout or writes note</td>
</tr>
<tr>
<td>5 min</td>
<td>SP gives verbal feedback</td>
</tr>
<tr>
<td>At the end of 6 cases</td>
<td>Resident completes survey</td>
</tr>
</tbody>
</table>
scores. However, the 2 tasks with the lowest overall and global scores (consent and elder abuse) were also the only tasks for which median and modal experience and comfort levels were less than maximal.

Eleven residents (92%) found the verbal feedback from the SPs, and the case-specific handouts, to be somewhat or very helpful, and 9 residents (75%) felt these cases allowed them to demonstrate their CIS.

Focus Group Results: Residents felt that the portrayals were realistic, but that there was not enough time to play some of the scenarios through to a reasonable conclusion. Standardized patients felt that the encounters were realistic. Although several of the scenarios could not be taken to a conclusion, they felt well able to assess the residents interpersonal and communication skills based on the 10-minute encounter.

DISCUSSION

The 6-station OSCE provided a reliable and effective method to assess residents’ communication and interpersonal skills in the context of common communication challenges. Although not a substitute for direct observation in clinical practice, assessment of residents’ skills in the context of standardized patient encounters offers several potential advantages. Standardized patient-based scenarios afford the assessment of rare but important scenarios, of scenarios where a real patient might be unavailable or unwilling to participate, and of scenarios where the participation of a real patient might present ethical difficulties. Risk to both resident and patient is minimized. Content validity is enhanced by the selection of cases based on thoughtful sampling of the domain rather than patient availability. Additionally, all residents encounter the same case portrayed in the same way, ensuring fairness and enabling direct comparisons across residents.

Standardized patient-based encounters in examinations or workshops provide exceptional opportunities for experiential learning. Residents can be exposed to situations they might not otherwise encounter, and practice appropriate responses in a realistic but safe setting. The period of time immediately after the encounter comprises a “teachable moment” in which learners are uniquely receptive to reflecting on their experience. Reflection can be facilitated by faculty debriefings, written handouts, and verbal feedback from the patient. Feedback focused on effective and ineffective resident behaviors and their impact on the patient is a unique benefit of SP-based encounters, providing a perspective not otherwise available. Remediation of residents with deficient CIS can be enhanced by resident review of videotapes of their encounter with a preceptor.

Objective structured clinical examinations can also provide valuable information for curriculum evaluation by documenting curricular outcomes in the form of residents’ skills. Areas of weakness identified across residents can be targeted as priority areas for curricular efforts and change.

Ideally, an assessment such as the CIS-OSCE should be administered at least twice over the course of residency training, to provide formative feedback and enable remediation if necessary. Accordingly we are in the process of developing another set of 6 cases (“Form B”) to be used on alternate years. The Form B tasks include discussing advance directives, notifying a family member of a patient’s death, obtaining informed consent for a surgical procedure, dealing with a patient who refuses hospitalization (cultural issues), informing a patient of a medical mistake, and a focused history and physical examination. In aggregate, the 12 cases will assess a significant subset of the ACGME competencies of communication/interpersonal skills, professionalism, and patient care.

Limitations and Future Plans

The CIS-OSCE was piloted with a small number of residents from only 2 surgery programs. As more residents take the examination, we plan to see if variables such as gender, postgraduate year, and previous experience with standardized patients affect performance on the examination. Although the development process, high reliability, and favorable resident and SP impressions speak to the validity of the examination, additional

<table>
<thead>
<tr>
<th>Case</th>
<th>Case Score</th>
<th>Range</th>
<th>SEM</th>
<th>Global Score</th>
<th>Range</th>
<th>Reliability (Alpha)</th>
</tr>
</thead>
<tbody>
<tr>
<td>1. Patient education: Colorectal Screening</td>
<td>4.1 (.45)</td>
<td>3.1-4.8</td>
<td>.10</td>
<td>3.7 (.63)</td>
<td>2-5</td>
<td>.84</td>
</tr>
<tr>
<td>2. Informed consent: HIV testing</td>
<td>3.7 (.55)</td>
<td>2.2-4.6</td>
<td>.12</td>
<td>2.8 (.96)</td>
<td>1-4</td>
<td>.92</td>
</tr>
<tr>
<td>3. Treatment refusal: Jehovah’s Witness</td>
<td>4.8 (.35)</td>
<td>3.8-5.0</td>
<td>.08</td>
<td>4.4 (1.06)</td>
<td>1-5</td>
<td>.87</td>
</tr>
<tr>
<td>4. Domestic violence: Elder abuse</td>
<td>3.5 (.48)</td>
<td>2.1-4.2</td>
<td>.10</td>
<td>3.5 (.96)</td>
<td>1-5</td>
<td>.91</td>
</tr>
<tr>
<td>5. Giving bad news: Breast Biopsy Results</td>
<td>4.8 (.35)</td>
<td>3.6-5.0</td>
<td>.07</td>
<td>4.2 (1.15)</td>
<td>2-5</td>
<td>.87</td>
</tr>
<tr>
<td>6. History and Physical: Appendicitis</td>
<td>4.1 (.43)</td>
<td>3.2-4.7</td>
<td>.09</td>
<td>3.6 (.85)</td>
<td>2-5</td>
<td>.82</td>
</tr>
<tr>
<td>Overall Scores</td>
<td>4.1 (.33)</td>
<td>3.4-4.5</td>
<td>.07</td>
<td>3.7 (.71)</td>
<td>2.2-4.7</td>
<td>.87</td>
</tr>
</tbody>
</table>

TABLE 3. CIS-OSCE Results by Station
validity evidence would be desirable. To obtain such evidence, we plan to administer some of the cases to fourth-year medical students to see if CIS improves over training; we may also compare CIS-OSCE scores with faculty rankings of residents and with CIS ratings on routine resident evaluations by faculty. The assessment is also being administered to residents from other specialties (with suitably modified cases), and the results of those assessments will be scrutinized.

The CIS-OSCE, as presently constructed, is intended for formative assessments only. No pass-fail standards have been set; indeed appropriate standard-setting methods for SP-based assessments are still being developed and debated.15

The small number of residents participating in this pilot precludes drawing conclusions about the effect of comfort and experience on task performance. As more residents are assessed, the tentative trend observed in the consent and domestic violence cases will be revisited.

CONCLUSION

The ACGME lists standardized patients and OSCEs as preferred methods for demonstrating resident competence in interpersonal and communication skills. Our experience confirms that standardized patient-based assessments can provide reliable, effective, and fair assessments of surgical residents, and they can provide program directors and residents with useful information for individual and programmatic review.

REFERENCES


APPENDIX A: THE UIC CIS-PATIENT PERCEPTION SCALE ITEMS

The Resident Communication and Interpersonal Skills Assessment is designed to assess the ability to maintain a patient-centered approach across several different communication tasks. All items are rated on a 5-point scale, where 1 = strongly disagree and 5 = strongly agree.

Communication Items

- I felt you were telling me everything; being truthful, up front and frank; not keeping things from me.
- I felt that you discussed options with me.
- I felt you made sure that I understood those options.
- I felt you asked my opinion, allowing me to make my own decision.
- I felt you encouraged me to ask questions.
- I felt you answered my questions, never avoiding them.
- I felt you clearly explained what I needed to know about my problem; how and why it occurred.

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I felt you clearly explained what I should expect next.  
During the physical exam, I felt comfortable because you explained why you performing certain maneuvers. 
During the physical exam, I felt comfortable because you explained to me what you found upon examining me.

**Interpersonal Skills Items: Personal Warmth and Sensitive Respect**

- I felt you greeted me warmly upon entering the room.  
- I felt you were friendly throughout the encounter. You were never crabby or rude to me.  
- I felt that you treated me like we were on the same level. You never “talked down” to me or treated me like a child.  
- I felt you let me tell my story and were careful to not interrupt me while I was speaking.  
- I felt you showed interest in me as a “person.” You never acted bored or ignored what I had to say.  
- I felt you displayed patience when I asked questions.  
- I felt you were careful to use plain language and not medical jargon when speaking to me.  
- I felt you approached sensitive/difficult subject matters, such as religion, sexual history, tobacco/drug/alcohol history, sexual orientation, giving bad news, etc., with sensitivity and without being judgmental.  
- During the physical exam, I felt comfortable because you would warn me as to what you were about to do.  
- During the physical exam, I felt comfortable because you draped me appropriately, never leaving me unnecessarily exposed.  
- During the physical exam, I felt comfortable because you never left me in an uncomfortable position (eg, left my legs dangling when in a supine position rather than pulling out the leg extension).  
- During the physical exam, I felt comfortable because you never physically hurt me (eg, when inserting the otoscope; when testing for the Babinski reflex, etc.).  
- I felt the resident displayed a positive attitude during the verbal feedback session.

**Global Item**

- If given the choice in the future, I would choose this resident as my personal physician.