Roles of standardized patients (SPs) in medical education: Students' reflection

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SUMMARY

The use of standardized patients (SPs) is becoming increasingly common in medical education. Many advantages exist for the use of SPs in early medical education, justifying the success of their implementation. It provides students with a safe environment to practice clinical skills, feedbacks and exposes the hidden curriculum in medicine such as professionalism. The suggestions that have been offered may be beneficial to all early medical education programs that use SPs in early medical education and OSCE evaluations, and these recommendations may improve these programs for students, faculty, clinical tutors and SPs alike.

Key words: Standardized patients – Hidden curriculum – Medical education – Clinical skills – Professionalism – Implementation

INTRODUCTION

The use of standardized patients (SPs) in medical education is becoming increasingly common, providing first and second-year medical students with the opportunity to practice skills that they will use during their clinical years. Numerous advantages exist for the use of SPs in early medical education, justifying the success of their implementation since 1963 (Wallace, 1997). Firstly, SPs offer medical students a safe environment to practice clinical skills (Barrows, 1993). It is beneficial to students and clinical patients alike, as neither party needs to fear possible worsening of a patient's condition (Shankar and Dwivedi, 2016). Secondly, in their ongoing interaction students usually develop a rapport with SPs, offering students a comfortable environment in which they can improve their clinical skills (barrows, 1993). Thirdly, in many medical education programs SPs provide students with feedback on their technical and communication skills, enabling them to refine their skills in a safe learning environment (McGovern et al., 2006). SPs are also instrumental in the implementation of the hidden curriculum in medicine, which involves learned elements on professionalism and patient care that are not explicitly stated (Lehmann et al., 2018). Lastly, and perhaps most importantly, early medical education involving the use of SPs allows students to begin understanding the physician-patient relationship, which will be a cornerstone of their future profession (Weaver and Erby, 2012).

It has been widely established that SPs have transformed early medical education for the better. This article describes the interactions of students, faculty and clinical tutors with SPs at

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the Keith B. Taylor Global Scholars Program of St. George's University in Newcastle Upon Tyne, United Kingdom. By reflecting upon these SP sessions, a significant role of SPs in undergraduate medical education and recommendations for SPs protocols can be made in all institutes.

CLINICAL CASES

St. George's University employs the use of SPs during first- and second-year medical student sessions, during which medical students are introduced to basic physical examination and application of ultrasound as a teaching tool to provide a clinically relevant understanding of basic sciences. These are closely supervised sessions led by clinical tutors and instructors, who are all medically-trained professionals. Prior to any training session, SPs were screened using clinical history questionnaires and full physical examination. In this article, using three different case scenarios, we will attempt to describe the interaction between SPs and students, along with opportunities to learn tools of the hidden curriculum when dealing with SPs.

Case 1

A 55-year-old male SP with no history of hypertension or ischemic heart disease was recruited for an ultrasound imaging lab in which the cubital fossa was to be visualized. No cubital fossa ultrasound imaging was conducted on the SP by students or clinical tutors before the lab. However, during the laboratory teaching session, the SP was found to have a high originating radial artery by participating students. Students were unable to find a brachial artery but rather found two arteries at the cubital fossa in this patient. After a detailed ultrasound of the upper limb of the SP, a high-originating radial artery was confirmed by a clinical tutor. Such incidental findings discovered in SPs during imaging training sessions are common and have potential implications on clinical examination, research design, especially in the areas of informed consent, patient privacy and results disclosure. In our case, the issue of patient privacy had to be considered. Given the unique circumstances of this situation, wherein both clinical tutors and students had been privy to the findings, maintaining patient confidentiality in this more public setting had to be prioritized. Had the patients not been recruited as an SP, they would likely have never known that they had a high-originating radial artery. Such an anatomical variation, however, does have relevance when considering procedures involving the cubital fossa such as trans-radial coronary procedures (Lo et al., 2009). Thus, informing the patient about this anatomical variation during lab and their potential implications had to be balanced with the risk of alarming or causing unnecessary distress to the patient.

Case 2

A 63-year-old male SP with no significant past medical history was recruited for participation in an abdominal ultrasound session. During a pre-session evaluation of the SP by a clinical tutor, the tutor discovered a hyperechoic liver, leading to the suspicion of liver disease. An informal medical interview of the SP was subsequently conducted by faculty. At this time, several factors, including physical symptoms (pain, fever, etc.), lifestyle choices and alcohol consumption, were assessed. This case brings to light ethical considerations involving patient lifestyle choices, and how best to respond to them professionally and respectfully. Chronic alcoholism is negatively perceived in both a medical and social context, often creating a stigma against alcoholic patients. Detailed history has been taken, and the SP presented, was discovered to have a substance abuse problem, which was likely the cause of this incidental finding. Therefore, Students, clinical tutors and faculty have a responsibility to ensure that such patients are free from judgement and decision making about the SPs findings.

Furthermore, given the more public setting of this incidental finding, all parties involved have an ethical obligation to the patient to maintain patient confidentiality.

Case 3

A 70-year-old male asymptomatic SP with a history of arthritis was recruited to participate in an ultrasound session on the abdomen. This particular session involved visualization of

abdominal vessels. Upon ultrasound imaging of the abdominal aorta, students discovered that the SP had an aortic aneurysm. Upon discussion with the patient, clinical tutors learned that the patient was aware of this potentially life-threatening pre-existing condition. This case highlighted the need to establish a standardized protocol for both SP recruitment and incidental findings in simulated laboratories. This case can be used in describing structural pathology to medical students in their early years. However, a proper pre-screening of all SPs should be a part of the medical curriculum.

Case Commentary

Implementation of a standardized protocol may provide medical programs with more control over SP interactions while outlining an approach to communication skills, professionalism and ethical concerns should they arise. The first step towards this goal requires answers to the following questions:

1. Should SPs have medical screening before entry into the program?
2. What are the benefits of using standardized patients from a diverse background, with potentially pre-existing medical conditions?
3. How should students and instructors respond to any findings that are discovered during clinical sessions? What is the appropriate way to react in the situation? Who should notify the patient?
4. How should the patient be accommodated in future sessions?

STANDARDIZED PATIENTS AND MEDICAL SCREENING

In many educational programs, standardized patients are selected based on interviews, acting skills and response towards students (Nestel et al., 2011). The above cases suggest the additional need for medical screening of SPs before their recruitment. Such screening should be comprehensive, including both medical and social history of the patient.

Given that medical screening is integrated into SP recruitment, there are many benefits of using such screening to select only healthy SPs for early medical education programs. Firstly, a healthy population of SPs will allow students to learn normal anatomy. It is especially important for programs that use an ultrasound-based approach for a clinical understanding of anatomy, as students must be able to appreciate and grasp normal anatomy before they can identify deviations and diseases (Swamy and Searle, 2012). Prior medical screening of SPs may also create a more stress-free practice as they will not have to fear potentially harming patients or worsening a pre-existing condition (Nestel et al., 2011; Nie et al., 2011).

In addition to admitting SPs based on pre-screening, there is a benefit of having medically qualified clinical tutors who evaluate patients using physical and ultrasound examination before each SP session—a practice that has been implemented into the Keith B. Taylor Global Scholars Program.

Examination by clinical tutors before each session identifies pre-existing abnormalities or conditions so that both clinical tutors and patients can be aware of any issues that may arise during the session with students. It also allows clinical tutors to prepare students for any pathologies or deviations from textbook anatomy that may be present in SPs. Such practices would enable a conducive learning environment wherein all parties are aware of what will be identified during the laboratory session.

Benefits of using diverse standardized patients

During clinical years, students will more often encounter patients with pre-existing conditions rather than healthy patients. Thus, the potential use of SPs with pre-existing conditions for early supervised medical education offers a more realistic perspective of challenges that students may face in their future careers.

If a certain proportion of SPs with pre-existing conditions are chosen to be used in early medical education programs, it will enable students to apply the knowledge they have gained from didactic lectures in a controlled clinical setting. Studies have demonstrated that the practical application of knowledge in the clinic is a proven

learning approach (Abela, 2009; Mayer, 2010). Perhaps a phased introduction of pathology would be beneficial for student learning, where students are first exposed to standardized patients to appreciate normal anatomy, and they are gradually exposed to patients with pathology. The discussed cases could be ideal learning situations for students to begin to understand disease mechanisms, assess patient histories, and discuss treatment and handling of patients. Thus, the ideal learning environment for medical students may involve a balance between healthy patients and those with pre-existing conditions, allowing them to visualize both normal anatomy and related pathology.

In medical education, one aspect of training is the clinical encounter in which trainee or medical student meets the real patients. Indeed, this clinical encounter allows improving both practical skills such as procedural skills, physical examination and unpractical ones such as communication skills, professionalism (Beigzadeh et al., 2016). However, there are many reasons have determinately affected the use of SPs in medical education. These reasons are continuous changes in the healthcare systems and the reliability of real patients. The latter is very challenging, because, if the education system is planning to use real patients, it is indicated to have control over many variables such as risks, type of diseases, stages of the illnesses and level of the interaction. These variables can be easily controlled in both simulated patients and standardized patients. Another aspect of concerns can be related to the paucity of suitable educational cases in early medical education. Of course, the availability of standardized patients depends on the type of departments and facilities available in every educational institution. Moreover, the ethical considerations are different between the two types of patients. Indeed, the ethical consideration regarding the use of SPs is more complicated, and sometimes are difficult (Bergin and Fors, 2003).

It is worth noting that the used SPs can be easily accomplished by training them on a variety of clinical scenarios in which we control their response to medical students' questions and examinations. The use of SPs allows strict control over the learning objectives and content and the presentation or the clinical scenarios (Beigzadeh et al., 2016). The use of standardized patients in medical education allows a fair evaluation of students' strengths and weaknesses in a supportive way. Indeed, additionally, positive feedbacks will increase the level of students' confidence and reduces the level of anxiety (Lane and Rollnick, 2007).

Indeed, all previously discussed aspects require careful planning regarding the use of standardized patients and simulated patients in medical education. Furthermore, most suitable and well-trained healthcare providers should be responsible for delivering such an approach to avoid any unwanted complications.

Response to incidental findings

The cases presented above further stress the importance of implementing a protocol to respond to any incidental findings that may occur during SP physical exam and ultrasound sessions (Beigzadeh et al., 2016). Incorporating such a standardized protocol into the pre-laboratory training of students, clinical tutors and faculty will allow for a respectful and appropriate response to unexpected situations from all involved.

On the other hand, the lack of professionalism and confidentiality with standardized patients might lead to an inappropriate response. Information disclosure and associated patients' response should be considered. SPs may experience fear, shock, or embarrassment in the same manner as we would appreciate the feelings of a patient in a real medical setting (Marsick and Watkins, 2001). As such, a comprehensive protocol should stress the importance of professionalism and clear, respectful communication when providing guidelines for incidental findings. Besides, a hierarchy of responsibility should exist as in any educational setting. Faculty and clinical tutors should be informed of incidental findings discovered by students before notifying patients. It allows for more experienced medical professionals to confirm the findings and convey them to the patient accurately and appropriately while maintaining patient confidentiality. With

patient and faculty consent, students may then be able to use this opportunity to learn about the pathology and how to deliver diagnoses to patients appropriately (Ziv et al., 2003; Rosenbaum et al., 2004).

Patient accommodation for future sessions

After the discovery of an incidental finding, the question arises as to whether or not the patient should continue to participate in future sessions. If the system decided to recruit real patients as SPs, special accommodations should be implemented to prioritize their health and safety. It raises questions as to how best to accommodate patients with pre-existing conditions without detriment to student learning.

As stated previously, patients with pre-existing conditions can be viewed as an excellent learning opportunity for students. In order to maximize student learning and patient comfort, students should be made aware, with patient consent, of these pre-existing conditions and how to manage patients accordingly without causing harm. Additionally, the SP should be educated on their condition and be made aware of potential risks involved with participation in supervised sessions.

Conclusions

This article offers insight into ethical considerations that may need to be made with the use of standardized patients in medical education. This article has attempted to outline suggestions that may be beneficial to all early medical education programs that use SPs in early medical education and OSCE evaluations. These recommendations may improve these programs for students, faculty, clinical tutors and SPs alike.

SPs are instrumental to student learning, student development and implementation of the hidden curriculum. Continued use of SPs in medical education is paramount for students in their preclinical years. It should evolve to consider (1) the impact of using only healthy SPs, (2) implications of using SPs with pre-existing conditions, (3) response to adverse events which may occur during SP sessions, (4) ethical responsibility for patient disclosure, and (5) how best to optimize student learning alongside patient comfort and well-being.

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