

# PROMOTING RESEARCH ACTIVITIES IN SIMULATION CENTERS TO IMPROVE PATIENT SAFETY

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There are many issues around patient safety that need to be addressed in the Pakistani healthcare system. Most of these issues arise because the healthcare professionals are not properly trained in the technical and non-technical skills. The technical skills include examining a patient, measuring blood pressure, listening to the heart sounds, passing the intravenous (IV) cannula line, passing urinary catheter, delivering a baby, etc. The non-technical or soft skills include communication skills, taking an informed consent for surgery or invasive procedure, breaking a bad news, and professionalism of healthcare professionals. The development of these skills is a neglected area in the medical education system of Pakistan. Moreover, there are limited facilities to develop these skills in our healthcare professionals. These skills can be improved for patient safety through simulation-based training, thus producing safe doctors, and other healthcare professionals. The patients in our healthcare system are exposed to the medical students in their clinical years, without prior training in the controlled environments. This compromises the safety of patients and may lead to many professional and ethical issues. These profession-

al and ethical values, if left unaddressed may lead to cases of unprofessionalism in future.<sup>1</sup>

Simulation is a standard technique that is used throughout the world in medical curricula to produce safe healthcare professionals.<sup>2</sup> The technique provides a controlled environment with near life experience in a guided manner.<sup>3</sup> The safety of patients is ensured by using manikins (model of human body), or standardized patients (SP). The manikins can be used to improve technical skills, for example, passing a nasogastric tube or a urinary catheter. The simulated or standardized patients are either real patients or actors whose consent had been obtained beforehand, and are trained for specific scenarios. The real patients can be used for improving the examination skills, such as, an enlarged thyroid gland, examining a patient for lymph nodes enlargement, or listening to an abnormal heart sound. The actors can be used to train the healthcare professionals in communication skills and professionalism, for example, breaking the bad news, taking an informed consent, dealing with confidentiality or uncertainty.<sup>4</sup> The simulation-based training will be an additional tool to test the psychomotor and affective domains of stu-

dents and will help in assessing their competence and performance.<sup>5</sup>

The research projects in simulation-based training will provide insights in how this training can be used to further improve patient safety in our context. The dynamics of the healthcare system reflect the cultural norms that need local research to understand it.<sup>6</sup> The Simulation Centres will provide a facility to carry out both qualitative and quantitative research to suggest guidelines on technical and non-technical skills in the local context, by providing evidence and publishing in peer-reviewed journals. The research projects will identify the local needs and will help in adding the theme of simulation-based training, and assessment to the medical curriculum. Additionally, it will also provide simulation-based training to the dental, nursing, physiotherapy, para-medics, and other healthcare professionals. Moreover, the research activities carried out in Skills lab will help in producing safe healthcare professionals by providing training opportunities during the process of research. The context of educational research is slightly different than other disciplines. The research activities usually have an educational impact on the participants. The participants will be involved in the research process and will also come to know about their educational needs. The feedback provided to them on their skills will highlight the deficiencies that they will need to improve. This exercise will contribute to improving their performance in the future healthcare related activities. Fur-

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thermore, the end-users of skills lab are the patients and the community, who are managed by these healthcare professionals in real life situations. The training under controlled conditions will ensure that these healthcare professionals provide a patient-centred care, and keep the safety of patients as a foremost priority. Therefore, the Skills lab will help in identifying the healthcare professionals who are not safe to practice, and have not achieved the required level of competencies.

Overall, the Simulation lab will improve the quality of health professions education at medical schools, hospitals, and medical universities. It will also improve the care and safety of patients by producing safe doctors and healthcare professionals. The simulation centres will provide a venue to help in developing research projects around technical and non-technical components of

medical education to improve the psychomotor and affective domains of our healthcare professionals.

#### NOTES ON CONTRIBUTORS

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#### CONFLICT OF INTEREST

The author declares no conflict of interest.

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