



Simulation: the need for a balanced view

Received 12 April 2013, Accepted 18 April 2013, Epub 21 April 2013

Dear Editor:

Wang et al. should be congratulated for giving a comprehensive review of simulation training in healthcare^[1]. Whilst all the points they make are correct, they concentrate on the benefits of simulation whilst largely ignoring the downsides of this new modality of medical education. The advantages of simulation by and large outweigh the disadvantages; however, the disadvantages are worth examining also -if only to get a balanced view.

First of all, the authors ignore the costs of simulation. When the costs of hardware, software, facilities, faculty, and administrative and technology staff are all added up, such costs will be substantial.^[2]

Practising on real patients (although it has many advantages) is essentially free, whereas simulation is relatively expensive. There are ways to reduce costs and maintain quality in simulation-delivered medical education (for example, by concentrating on fidelity rather than technology and by ensuring that simulators are used to their maximum capacity); however, high costs still cannot be discounted totally.

Secondly, simulation, even though it can mimic very closely the clinical environment, is still not a real experience. Medical students and junior doctors in postgraduate training ultimately need to spend time with real patients and real colleagues in real wards-only then will they be fit for autonomous practice. In

simulated learning, the trainee ultimately knows that their actions in the simulator will not harm patients. On one hand, this is good as it results in a safe learning environment; however, on the other hand, it can result in some students not taking the simulation experience as seriously as they should.

Thirdly and lastly, there is no guarantee that learning in a simulated environment will be transferred to the clinical environment. There are ways to encourage such transfer (for example, once again by ensuring high fidelity); however, transfer can still not be guaranteed.

Kieran Walsh,
BMJ Learning,
BMJ Group,
BMA House,
Tavistock Square,
London,
WC1H 9JR, UK.

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✉ Corresponding author: Dr. Kieran Walsh, BMJ Learning, BMJ Group, BMA House, Tavistock Square, London, WC1H 9JR, UK. Tel/Fax: 0044-798-575-5333/0044-207-383-6242, E-mail: kmwalsh@bmjgroup.com

bmjgroup.com.

The authors reported no conflict of interests.

The authors reply:

We agree with Kieran Walsh^[1] that medical simulation-based education is expensive to implement. Our institution has invested millions of yuan to establish the medical simulation center. Besides, equipment maintenance, repair and replacement entails significant financial cost. However, as medical schools are organizations geared for education, they have a responsibility for training medicos to be qualified physicians^[2]. Every project has its own prime cost, so does education. We attach great importance to education and strive to secure investment for medical education-related projects including medical simulation. We guide students to practice on the models with standard and care, and make them conscious of protecting the models.

Secondly, it is true that in medical simulation, some students may not practice as seriously as they would do in a hospital setting with real patients. However, this could also occur in a real clinical setting as some students may be prone to the same attitude or behavior. This practice is not just limited to simulation-based education. Nevertheless, we should educate medicos to treasure the chance of practice

during medical situation-based education and in clinical encounters.

Thirdly, it really cannot be guaranteed that learning in the simulation center can be fully transferred into the clinical environment. How to bridge the gap between school knowledge and clinical practice remains an important issue still to be defined. Medical simulation education plays an important role in transforming knowledge learned from books into practice better rather than resolving the problem absolutely.

Wang Zhaoming, MD and Hai Wang, MD
Department of Surgery,
The first School of Clinical Medicine,
Nanjing Medical University,
Nanjing, Jiangsu 210000, China.

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