

Medical Use of Standardised Patients

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Introduction

Simulated patients are individuals who are trained to present the symptoms and signs of disease processes as they present in real patients (Barrows, 1985). They are increasingly being used to develop, assess (Adamo, 2003) and research the clinical competence of health professionals (Collins and Harden 1998). One of their increasingly useful roles in medical education is in providing feedback to clinicians (Ker et al 2003).

There has been some understandable confusion over the use of the terms standardised and simulated patients with them often being used interchangeably. A simulated patient as defined by Barrows (1993) is *“a normal person who has been carefully coached to present the symptoms and signs of an actual patient”*. Standardised patients, in contrast, are *“people with or without actual disease who have been trained to portray a medical case in a consistent fashion.”* The consistency element in identifying standardised patients has seen this term used more frequently as patients have become an increasing focus in the assessment process in medicine.

Simulated patients and standardised patients have become integral to the delivery of medical education over the past twenty years in the UK. Initially, they contributed mainly at undergraduate level but their participation in postgraduate education and continuing professional development is increasingly being appreciated (James et al, 2001; Smith et al 2002). This will continue to increase as a result of changes being made in education and training in the medical profession in the UK (DOH, 2003).

Much of the literature shares experience of using simulated or standardised patients in the areas of developing communication skills in the consultation process (Kinnersley and Pill 1993, Baerheim and Malterud 1995) and for the purposes of assessment in different clinical settings (Harden and Gleeson 1979, Furman et al 1994, Adamo, 2003).

Simulated and standardised patients have become central to health care education as a result of changes in education, health service delivery and patient expectations. The need for simulated patients at undergraduate level has been determined by the recommendations for undergraduate medical education, *Tomorrows Doctors* (1993) which has led to a greater focus on the acquisition of knowledge in a more systematic, relevant and integrated way involving more patient practice at earlier stages of the curricular programme. Students at different stages of the development of their clinical expertise need to build up their understanding of the complexity of patient presentations. They need to learn to identify the relevant symptoms and signs during a consultation, evaluate this information in the context of both the clinical setting and the patient's lifestyle and learn to make a judgement both in relation to the diagnosis and in determining, with the patient, the most appropriate treatment (Ker, 2002). The availability and flexibility of simulated patients, their readiness to undergo scenarios many times and their ability to match their scripts to the students experience can all help to provide a safe, learner centred-learning environment. This is particularly valuable when students have minimal clinical

experience early in the curricular programme. Simulated patients in the learning setting can provide different levels of authenticity of clinical practice so students can rehearse and reinforce their skills.

Increased use of simulated patients has also occurred as a result in the reduction of inpatient beds with the subsequent shift to care in the community and the reduced average hospital admission period for patients. This has had a major impact on the availability of patients to take part in the training of health care professionals (Barrows 1993). In addition, increased consumerism has seen an increasing reluctance from patients to contribute to the training of professions (Adams 1995). A cultural shift within the NHS towards a more client-centred approach to care was first highlighted in the 1990s. Patients no longer accept being “practiced on” particularly when they are more unwell when inpatients and require more complex care. In addition there has been a huge undermining of the patient- doctor relationship as a result of Shipman, the Bristol Heart Inquiry and the Alder Hey body parts scandal in Liverpool.

This paper identifies the dilemmas facing the doctor patient relationship, shares some of the experiences of using simulated patients in the undergraduate medical curriculum in the context of the need to deliver safe patient care in the NHS of the 21st century and addresses the disadvantages and advantages of simulated and standardised patients and the resources and training required for a successful simulated patient programme.

The Patient - Doctor Relationship

Central to the success of any medical intervention is the establishment of the doctor-patient relationship. Sometimes when the patient is incapable or incapacitated this involves the participation of the patient’s representative or next of kin. In addition in practising in an increasingly diverse culture in the UK the role of an interpreter can also impact on the development of the patient –doctor relationship.

There is evidence that a poor doctor-patient relationship can result in incorrect diagnosis and poor compliance in relation to treatment.(Braddock et al 1999, Day et al 1993). It is essential that in any consultation doctors need to be able to assess patients feelings and emotions in relation to their illness presentation (Finestone and Conter 1994).

The advent of the internet has made previously unique medical knowledge more available to the public and with increasing educational standards, patients are more likely to question the medical decision making process. In addition the types of problems patients’ present with are more often lifestyle-related and are more challenging to solve by the medical profession. The doctor-patient relationship has also been further undermined by the multiplicity of health care specialisms that patients now have to interact with in the health care system

and with the public perception of the comparative routineness of highly complex technical medical procedures now available (Hopkins 1996). Over the past ten years there has been an enormous cultural shift which is still ongoing within the NHS initiated by the Patients Charter in the 1990s which has refocused care on the patient's needs. This reflects the world of industry with customer satisfaction being "at the core of good business practice". Patients are increasingly being referred to as clients with a move towards delivering a high quality tailor-made health care service where and when the patient requires it. This has shifted the power balance in the doctor-patient relationship where doctors in the words of Rueschemeyer "strike a bargain with society giving competence and integrity for trust and freedom from interference". Patients' increasingly demand as their right the highest standards professionalism in terms of trustworthiness, service and integrity (Broadbent 2001). This has been severely undermined by the recent well publicised abuses of professional privilege in the UK. Education has a central role in ensuring doctors have the capability of developing a trusting relationship with patients.

Role of Simulation in the Education of Doctors

The Hippocratic Oath and Florence Nightingales dictum to "first do no harm" have provided the underlying philosophical approach to medical and nursing practice for over 200 years. Yet as far back as the 1960s there has been an increasing wave of evidence, especially from the USA, of iatrogenic illness and injury- many associated with medication errors. There is also a culture within health care practice that does not address the underlying causes of errors with most errors perceived as doing little or no harm or as isolated events involving individual practitioners.

High reliability organisations like the NHS (Sexton et al, 2000; Fletcher et al 2003) are increasingly using simulation for learning and assessment (Darzi et al 1999). Recent developments both in high fidelity simulators and in the use of simulated patients have provided opportunities for creating highly realistic clinical environments (Ker et al 2003). There is increasing evidence that simulated experience provides opportunities for safe practice as part of a preparation for practice and in the development and maintenance of competence (Maran and Glavin 2003). Simulation also allows educationalists to incorporate and structure learning in the development and progression of skills acquisition using appropriate educational theories (operant conditioning, Skinner 1953, to transformative learning, Merizow 1991). Simulation of the clinical environment can be advantageous as it can be tailored to allow identification of omissions in practice, dangerous practice and ambiguous practice.

The advantages of simulated practice is that it also enables doctors at whatever level of expertise to rehearse their skills in a realistic context without compromising the care of their patients. In addition simulation provides a safe environment to identify how errors in practice occur and to determine both individual and system strengths and weaknesses in a performance-type setting. Most errors result from faults in mental functioning and can be analysed based

on a model developed by Rasmussen and Jensen, 1974. They describe human performance at three levels with the first two being the normal *modus operandi* as expertise increases:

- 1 skill based patterns of thought and action, largely unconscious
- 2 rule based thinking in which solutions are stored as set of rules (if X then Y)
- 3 knowledge based thinking which is required for new situations requiring conscious analytical processing

Errors can occur at all levels, skill based errors are known as slips and can be made more likely by things such as busyness, fatigue, alcohol or fear.

Rule based errors occur when a wrong rule is chosen. Knowledge based errors occur due to lack of knowledge or misinterpretation of the problem (we see what we know) and can be biased by memory or using the first solution that comes to mind. Mistakes due to rule based and knowledge based errors can be affected by the same things as slips. Simulated practice using simulated patients can give the practitioner the opportunity to rehearse their performance by recreating errors at different performance levels. However many human performance errors are often the result of systems errors either in the design or in the process of development of complex process'. In the case of the two doctors found guilty for manslaughter in Nottingham following the administration of intrathecal vincristine instead of methotrexate 32 errors occurred in the system prior to the actual administration of the drug. Simulation using simulated patients can both enable significant health care events to be reviewed and can be used to trial systems before they are introduced in the workplace resulting in safety becoming central to the practice of medicine.

Use of simulated patients in medical teaching and learning process

Simulated patients have many advantages in supporting and maximising learning in relation to developing safe clinical practice. Significant improvement has been seen in history taking and physical examination skills (Maguire et al 1977).

Often students are hesitant about role playing as they feel the impact of their own clinical knowledge will affect their performance (Donovan and Hutchison 2002). Often in role play situations health professionals find they feel awkward or ill at ease in having a central role in exposing the weaknesses of their clinical colleagues. The use of simulated patients can facilitate a more realistic learning experience.

Simulated patients have been found to be valuable in areas of health behaviour change (Poirer, 2004) and lifestyle problems such as alcohol abuse (Eagles et al 2001) and sensitive areas such as sexual health (Fitzgerald et al, 2003). They have also helped in giving formative feedback on performance following simulated ward exercises (Ker et al 2003).

Simulated patients have also been used extensively in areas of sensitive communication particularly in relation to breaking bad news (Fallowfield et al 2001). This adds a sense of reality to the learning process where the impact of the patient's feelings and emotions can be explored in relation to the doctors interaction.

The reliability, validity and feasibility of using standardised patients for assessment is also well established (van der Vleuten and Swanson 1990, Vu et al 1992). In certain circumstances standardised patients have been used to assess the serial acquisition of core clinical skills such as history taking, and examination (Prislin et al 2000).

In some institutions patients have been trained to become evaluators or instructors(Carroll 1981) which maintains their interest in the programme but also gives responsibility to those capable of developing it In relation to intimate examination in Maastricht the instructor provides invaluable patient feedback as well as instruction to the student carrying out the intimate examination. In several studies standardised patients have been used in real practice settings as incognito patients with variable results (Maiburg et al, 2004) in that it is feasible but requires substantial background work .

Advantages and disadvantages of simulated and standardised patients

Adapted from Collins and Harden (1998)

Advantages of simulated patients include

- A always have conditions present don't need to rely on opportunistic approach of practice
- B patient scenario can be dissected and staged in relation to learning process
- C can allow students to safely make errors and receive constructive feedback
- D can provide in safe environment professional feedback and patient feedback
- E provides positive links between local community and institution
- F contributing to educational programme in developing scenarios based on own experience of health care services
- G participating in sensitive consultation training

Advantages of standardised patients include

- A can assess students in formal examinations
- B will tolerate more students than real patients as normally fit
- C provide consistent and reliable performance in clinical assessments

Disadvantages of simulated patients and standardised patients

There are a number of disadvantages of using simulated patients. Most pertain to cost in terms of recruitment training and maintenance. In addition they do not duplicate the real patient and must not be seen as a substitute to real practice. What they enable clinicians to do is to rehearse and reinforce good practice in preparation for real practice. In addition in medicine simulated patients can not simulate subtle clinical signs. This can be overcome by giving a picture or written description to the patient to produce when the learner requests it but this reduces the reality factor. Some examiners are often sceptical of the use of

standardised patients in assessment but when they are trained their ability to consistently reproduce the same history is impressive and often examiners are unable to differentiate them from real patients.

Requirements for a simulated patient programme

Often in the development of a simulated patient programme there is a lack of understanding of the resources required both in relation to the development of a simulated patient bank and the training and ongoing support that is required both in terms of psychological support of patients and in financial terms. Simulated patients need to be used on a regular basis if their interest and enthusiasm is going to be maintained. This requires the support of a training programme, identified holiday periods and systems of reward or acknowledgement of input on the part of the simulated/ standardised patient. There are different models of simulated patient banks. Some involve the training and recruitment of actors but this can be expensive, particularly at undergraduate level where patients may only be required for rehearsal of simple procedures. Patients can be trained to simulate aspects of the consultation such as the history or participate in different clinical contexts such as ambulatory care, general practice or specialist wards. Involving simulated patients in the development of the patient scripts can be both a learning experience for the trainers but can also significantly contribute to the reality of the simulations. Particularly at postgraduate level videotapes of real consultations (Thew and Worrall, 1998) are often used to generate illness scripts for simulated patients where the anonymity of the patient is kept but the reality of the clinical experience is re created. Many simulated patient programmes now have well developed patient banks where the expertise of each patient is documented and their simulated history is kept in order to develop a cohesive training programme. As part of the recruitment process the each simulated patient's agenda for joining the programme is explored and documented. Flexible programmes enable simulated patients to participate at a level they feel comfortable with so some are happy just participating in technical skill development while others develop skills in giving constructive feedback.

Potential for other professions

Medicine, law and divinity are amongst the oldest known professions who have a specialised knowledge which they can utilise on behalf of their patients, clients or congregation. Each profession practises in unique settings which affect how their specialised knowledge is utilised. Recognising the role that the "non professional" plays in any interaction and their perception of the process can only improve the professional role and ensure errors are kept to a minimum. Patients clients and congregations need to feel they are valued and that they are receiving and sharing in the decisions that affect their medical legal and spiritual future. Using simulated patients has been an invaluable learning

experience in the field of medicine and could be an invaluable resource in ensuring any professional is fit for practice.

Simulated clients in law for instance could be introduced at undergraduate level to help students understand how to apply some of the LLB qualifying subjects like conveyancing or commercial law. In relation to assessment national standards of professional practice could be determined using standardised clients which could provide criteria for the APC (assessment of professional competence) and enable best practice statements to be shared throughout the profession.

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