

EDITORIAL

Simulation: A Panacea for interprofessional learning?

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INTRODUCTION

It has been fascinating to observe the rapidly rising popularity of simulated learning activities over the past decade. Emerging mainly in medical education, but quickly adopted by the other health professions, simulation is credited with a number of key contributions for the education of health and social care learners (e.g. Issenberg et al., 1999; Scalese, Obeso, & Issenberg, 2008; Ziv, Wolpe, Small, & Glick, 2003). Simulation is also increasingly being promoted in the interprofessional field over the past few years. One of the main drivers for this focus was the publication of the Institute of Medicine's seminal report *To Err is Human* (Kohn, Corrigan, & Donaldson, 2000) which argued that to improve quality and safety, health care organizations needed to create interprofessional training opportunities for practitioners to learn interpersonal and technical skills in safe, simulated environments. In this editorial, we explore the possible uses and advantages of employing this approach within an interprofessional context as well as some of its limitations and challenges.

THE EXPANSION OF INTERPROFESSIONAL SIMULATION

Soon after the Institute of Medicine's call, there was a noticeable increase in published papers on interprofessional simulated learning. These accounts covered a number of clinical contexts, including emergency rooms, operating rooms and obstetrics units. Their focus ranged from simulating interprofessional interactions within family conferences (Schmitz, Chipman, Luxenberg, & Beilman, 2008), intensive care delivery (Mah et al., 2009), resuscitation and crisis resource management (Dagnone, McGraw, Pulling, & Patteson, 2008; Jankouskas, Haidet, Hupcey, Kolanowski,

& Murray, 2011) and disaster management (Atack, Parker, Rocchi, Maher, & Dryden, 2009). The learning approaches employed in these programs spanned the range from low- to high-fidelity simulation, and included case-based discussions, activities with standardized patients, games and scenario-based simulation with high-fidelity mannequins.

Advocates of interprofessional simulation argue that replicating real-life clinical dramas within the safety of a simulated environment helps professional learners to think more deeply about a number of facets around their collaborative practice. For example, it helps them to consider issues related to differing roles and responsibilities and interprofessional communication. In addition, this type of learning also allows learners to experience the pressures and stresses of working together in an interprofessional team (e.g. van Soeren et al., 2011). As a result, interprofessional simulated learning is valued by many of its participants (educators and learners), who enjoy its innovation, its near real-life sensibility, its low risk and at times its playfulness.

While we continue to see the literature produce generally positive accounts of this form of education, few studies have looked at the impact on interprofessional competence beyond the lowest levels of Miller's (1990) assessment pyramid (e.g. knows, knows how). Indeed, there has been little questioning of the *underlying assumptions* of this type of interprofessional learning. From our respective positions of sociology and medicine, we feel that as a community of educators and researchers we should take a more critical look at interprofessional simulated learning. Although our goal here is to explore the limitations of this form of learning, we both do see its educational merit. We therefore provide this critique to generate more thoughtfulness about the work we undertake in interprofessional simulated learning and to encourage research to address unanswered questions.

THE LIMITATIONS

An adequate level of realism or fidelity is considered essential for effective simulated learning (Issenberg, McGaghie, Petrusa, Lee Gordon, & Scalese, 2005), but can simulation truly recreate real life? While mannequin fidelity is improving with newer generations of equipment having increasingly more realistic features, psychological fidelity or how real the simulation *feels* may be particularly challenging to achieve in the interprofessional setting. For example, team composition in the simulated learning environment does not always accurately reflect its composition in real life. In addition, the actors or other confederates who perform specified roles in simulation scenarios may not adequately represent the profession they were asked to enact.

Another overlooked factor within simulated learning is the issue of reactivity – that people under scrutiny often modify their behavior to over-exaggerate elements which they feel to be socially desirable (Robson, 2002). This may be exacerbated in interprofessional simulation. Participants concerned about poor assessments of their ability to work as “team players”, may over-emphasize their collaborative behavior during a simulation, which may be truly unrepresentative of the way they normally act in their clinical practice. Indeed, a colleague involved in an interprofessional simulated learning session mentioned to one of us that “*the way the surgeons talk to you in a simulation is nothing like the way they do in the OR.*”

Most simulated interprofessional learning is focused on crisis situations and high-acuity settings, and whether this translates to lower acuity settings is questionable. Interprofessional teams in outpatient and nonintensive inpatient care settings tend to have very different tasks and membership than high-acuity teams. In high-acuity situations, team tasks are often routinized (through the use of protocols) and clearly time-bound; teams have defined membership with assigned roles and team effectiveness may be best measured using objective outcomes (e.g. the patient survives). In the setting of an outpatient clinic or inpatient ward, clinical tasks may be less clearly delineated, team composition, membership and individual roles may vary and objective outcomes may be more difficult to define, with individual professionals having different ideas regarding desirable outcomes. Considering these differences, any effectiveness attributed to simulated learning in high-acuity settings cannot be assumed to translate to low-acuity settings. It therefore remains largely unknown whether simulation is an adequate learning strategy for interprofessional collaboration and teamwork in such environments.

The Accreditation Council for Graduate Medical Education (ACGME, 2005) embraces simulation in part because of its ability to support standardized assessment of various competencies, but it is not easy to operationalize this for professional learners, in particular at higher levels of Miller’s (1990) pyramid (shows how and does). Assessment at the individual level is labor intensive and most tools address leadership skills only. Assessment at the team or group level can be very useful for established teams that continue to work

together, but in many health care settings teams are often ad hoc in nature and have ever changing members. Since the definition of effective collaboration and teamwork is context dependent, it is not easy to assess how simulated interprofessional learning may actually improve interprofessional practice.

While debriefing is seen as an effective way to provide formative assessment, the effectiveness of interprofessional debriefing has not been studied. In a study among pediatric residents undertaken by one of us, it became clear that interprofessional debriefing is not without challenges. As one of the medical participants stated, “*I am not going to be too critical of a nurse in the debriefing, because I still need to work with that person.*” This highlights, again, the importance of interpersonal dynamics and power differentials and also challenges the assumption that simulation creates an opportunity to practice in a “safe” (neutral) environment.

It should also be noted that interprofessional simulated learning activities are not easy to implement. Practical considerations such as scheduling challenges and issues around financing can be problematic, but one can also encounter limited buy-in among learners and professionals. Some of this resistance may be due to factors related to hierarchy and power differences, and the psychological safety mentioned above. A useful illustration of this is the example of an intensive care medical fellow, who told one of us that he hates (interprofessional) mock codes, because he does not like to make a fool out of himself in front of the nurses.

There is also often an absence of thought about the imbalances of authority/status and the hierarchical division of labor that exists between the health professions and can arguably have a major impact on this form of learning. Nevertheless, such factors continue to be overlooked in this form of learning. This problem led one of us to call for the use of sociological fidelity in interprofessional simulation (Sharma, Boet, Kitto, & Reeves, 2011) – an approach which aims to create scenarios based on achieving high levels of social realism, rather than simply recreating complex clinical cases which are acontextual in nature.

CONCLUDING COMMENTS

In summary, while there are clear benefits to interprofessional simulated learning (this approach certainly helps participants to learn with, from and about each other), there are also some clear challenges and limitations. Research is therefore needed to establish the impact of various interprofessional and intraprofessional dynamics on the efficacy of this form of learning, to understand what type of simulations is most effective for which types of interprofessional teams and what educational content or clinical competencies are better learned in a uniprofessional setting. The use of theoretical perspectives is also needed. Only on a sound theoretical base can we build evidence-based simulation curricula that justify the associated costs and labor invested. This in turn will ensure that the interprofessional learning is effective, which can also help health care professionals provide excellent and safe patient care.

Declaration of interest

The authors report no declarations of interest. The authors alone are responsible for the writing and content of the paper.

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