## Time for Re-visiting Surgical Training Program

Jamshed Akhtar 1\*

COVID-19 pandemic resulted in number of life style changes including social interaction. Standard operating protocols are also developed for interaction among healthcare providers, patient population and their families. This affected the delivery of healthcare related services. Multiple directives by health authorities during COVID-19 waves seriously jeopardized the surgical teaching and training of residents. The usual conventional mode of teaching is shifted to virtual platform. Journal club, clinicpathological meetings and other face-to-face teaching activities are conducted on-line.1 However, surgical hands-on training cannot be done virtually though simulations can be a way out. This change has not produced same level of satisfaction as that of conventional method.

During COVID-19 pandemic elective surgeries were postponed. This also included oncology related procedures as well. The emergency services, however continued. Number of surgical residents were also posted to COVID-19 wards. Changes in the duty roster also made and surgical teams were re constituted with minimum number of doctors so as to prevent or decrease their exposure to the infection. The psychological well-being of residents was also affected. Many doctors reported anxiety, fear and some were diagnosed as having depression. During the pandemic many healthcare providers including doctors also died because of the COVID-19 infection. All this affected surgical teaching and training of the residents.

The pandemic is not going to go away in near future. Number of new COVID-19 variants resulting in resurgence of disease in the form of different waves

has become a regular phenomenon. The pattern is expected to continue in future as well. Residents in this situation cannot be expected to achieve competencies as required by the degree awarding bodies. It is therefore important to re-visit the surgical residency program to address this issue. The competency based training program requires specific proficiencies that must be achieved during different residency years. However, due to pandemic number of changes made in provision of surgical services thus the competencies are not acquired. Since March 2020 when the first case of COVID-19 reported in Pakistan surgical services are curtailed. Postgraduate trainees thus failed to complete training as outlined in the curriculum. On the other hand, they got certificate of completion of residency. Few appeared in the exit examination, which in some disciplines, was held in virtual format. Number of residents were declared pass without being assessed on psychomotor skills, an essential component of clinical assessment. They have also not acquired the hands-on surgical experience as per curriculum.

Degree awarding bodies are expected to analyze the current pandemic situation and take appropriate decisions in consultation with all the stakeholders. Some of the changes that might be discussed include increasing the duration of surgical residency program for those who are already in training and for future induction as well. The e-log of residents can be analyzed to find out deficiencies. This shall guide in developing additional training requirements. Another way out for those who have passed out could be the creation of post-fellowship slots in the same surgical disciplines so as to improve the exposure of residents to complex and advance surgical procedures.

The educational strategies can be modified in context of COVID-19 pandemic. This may include introduction of simulation based learning (SBL). This include simulated or standardized patients, task trainer, manikins, or screen-based simulation. This is not an easy solution and requires huge investment and training of trainers. This may be kept in plan when developing long-term strategies. Same can be used for assessment in exit examination. It is important

## Correspondence:

Dr. Jamshed Akhtar <sup>1\*</sup>
Department of Paediatric Surgery
National Institute of Child Health, Jinnah Sindh Medical
University (JSMU) Karachi
E mail; jamjim88@yahoo.com

Department of Paediatric Surgery, National Institute of Child Health JSMU, Karachi

to mention that SBL approach has its limitation. With advancement in technology more realistic simulations are developed. This amounts to improved fiedilty. The learning that shall be achieved through this approach is debatable as all students may not learn the same way.

In context of Pakistan, the government has embarked upon vaccination drive and it aims to cover maximum number of eligible population so as to create herd immunity. This shall decrease the incidence of the disease and its related morbidity and mortality. There is no alternative to real patient. A resident-patient encounter in outpatient and emergency room, in wards, for preoperative and postoperative care, during surgery and at follow up is essential for both training and assessment. With huge population and number of patients in the community, simulation based learning is not an ideal approach. Manikins can be used for practicing invasive procedures thus minimizing harm to the patient. However, hands-on experience under supervision is important to sign-off a resident as Day-1 Consultant.

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