Training Standardized Patients for a High-stakes Clinical Performance Examination in the California Consortium for the Assessment of Clinical Competence

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The use of standardized patients in teaching and assessment of clinical skills has become more ubiquitous in medical schools in the United States and Canada since Dr Howard Barrows introduced the first standardized patient at the University of Southern California in 1963. This increased usage is also due to the fact that the national licensing examination in the United States, includes a component to assess the clinical skills of the learners (United States Medical Licensure Examination Step 2 CS). The eight medical schools in California form a Consortium for the Assessment of Clinical Competence, which enables them to develop and implement a common clinical assessment tool, the Clinical Performance Examination (CPX), for final year medical students across the state. All medical schools in the Consortium share the same standardized patient cases and checklists. The standardization of training across the eight medical schools is presented. This paper describes the methods that have been used to train the SPs so that they can portray the gestalt of the patient, provide effective feedback, and reliably evaluate the students at the Keck School of Medicine of the University of Southern California. Quality assurance measures to ensure both performance and checklist accuracy are also described.

Key Words: clinical performance examination, clinical skills examination, standardized patients, standardized training
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What are Standardized Patients?

Standardized patients (SPs) were first known as *programmed patients*, later as *simulated patients* and, more recently, the term *standardized patient* has been generally accepted since the 1980s. In the literature, they have also been termed as *surrogate patients*, *professional patients* and, with specialized training, there are *gynecological teaching associates* (*GTA*), *male urogenital teaching associates* (*MUTA*), *patient instructors* and *patient educators*.

Geoff Norman, a psychometrician from McMaster University, Michael G. DeGroote School of Medicine, first coined the expression "standardized patient". The term standardized is used for two reasons. First, SPs can accurately and consistently portray a

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case in a "standardized" way, i.e. if eight men are trained to portray a patient with chest pain, they can simulate all aspects of the case, as trained, and will present the same challenge to the learner. Second, SPs can evaluate in a consistent and reliable way, i.e. if the student performs according to the checklist, the SP will evaluate in a "standardized" manner, accurately recalling and recording student behaviors on the checklist.

An SP has been defined as a person who is carefully trained to accurately, repeatedly, and realistically recreate the history and physical findings, as well as the psychological and emotional responses of the actual patient on whom the case is based [1]. This allows for any learner encountering that "patient" to experience the same challenge from the SP, no matter when the case is performed or which of the SPs trained to portray the case is encountered.

How are SPs Used in Medical and Health Professional Education?

SPs are used as a standardized tool for teaching and assessing history taking and interviewing skills, physical examination skills, communication and patient–physician interaction skills and patient education and information sharing skills [2–12].

At the Keck School of Medicine of the University of Southern California, SPs are used in all 4 years of medical school for both teaching and assessment.

In Year 1, the Introduction to Clinical Medicine (ICM) course uses SPs for teaching clinical skills through seven workshops, and on request from individual faculty. SPs are also used as triggers for teaching and discussion in the Professionalism and the Practice of Medicine (PPM) course, and in certain organ systems courses. For formative assessment, ICM conducts an Objective Structured Clinical Assessment (OSCA) midway through the course, where students receive feedback on their clinical skills from both faculty and SPs. At the end of Year 1, the students are evaluated with a summative Objective Structured Clinical Examination (OSCE).

In Year 2, there are two workshops in the ICM course; an OSCA midway through the year, and an OSCE at the end of the year, which is the clinical aspect of the Year 2 Comprehensive Examination. The comprehensive examination and the OSCE prepare the learners for the clinical years, as well as for the National Board of Examiner's United States Medical Licensure Examination (USMLE), Part I.

In Year 3, all the required clerkships, except Pediatrics, use SPs in their OSCE. Surgery and Internal Medicine also use OSCAs to provide formative feedback to their learners. In all situations where SPs are used for assessment, the SPs use checklists to evaluate clinical skills, and all encounters are recorded on digital video.

At the beginning of Year 4, there is a high-stakes SP-based clinical performance examination (CPX), which all students need to pass to graduate. Students have found the CPX as being extremely helpful in preparing them for the USMLE Clinical Skills Examination.

The CPX is unique in that all eight medical schools in California have formed a consortium, the California Consortium for the Assessment of Clinical Competence (CCACC). Teams of deans, clinicians, educators, psychometricians, and SP trainers from each medical school collaborate to design the clinical cases used for assessment.

Standardization of Training of SPs

Standardization of the training across test sites at each school is accomplished through consortium meetings and meetings of SP trainers. The thrice-yearly consortium meetings take place twice through face-to-face meetings and once by videoconferencing.

Prior to the first Consortium meeting, and soon after the last CPX has been conducted in the medical schools, the standardized patient trainers meet to dissect each case by detailing training concerns and evaluation checklist issues, as well as sharing training tips.

At the first Consortium meeting

Trainers who have had an initial review of the cases used, present issues related to the cases used in the previous year's CPX. The Consortium schools lay the groundwork for the coming year and agreement is reached regarding the cases for the upcoming CPX. The following grid is used for case selection, and an example is shown below.

Grid for Case Selection							
Case name	**Race**	**Age/gender**	**Acuity**	**System**	**History**	**Physical exam**	**Counseling/ info sharing**
John Smith	African-American	57 years/male	Chronic	Cardiovascular	Yes	Yes	Yes
Maria Luna	Latina	36 years/female	Acute	Gastrointestinal/ liver	Yes	Yes	Yes
Jack Byrd	Caucasian	8 months/male	Ill-defined	Nervous system	Yes	No	Yes

The types of cases used are:

- acute emergent
- chronic
- ill-defined
- well care
- behavioral
- grave prognosis

In terms of demographics, the different ethnicities used are:

- African-American
- Latino
- Caucasian
- Asian-American

Ages range from 8 months to 75 years and both males and females are used. Checklists are used to assess the following skills: history taking, physical examination, information-sharing/counseling, clinical courtesy, patient–physician interaction and the patient's overall satisfaction. The SP also gives written feedback.

At the second Consortium meeting

The cases are thoroughly discussed, checklists are worked out and refined, as are the post-encounter exercises. Details such as equipment necessary for each case are agreed upon.

At the third Consortium meeting

The cases and evaluation checklists are finalized by representatives of all eight medical schools.

Trainers' Retreat

Before actual training at each of the schools begins, there is a trainers' retreat, which is the final meeting of all the trainers. Videos of the different cases are reviewed, and the similarity between the SPs trained at different schools for the same case is a testament to the standardization of training. Each case and checklist are discussed thoroughly and the training techniques and best practices shared among the schools. Physical examination maneuvers are demonstrated by the clinician trainers to the nonclinician trainers. The retreat offers an opportunity for the trainers to share techniques and experiences that worked well in the different schools.

Training of SPs for a High-stakes Examination

Training of the SPs usually takes place in four sessions.

Session 1 (approximately 3 hours)

The first session starts off with a *general orientation*, where the objective is to familiarize the SPs with the case. Here, we are assuming that more than one SP is being trained for a case. The SPs' role in the case is defined and the SPs are provided with information about the purpose and logistics of the examination or assessment where this case will be used. The SPs' rights and responsibilities are discussed and clarified. The SPs are provided with an overview of the case and the checklist. If the case has been used before, the video is shown to the SPs being trained for the case.

The SPs receive the training materials and read them aloud. Each SP reads part of the training material so that everyone is paying attention to the material that is being read. This also allows the SPs to stop and ask questions of the trainer if anything is unclear. The trainer answers their questions and also clarifies the patient's personality, manner, attitude and how s/he portrays it by means of body language or gestures or verbal responses. The written training materials

provide the basis for the SPs to understand the patient that they will portray. However, the trainer will provide the nuances that will make the patient come to life. Trainers can also take the SPs' perceptions and ideas and incorporate them into the training materials if they can help the SPs to better understand the gestalt of the patient.

Session 2 (approximately 3 hours)

The objective of this session is to role-play the case and practice filling out the checklist. In this session, the trainer addresses any questions that the SPs may have after reading the case materials. The SPs are then given a multiple-choice quiz to test their content knowledge and ensure that they have learned it. Next, the SPs are trained on physical examination maneuvers. They learn what to expect and how to respond to the maneuvers. Last, the SPs and the trainer review the checklist and the guide for the checklist. If the SPs have any questions regarding the checklist or the guide, the trainer answers them. Then, the SPs and trainer role-play the case. As each SP role-plays the case, the other SPs observe and comment on the performance. The SPs fill the checklist while watching the performance. The trainer fills the checklist after the performance, and then all of them review the checklist together. This provides another opportunity for the SPs to clarify any of the checklist items.

If this case has been used in another examination, the videos of this case, with different students, can be selected ahead of time by the trainer and used for the SPs to practice their checklists. When reviewing the checklists together, it is important to spend time on checklist items where there is disagreement. The trainer and the SPs need to ensure that there is resolution on the item before moving on. Sometimes the SPs may all be in agreement, yet they may all be wrong. It is the trainer's function to check and see why they were all agreeing on the wrong answer, and correct their misconceptions.

Sometimes the tape needs to be reviewed for a particular checklist item, where there is an inconsistency between SPs, and discussion will take place on why that student's behavior warranted that response on the checklist.

Some key reasons for running this session are to encourage SPs to ask questions, train on physical maneuvers (if the case requires them), provide constructive criticism and positive feedback as often as possible, repeat role-play with feedback until the performance of the SP matches that of the case, compare and review checklists, and decide if each of the SPs are capable of performing all the tasks, i.e. performance and checklist.

Session 3 (approximately 3 hours)

The objective of this session is to standardize performance and ensure checklist accuracy. By this time, the SPs should have enough familiarity both with the case and the checklist that they can perform the case as well as fill in the checklist after the performance.

The clinician who developed the case can be invited to this session. It may not be possible in all situations for this to occur, but this can be an asset for the SPs, because it will allow them to receive feedback from the clinician regarding the authenticity of their performance.

The trainer will role-play students who are average, above average and below average, allowing the SPs to get a flavor of the different ways that students may ask questions. The SPs playing the character and the trainer will fill the checklist after the encounter. The observing SPs, will also fill the checklist during the encounter. These observers will be encouraged to make notes as they fill in the checklist, to give feedback to the performing SP on the portrayal of the case. Variability in the checklists should be much less by this point. The reliability score for each SP can be calculated, and those who obtain less than 85% may need additional training.

This is also the session where, in some schools, feedback is taught to the SPs, so that they provide written feedback to the learners from the patient's perspective. The session may take longer than 3 hours if this happens.

At USC, we have a separate feedback training session, which is 3 hours in duration.

Feedback training (approximately 3 hours)

This is a 3-hour workshop in which we use the WinDix model [13]. The goal of the workshop is to enable SPs to use the WinDix model to give more effective feedback, and rate the quality of their feedback.

The objectives of the workshop are:

- SPs will be able to use the WinDix model to give more effective feedback, and rate the quality of their feedback.

- SPs will be able to state the principles of effective feedback.
- SPs will be able to use video clips and differentiate between effective and less effective feedback.
- SPs will be able to use the Quality of SP Feedback (QSF) rating form to evaluate feedback.
- SPs will be able to give more effective feedback.

The workshop overview is as follows:

- Objectives of feedback
- Concerns and challenges of SPs
- Principles of feedback
- Training video clips
- Exercises
- Use of the QSF rating form for training
- Analysis using QSF rating form
- Exercises
- Summary

In providing written feedback, the following principles are emphasized:

- The feedback is given using the patient's name, e.g. "John felt…" or "Jane felt…" This distances the patient (case) from the SP, and the student will feel that it is the patient's perspective, and not the SP's perspective. The importance of giving feedback from the patient's perspective can never be overemphasized.
- The SP provides specific feedback in the form of behaviors that the student exhibited and how the patient felt as a result of the behaviors, e.g. "You paused for a number of times before asking me questions, so Jane felt that you were not sure where you were going to go next." The SP must not provide general statements such as "You seemed a little unsure of yourself at times."
- Feedback should be provided using the sandwich technique with a positive comment followed by a constructive suggestion and closing with another positive comment. This is because learners cannot take more than 2–3 items of constructive feedback at a time.

Session 4—practice examination (approximately 3 hours)

This is the dress rehearsal for the SPs. At the Keck School of Medicine of the University of Southern California, we utilize Session 4 as the practice examination.

In some schools, the two are treated as separate sessions. If two sessions are planned, then for Session 4, a clinician unfamiliar with the case is recruited. SPs will interact with the clinician one at a time. The trainer and the remaining SPs will observe from the monitoring room. The clinician is briefed by the trainer regarding the objective of and expectation for this session. The objective is for the clinician to ensure the authenticity of the SPs' performance. The clinician will receive the same instructions for the station, as the learners. The timing would also be exactly the same. After the session, while the SP fills the checklist, the clinician will provide feedback to the trainer on the portrayal of the case by the SP.

At USC, we use this session to run a practice examination, using General Internal Medicine residents. We provide orientation to the residents, explaining that this session is used to assure us of the SPs' authenticity of portrayal. We have found it useful to provide a series of questions for the clinician to answer regarding the patient. This reassures the residents that the purpose is not to assess their clinical skills. The following questionnaire is provided:

- Is the SP's portrayal of the symptoms realistic? Yes/No (If No, please state why.)
- Is the SP's affect believable? Yes/No (If No, please state why.)
- Did you feel that your interaction with the SP is as authentic as your interaction with a real patient having the same constellation of signs and symptoms? Yes/No (If No, please state why.)

The practice examination is usually given 3 days before the actual examination. All SPs trained for a particular case need to be present. All encounters are videotaped.

All SPs for each station will be in the room. The residents rotate through the stations like the students. The difference is that, while the resident examines the first SP, the other SPs observe the encounter, and make any notes on the accuracy of the facts in the history and the portrayal such as the physical examination and the affect. Once the encounter is over, the resident leaves the room and fills in the provided questionnaire while the SPs fill in the checklist. The SP performing the case will fill the checklist electronically, while the other SPs fill paper checklists. The trainer collects the resident's questionnaire and, if there are any discrepancies noted by the resident, the trainer discusses these with the resident. This takes up some time but because we ask for 4–6 residents, and there are only 3–4 SPs per case, there is adequate time for discussion and clarification.

The next resident then rotates through, and the same procedure is followed until all of the residents have examined all SPs trained for each case.

After the residents leave, the SPs receive feedback from the trainer, based on the residents' feedback. Final adjustments are made regarding the portrayal. Checklists are compared for interrater reliability.

Quality Assurance of SPs

During the 2–3 weeks of the CPX, it is essential that the SPs' performance remain at a high level, and their checklist accuracy is at 85% or higher.

To do so, trainers need to monitor the performance of the SPs. It is not possible for the trainers to monitor every station all the time, so there is intermittent monitoring of the SPs, to ensure that each station is observed at least once. Depending on the audiovisual system that is being used to record the interactions and the clinical skills assessment software used, the trainers can observe SP performance, compare their own checklists with those of the SPs, and compare the individual SP data for each case, allowing for quality assurance. SP performance can thus be checked for errors and feedback can be provided to them.

References

1. Wallace P. *Coaching Standardized Patients for Use in the Assessment of Clinical Competence*, 1st edition. New York: Springer Publishing Company, 2007.
2. Brown A, Anderson D, Szerlip HM. Using standardized patients to teach disease management skills to preclinical students: a pilot project. *Teach Learn Med* 2003;15: 84–7.
3. Clay MC, Lane H, Willis SE, et al. Using a standardized family to teach clinical skills to medical students. *Teach Learn Med* 2000;12:145–9.
4. Cohen R, Reches A, Steinberg A, et al. Evaluation of a workshop to teach clinical bioethics in the clinical setting. *Med Law* 2000;19:451–61.
5. Colletti L, Gruppen L, Barclay M, et al. Teaching students to break bad news. *Am J Surg* 2001;182:20–3.
6. Haist SA, Wilson JF, Pursley HG, et al. Domestic violence: increasing knowledge and improving skills with a four-hour workshop using standardized patients. *Acad Med* 2003;78:S24–6.
7. Hardoff D, Schonmann S. Training physicians in communication skills with adolescents using teenage actors as simulated patients. *Med Educ* 2001;35:206–10.
8. Petrusa ER. Clinical performance assessments. In: Norman GR, Van der Vleuten CPM, Newble DI, eds. *International Handbook of Research in Medical Education*, 1st edition. Dordrecht, The Netherlands: Kluwer Academic, 2003:673–710.
9. Petrusa ER. Taking standardized patient-based examination to the next level. *Teach Learn Med* 2004;16:98–110.
10. Swartz MH, Colliver JA. Using standardized patients for accessing clinical performance: an overview. *Mount Sinai J Med* 1996;63:241–9.
11. Van der Vleuten CPM, Swanson DB. Assessment of clinical skills with standardized patients: state of the art. *Teach Learn Med* 1990;2:58–76.
12. Williams RG. Have standardized patient examinations stood the test of time and experience? *Teach Learn Med* 2004:16:215–22.
13. May W, Fisher D. *WinDix Training Manual for Standardized Patient Trainers: How to Give Effective Feedback*. MedEdPORTAL; 2006. Available from: http://services.aamc.org/jsp/mededportal/retrieveSubmissionDetailById.do?subId=171