

Teaching clinical skills to undergraduate medical students in times of physical distancing: Trials and tribulations

Over the last few decades, the decline in history and physical examination skills and over reliance on technology and laboratory investigations has been increasingly evident.^[1-3] It was even felt that the tool considered to be the symbol of a modern-day doctor, the stethoscope is obsolete.^[4,5] The severe acute respiratory syndrome coronavirus-2 disease (COVID-19) pandemic has added salt to spice by forcing the training programmes to adapt their curricula to carry out clinical teaching despite restrictions as per the COVID-19 appropriate behaviour. The impact on medical student education especially in terms of teaching and learning within the clinical environment has been significant. This is likely to dent into the core concepts of medical profession, i.e., the essential bedside clinical skills for assessment of the patient.

Imparting clinical skills training requires the acquisition of cognitive as well as psychomotor skills and this is best possible from in-person bedside training.^[6-8] The adoption of COVID-19 appropriate physical-distancing policies has resulted in a lesser number of trainees being allowed at one bedside. This has also resulted in cancellation of the large-group in-person bedside clinical teaching sessions. Several hospitals being designated as exclusive COVID-19 hospitals with non-COVID-19 services coming to a standstill, need for isolation of patients with COVID-19, have resulted in restricted access to hospitalised patients. Further, to minimise disease transmission and reduce non-essential use of personal protection equipment, direct bedside examination of patients for educational purposes has been actively discouraged during the pandemic. Diverting all medical faculties to COVID-19 care due to enormous increase in workload have seriously limited the ability of faculty to impart clinical training and conduct assessment bedside. During the COVID-19 pandemic, significantly less time has been spent bedside and physical examination has become brief and limited to the essential requirement. This can lead to a generation of doctors ill-equipped with clinical skills which is not a desirable development. Carefully eliciting the history and carrying out rational, hypothesis-driven physical examination constitutes the backbone of clinical diagnostic reasoning and forms the basis for planning the diagnostic workup. Disregarding clinical examination and overreliance on

laboratory investigations, as is happening in COVID-19 pandemic, will drive-up health-care costs. Furthermore, although crippled by the COVID-19 restrictions, the teaching faculty in most of the medical schools has innovatively rallied to ensure teaching of basic clinical examination skills to undergraduate medical students using existing web-based and remote learning strategies falling back on in-person practice whenever feasible.^[8,9] Some of these innovations include flipped classroom model, participation in online telemedicine clinics, procedural simulation and use of physical examination and surgical procedural videos. Further, for teaching surgical clinical skills, students have been taught using homemade tools such as oranges for injections, bananas for suturing and cannulated sponges for practising intravenous drug administration, among others.^[10-13] Giving feedback to students, an important tool for enhancing the learning experience has also become difficult with online teaching of clinical skills.

During the COVID-19 outbreak, online assessment of clinical examination (practical) by external examiners who were from out-of-the state or from an other university within the state was permitted by the Medical Council of India and the present National Medical Commission (NMC).^[14] Instead of real patients, often, virtual case scenarios were used. Over an online platform external examiners had assessed the clinical examination skills of the undergraduate medical students. However, state-of-the-art audiovisual equipment was not available in most of the medical colleges, and tabs, laptops and smart mobile phones were used instead. It was commonplace for external examiners to request the internal examiners to verify the elicitation of physical signs as the video feeds provided did not facilitate close-up viewing.

Imparting clinical skills in COVID-19 times have been challenging and involved trials and tribulations. Accepting and adapting to new technology have been challenging for both students and medical college faculty, especially the elderly faculty. However, with physical distancing becoming the new norm for survival, a paradigm shift has become essential in teaching clinical skills to undergraduate medical students. As it is already more than a year since the situation

has come up and is likely to exist for some more time, a few batches of undergraduates across the country will be qualifying with inadequate training in clinical skills. This is an issue of concern and is likely to have far-reaching consequences. Hence, the direction of redressal should change from that of temporarily tiding over with ad hoc measures to long-term solutions. There is a need for evolving newer standardised teaching-learning-assessment methods of imparting clinical skills keeping in mind the changing situation. There is also a need for defining the minimum essential audiovisual standards that are required to conduct a teleassessment by an examiner. Capacity building in terms of equipping medical colleges with adequate audiovisual equipment facilities to support concurrently occurring examinations in several clinical subjects is required. As a lot of cost and technology is involved, encouraging technocrats to come out with suitable audiovisual gadgets at an affordable cost also need to be considered. Training students to do the role play of patients will also provide a more realistic platform of learning and training compared to virtual scenarios. Designers of evolving medical education training modules such as the Revised Basic Course Workshop in Medical Education and Advance Course in Medical Education of the NMC should do some brainstorming sessions to incorporate methodology and standards for online teaching-learning-assessment and feedback to impart clinical skill training to students. Furthermore, the bodies governing medical education should seize the first opportunity to go back to as much bedside training as possible.

Conflicts of Interest

Alladi Mohan is an Editor of Journal of Clinical and Scientific Research. Battalalpalli Sri Hari Rao is a faculty member of Sri Venkateswara Institute of Medical sciences, Tirupati, of which Journal of Clinical and Scientific Research is the official Publication. The article was subject to the journal's standard procedures, with peer review handled independently of this faculty and their research groups.

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