

# Teaching clinical skills with patient resources

Jean Hudson MD MScCH CCFP FCFP Savithiri Ratnapalan MBBS MEd MRCP FRCPC

Experiential learning is a key component in teaching clinical and communication skills to medical students. A UK report stated the following about the role of patients in medical education:

There are a number of challenges that arise from patient involvement in medical education. These range from practical considerations relating to the organization of clinical placements to patient concerns about consent and confidentiality. As many of these challenges are an unintended consequence of changes to medical education and healthcare service delivery, they will require flexible and innovative solutions.<sup>1</sup>

It is challenging for tutors to structure learning events for their students with patients. We have several anecdotal accounts of preclerkship medical students going to the wards unsupervised to practise their clinical skills—a practice no longer considered ethical by today's standards. As such, an awareness of and ability to recruit different patient resources and to be available to teach and assess students has become part of the teacher's mandate.

In this article, we discuss various types of patients as "educational resources," including standardized patients (also called *simulated patients*), real inpatients or outpatients, patients who volunteer for educational purposes, and virtual patients. It is important that both teachers and learners be mindful that, with the exception of virtual patients, these resources are human beings and not mere educational objects.<sup>2</sup>

## Standardized and simulated patients

To address the difficulties of finding real patients for teaching medical students on a consistent basis and also to provide a fair learning and assessment environment, Barrows introduced simulated patients in 1963.<sup>3</sup> A simulated patient is usually a person who has been carefully coached to simulate an actual patient, such that the simulation would not be detectable by a skilled clinician.<sup>3</sup> Simulated patients can be real patients coached to modify their presentations, lay volunteers, faculty members, students, trained actors, high-fidelity mannequins, and, more recently, virtual patients.

The terms *simulated patients* and *standardized patients* are often used interchangeably; however, the emphasis for simulated patients is in portraying the signs and symptoms

of real patients, whereas the emphasis for standardized patients is on consistency.<sup>4</sup> For the purpose of our discussion, we will use the term *standardized patient (SP)*.

Standardized patients can be indistinguishable from real patients when they are sent unannounced into clinical practice.<sup>5</sup> However, the students are well aware that they are not real patients when SPs are used for teaching and testing. As consistency is important in testing students, SPs are the norm in examination settings across North America.

## Real patients

Family physicians have access to real patients in their offices, in clinics, or on the wards. Often in preclerkship training the inpatient units are where the students meet real patients to practise their clinical skills. These patients are often very frail; there might be language barriers; or they are unavailable. It is fair to say that in current times, if a patient is well enough to endure 1 to 2 hours of a first-year medical student interview and examination, then he or she might be too well to be in hospital. Students learning clinical skills on inpatient units is not only unfair to the inpatients, but also to the medical students, as their learning becomes a suboptimal experience because patients might be too fatigued for them to finish their assessments. For example, a student might be unable to perform a required musculoskeletal examination and observe the patient's gait if the patient is too sick.

Outpatient volunteer programs are burgeoning across Canada (eg, Patients Playing a Part program at the Mississauga Academy of Medicine at the University of Toronto<sup>6</sup>). Organization and maintenance of such programs can prove to be a challenge, requiring administrative resources. Teaching intimate examination requires specialized patient partners or associates, and many schools work in collaboration with such programs. Access to such teaching resources might be found through SP programs or midwifery programs. Teaching with a hybrid combination of SPs and task training pelvic models is becoming more and more common.

## Virtual patients

Virtual patients in online tools are also being used in clinical skills medical education. Often there are blended approaches with patient resources such as combining a live patient visit with online clinical resource tools; for example, the student might examine a patient's heart and then augment his or her learning afterward with online auscultation modules.

La traduction en français de cet article se trouve à [www.cfp.ca](http://www.cfp.ca) dans la table des matières du numéro de juillet 2014 à la page e373.

## Comparing patient types

Studies have found that there is generally a high level of satisfaction expressed by medical trainees working with various patient types. However, there are challenges with this type of research. Most studies that examined the equivalence of SPs and real patients for teaching had no standardized evaluation tools and were based on attitude or satisfaction surveys developed for each individual study.<sup>4</sup> Reporting standards were also inconsistent, as demonstrated in a review that specifically looked at the quality of research on SPs; the review randomly selected 21 articles from a total of 177 articles published from 1993 to 2005 and found no defined standards for reporting the use of SPs in research.<sup>7</sup> Some examples of studies from the literature are demonstrated in **Table 1**.<sup>8-13</sup>

The literature supports the use of SPs in teaching medical students how to conduct interviews, develop communication skills, and perform physical examinations; however, no superiority in use of either SPs or real patients has been consistently demonstrated. Working with SPs in medical education appears to have no effect on student performance, and differences in perceptions

among students and faculty members are inconsistent. As some of the recent original studies have illustrated, there is evidence to support involving real patients as educational resources.<sup>14</sup>

## Using patient resources

Available patient resources vary according to the geographic location, medical school, and curricular programs. The clinical skills teacher needs to be aware of the options in their local community. Simulated patients cost money, but so do the patient volunteers or real patients in the sense that running the programs to use these resources requires coordination and time on the part of the medical education office.

Selecting, obtaining consent from, and preparing real patients and patient volunteers are integral to the success of a session. Unlike SPs, real patients or patient volunteers are not trained in a specific role for teaching. Patients might have a personal agenda regarding how best to educate medical students. They might reveal too much information, making it too easy for the students, or they might withhold information, trying to make it more challenging for the students. For

**Table 1. Examples of studies that discussed SPs and real patients**

STUDY	PATIENT TYPE	OUTCOMES
McGraw and O'Connor, <sup>8</sup> 1999	SPs and real patients	<ul style="list-style-type: none"> <li>This study compared the effectiveness of SPs with real patients as educational resources; it found a non-significant trend toward greater satisfaction with feedback in the SP group but no significant difference between the groups in student performance on the OSCE</li> </ul>
Gilliland et al, <sup>9</sup> 2006	SPs and real hospitalized patients	<ul style="list-style-type: none"> <li>The performance of students trained with SPs was compared with those trained with hospitalized patients and the authors found that using SPs in a simulated setting was not a disadvantage to the education of medical students</li> <li>A study of 2 self-selected groups of students in a simulation centre who used SPs or hospitalized patients to teach history taking and performing physical examinations showed no significant differences in OSCE results or the National Board of Medical Examiners results between the 2 groups</li> </ul>
Lane and Rollnick, <sup>10</sup> 2007	SPs	<ul style="list-style-type: none"> <li>Most students consistently rated the use of SPs as useful and beneficial with a positive effect on the learning experience</li> <li>Only 1 study reported SP use as having a negative effect on learning</li> <li>Most common use of SPs was for teaching communication skills (55%), followed by teaching clinical skills (32%) and physical examination skills (17%)</li> </ul>
Bokken et al, <sup>11</sup> 2008	SPs and real patients	<ul style="list-style-type: none"> <li>This review examined 4 studies that assessed if real-patient encounters were comparable to SP encounters in the teaching of clinical skills (eg, communicating, interviewing); studies found most real-patient encounters were comparable to SP encounters</li> </ul>
May et al, <sup>12</sup> 2009	SPs	<ul style="list-style-type: none"> <li>A 10-year review (1996-2005) of the literature on the use of real patients in medical education; it found a positive effect on learning but could not address the usefulness of using patients in curricular design and assessments</li> </ul>
Clever et al, <sup>13</sup> 2011	Volunteer outpatients and SPs	<ul style="list-style-type: none"> <li>Faculty members preferred SP interactions, as they were easier from a preceptor perspective</li> <li>Medical students preferred interactions with real patients when learning communication skills; students better remembered real patients' subject matter because the "patients stick in their mind"</li> </ul>

OSCE—objective structured clinical examination, SP—standardized patient.

example, an eager patient might reveal his or her entire medical history within the first 5 minutes, diminishing the student's ability to practise questioning techniques. Patients might feel pressured to volunteer in order to please their personal health providers. Real patients are authentic, which might be preferable for some types of teaching sessions, as in the example of demonstrating palpation of an enlarged liver. Additionally, some real patients or patient volunteers are amenable to coaching. One can offer the patient suggestions about which part of the history to reveal or withhold until he or she is asked the correct question.

Standardized patients are often trained to provide constructive feedback to the students about their communication skills and behaviour. Real patients or patient volunteers often appreciate being asked for feedback. Sometimes patients will provide unsolicited feedback about the student's attire or behaviour, which can lead to valuable discussions. Feedback about SP programs maintains high-quality performance; for example, the SP might have forgotten to portray a key part of the history that was critical to the diagnosis. Clinical teachers will likely work with all patient types, so being aware of and knowledgeable about various patient resources will serve to enhance their competency in teaching. In **Box 1** we discuss factors to consider when working with various patient types.

### Teaching learners

The teacher needs to be prepared with regards to the clinical skills session's objectives, content, and role of the patient for each session. For example, a teaching session on "breaking bad news" would involve SPs who could provide the learners with a "safe" environment for them to develop their approach before they face the real-life circumstances. Whereas learning how to obtain a patient's medical history might be more appropriate with a real patient.

Using patient resources to teach learners clinical skills is also a golden opportunity for teachers to model respectful behaviour toward the patient—regardless of whether he or she is a real patient, a volunteer, or an SP—who essentially represents the voice of the real patient as in real life. Students quickly notice this respectful behaviour; thanking and speaking directly to the patient volunteer, real patient, or SP is paramount to the tutor's role modeling.

While the teacher and students talk about the patient's health in front of the patient during a teaching session, they can unwittingly cause the patient anxiety, leading to follow-up patient medical visits to address these concerns. Ideally, when possible, the teacher needs to observe the patient-student encounter and provide specific feedback immediately. Standardized patient programs should offer faculty members suggestions

#### Box 1. Factors to consider when working with all patient types

- Get appropriate consent from real patients and patient volunteers
- Be prepared and meet with the patient before the clinical teaching session. Coach the real patients or patient volunteers on what is expected from them
- Be mindful that patient volunteers or real patients are not trained. They might have their own agendas and might be vulnerable; they also might be looking to "please" their health care providers who are the teachers
- Facilitate feedback from the patient to the students
- Provide feedback to the SP or volunteer patient program to ensure ongoing quality

SP—standardized patient.

and sessions on how to improve the quality of teaching encounters when working with SPs.<sup>4</sup> In **Box 2** we present factors for teachers to consider when using patient resources to teach clinical skills.


### Conclusion

Studies have shown that both real patients and SPs are suitable to facilitate medical students' education in clinical skills. There is no evidence of the superiority of one patient type over another in teaching clinical skills to preclerkship medical students. Instead, local circumstances and expertise will ultimately guide selection of patients for educational sessions. Factors such as the knowledge or skill being taught or assessed, the

#### Box 2. Factors to consider when using patient resources to teach learners clinical skills

- Be aware of the different patient resources available at your site, costs, and logistics
- Recognize which real patients are appropriate for teaching
- Understand the advantages and disadvantages of patient types
- Align the patient type with the goals of the teaching session; for example, if the teaching session is about difficult communication, it might be preferable to use an SP
- Know the objectives of the teaching session and the role of the patient within that session; for example, is the patient there to tell a story? Is this an opportunity to practise breaking bad news?
- Remember that clinical teachers are role models and must model professional behaviour toward all patients (ie, real patient, volunteer patient, or SP)
- Observe the medical students during clinical skills interaction and provide specific constructive feedback

SP—standardized patient.

availability of real patients, and the costs involved with either SPs or patient volunteers will have an effect on the choice of patient resources. 

**Dr Hudson** is Assistant Professor and First Year Clinical Skills Course Director in the Department of Family and Community Medicine at the University of Toronto in Ontario. **Dr Ratnapalan** is Associate Professor in the Department of Paediatrics and the Dalla Lana School of Public Health at the University of Toronto.

#### Acknowledgment

We thank **Diana Tabak** for her assistance in writing this paper.

#### Competing interests

None declared

#### References

- Spencer J, Godolphin W, Karpenko N, Towle A. *Can patients be teachers? Involving patients and service users in healthcare professionals' education*. Newcastle, UK: The Health Foundation; 2011. Available from: [www.health.org.uk/public/cms/75/76/313/2809/Can%20patients%20be%20teachers.pdf?realName=br0eQj.pdf](http://www.health.org.uk/public/cms/75/76/313/2809/Can%20patients%20be%20teachers.pdf?realName=br0eQj.pdf). Accessed 2014 May 20.
- Nestel D, Burn CL, Pritchard SA, Glastonbury R., Tabak D. The use of simulated patients in medical education: guide supplement 42.1—viewpoint. *Med Teach* 2011;33(12):1027-9.
- Barrows HS. An overview of the uses of standardized patients for teaching and evaluating clinical skills. *AAMC Acad Med* 1993;68(6):443-51.
- Cleland JA, Abe K, Rethans JJ. The use of simulated patients in medical education: AMEE guide no 42. *Med Teach* 2009;31(6):477-86.
- Rethans JJ, Drop R, Sturmans F, van der Vleuten C. A method for introducing standardized (simulated) patients into general practice consultations. *Br J Gen Pract* 1991;41(344):94-6.
- Trillium Health Partners [website]. *The patients playing a part program*. Mississauga, ON: Trillium Health Partners. Available from: <http://trilliumhealthpartners.ca/education/Pages/The-Patients-Playing-a-Part-Program.aspx>. Accessed 2014 May 20.
- Howley L, Szauter K, Perkowski L, Clifton M, McNaughton N. Quality of standardised patient research reports in the medical education literature: review and recommendations. *Med Educ* 2008;42(4):350-8. Epub 2008 Feb 20.
- McGraw RC, O'Connor HM. Standardized patients in the early acquisition of clinical skills. *Med Educ* 1999;33(8):572-8.
- Gilliland WR, Pangaro LN, Downing S, Hawkins RE, Omori DM, Marks ES, et al. Applied research: Standardized versus real hospitalized patients to teach history-taking and physical examination skills. *Teach Learn Med* 2006;18(3):188-95.
- Lane C, Rollnick S. The use of simulated patients and role-play in communication skills training: a review of the literature to August 2005. *Patient Educ Couns* 2007;67(1-2):13-20. Epub 2007 May 9.

- Bokken L, Rethans JJ, Scherpbier AJ, van der Vleuten CP. Strengths and weaknesses of simulated and real patients in the teaching of skills to medical students: a review. *Simul Healthc* 2008;3(3):161-9.
- May W, Park JH, Lee JP. A ten-year review of the literature on the use of standardized patients in teaching and learning: 1996-2005. *Med Teach* 2009;31(6):487-92.
- Clever SL, Dudas RA, Solomon BS, Yeh HC, Levine D, Bertram A, et al. Medical student and faculty perceptions of volunteer outpatients versus simulated patients in communication skills training. *Acad Med* 2011;86(11):1437-42.
- Jha V, Quinton ND, Bekker HL, Roberts TE. Strategies and interventions for the involvement of real patients in medical education: a systematic review. *Med Educ* 2009;43(1):10-20.

### TEACHING TIPS

- Both simulated patients (SPs) and real patients are suitable resources to use when teaching clinical skills. When deciding which patient type to use, consider the resources available at your site, costs, and logistics.
- Align the patient type with the goals of the teaching session; for example, if the teaching session is about difficult communication, it might be preferable to use an SP.
- Clinical teachers are role models and must model professional behaviour toward all patients regardless of what patient type (ie, SP, real patient, or volunteer patient) is being used.

Teaching Moment is a quarterly series in *Canadian Family Physician*, coordinated by the Section of Teachers of the College of Family Physicians of Canada. The focus is on practical topics for all teachers in family medicine, with an emphasis on evidence and best practice. Please send any ideas, requests, or submissions to **Dr Miriam Lacasse**, Teaching Moment Coordinator, at [Miriam.Lacasse@fmed.ulaval.ca](mailto:Miriam.Lacasse@fmed.ulaval.ca).

— \* \* \* —