

Short Communication

Skill enhancement for post graduate medical students

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ABSTRACT

The medical students ought to be well versed with life saving measures like basic and advanced techniques and should also practice medicine in the most ethical manner in today's healthcare environment. To provide a uniform formal training to all the post graduate medical students it was decided to start the BLS/ALS/GLP/GCP courses across the state using uniform modules developed by experts. To implement this uniformly, The Tamil Nadu Dr. M. G. R. medical university initiated training programs in advanced life support (ALS), basic life support (BLS), and good clinical practice (GCP), good laboratory practice (GLP) through eight designated nodal centres across Tamil Nadu. A total of 4,000 postgraduate medical students received training from qualified personnel. Pre and post training assessments were conducted to evaluate the effectiveness of the program. The feedback collected from students was highly encouraging, indicating a positive reception of the training modules, and reaffirming the program's value and effectiveness.

Keywords: Advanced life support, Basic life support, Good clinical practice, Good laboratory practice

INTRODUCTION

Saving a life is the primary motto of medical fraternity. When any patient encounters a heart attack, there are possibilities of reviving the patient if there is intervention in the golden hour.^{1,2} Medical students should know the exact methodology to execute this like pressure, avoid rib fracture, restoration of airway are few things to be considered.^{3,4}

Stimulation labs provides facilities for students to practice the technique well before the real scenario. This will boost their confidence and also avoid mistakes in real situations.⁵

The national medical council made it mandatory for all the medical students to undergo BLS and advance life support (ALS) training.⁶ Few medical colleges of the state have adequate facilities to conduct the same. Other colleges manage with the primary mannequins. American heart association (AHA) proprietary rights need to be procured

by the colleges to utilize the modules of AHA. All students are not exposed to this important program uniformly.⁷

Cardiac arrest continues to be serious public health concern and one of the leading causes of death globally, despite medical advancements in prevention and care.⁸ Cardiopulmonary resuscitation (CPR) is a critical procedure that supports breathing and circulation during cardiac arrest.⁹ Proper knowledge and training in both BLS and ACLS are key factors that determine the success of resuscitation efforts.^{10,11} As healthcare system advances, simulation-based learning is crucial for equipping students with lifesaving competencies. Simulation based learning using advanced manikins and structured team training significantly strengthens lifesaving skills. It also supports better clinical decision making and improves teamwork during emergency situations.^{12,13}

Leading health organization like the AHA and the world health organization (WHO) continue to emphasize skill based education as a key component of patient safety.^{14,15} The Objective of this training is to offer all the students

under the aegis of this university uniform training by expert faculty.

METHODS

To bring about the uniformity, The Tamil Nadu Dr. M. G. R. Medical University proposed to conduct ALS, BLS and GCP, GLP programs. The university entered a memorandum of understanding (MoU) with society for emergency medicine India (SEMI) and Tamil Nadu apex skill development centre for healthcare to facilitate the training program. These organizations provided trained faculty, technical support, and access to high-fidelity simulation manikins and other training aids to ensure high standards of delivery.

This training program is decentralized into eight nodal centers across Tamil Nadu to enhance accessibility and reduce travel burden for students. Each session included lectures, hands-on simulation training, and team-based learning modules. The modules were designed with a blend of evidence-based protocols and real-time clinical scenarios, ensuring that students could apply theoretical knowledge in simulated emergencies. To maintain consistency and quality across all centres, structured evaluation formats were developed and implemented, along with feedback collection and review by an academic oversight committee. The program commenced on 3rd March 2025, and so far, approximately 4,000 postgraduate medical students have been trained under this initiative.

RESULTS

A total of 4000 postgraduate medical students received structured training from trained personnel over a period of four months. The training was conducted across eight nodal centre established under the aegis of The Tamil Nadu Dr. M. G. R. medical university, covering institutions through the state of Tamil Nadu. Pre and post test evaluations was done to assess knowledge gained. All students from two academic batches were successfully trained. Feedback forms were collected from the students provided highly encouraging response, reflecting their appreciation and perceived value of the training. Upon completion, every participant was awarded an e-certificate, which is a mandatory prerequisite for appearing in their university examination.

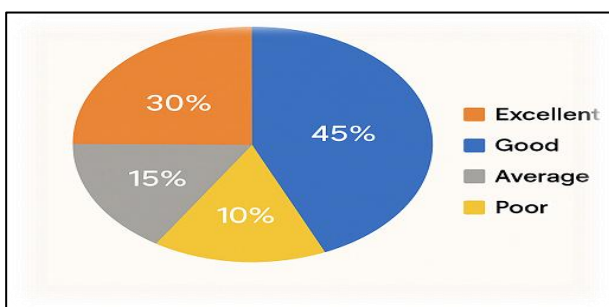


Figure 1: Response rating the faculty's content.

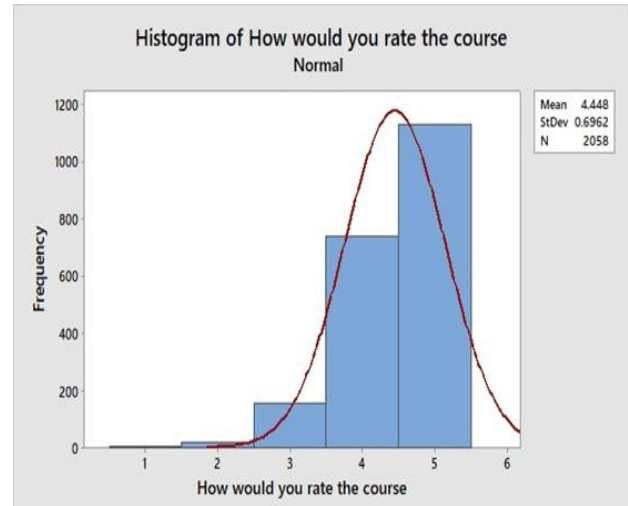


Figure 2: Response rating the content of the course.

DISCUSSION

The large-scale implementation of skill enhancement programs like ALS, BLS, GCP, and GLP has addressed a critical gap in uniform training across postgraduate medical institutions in Tamil Nadu. The decentralized approach through eight nodal centres ensured accessibility and minimized logistical challenges for students. The encouraging feedback received from the participants highlights the relevance, effectiveness, and quality of the training modules delivered.

By incorporating both theoretical understanding and hands-on simulation, the program effectively bridged the gap between knowledge and clinical application. The mandatory nature of the certificate for exam eligibility also ensured full participation and commitment from students. The success of this initiative reflects the university's commitment to standardized, high-quality skill development and sets the stage for further expansion into allied health sciences and AYUSH disciplines.

CONCLUSION

The structured skill enhancement program initiated by The Tamil Nadu Dr. M. G. R. medical university has successfully addressed the need for standardized training in life-saving techniques and ethical clinical practices among postgraduate medical students. With the training of 4,000 students across eight nodal centres, the program has demonstrated feasibility, effectiveness, and wide acceptance. The encouraging feedback from students reinforces the value of simulation-based, hands-on learning. Recognizing its impact, the university plans to expand the initiative to include paramedical and AYUSH students.

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REFERENCES

1. Topjian AA, Raymond TT, Atkins D, Chan M, Duff JP, Joyner Jr BL, et al. Part 4: Pediatric Basic and Advanced Life Support: 2020 American Heart Association Guidelines for Cardiopulmonary Resuscitation and Emergency Cardiovascular Care. *Circulation*. 2020;142(16):S469-523.
2. Girotra S, Nallamothu BK, Spertus JA, Li Y, Krumholz HM, Chan PS, et al. Trends in survival after in-hospital cardiac arrest. *N Engl J Med*. 2012;367(20):1912-20.
3. Reichman's Emergency Medicine Procedures, 3e | Access Emergency Medicine. McGraw Hill Medical. Available at: <https://accessemergencymedicine.mhmedical.com/book.aspx?bookid=2498#201292263>. Accessed on 17 July 2025.
4. cpr.heart.org. American Heart Association CPR and First Aid. Available at: <https://cpr.heart.org/en/404>. Accessed on 17 July 2025.
5. Sakles JC, Laurin EG, Rantapaa AA, Panacek EA. Airway management in the emergency department: a one-year study of 610 tracheal intubations. *Ann Emerg Med*. 1998;31(3):325-32.
6. Handbook: good laboratory practice (GLP). Available at: [https://wkc.who.int/resources/publications/i/item/handbook-good-laboratory-practice-\(-glp\)](https://wkc.who.int/resources/publications/i/item/handbook-good-laboratory-practice-(-glp)). Accessed on 17 July 2025.
7. Doneski L, Roos D, Dong M. Good Laboratory Practice (GLP): An Overview for the Analytical Chemist. *LCGC North Am*. 2023;41(9):381-5.
8. Vazanić D, Prkačin I, Neseke-Adam V, Kurtović B, Rotim C. Out-Of-Hospital Cardiac Arrest Outcomes – Bystander Cardiopulmonary Resuscitation Rate Improvement. *Acta Clin Croat*. 2022;61(2):265-72.
9. Goyal A, Singh B, Patel PH. Cardiopulmonary Resuscitation. In: StatPearls. Treasure Island (FL): StatPearls Publishing; 2025.
10. Meaney PA, Bobrow BJ, Mancini ME, Christenson J, de Caen AR, Bhanji F, et al. Cardiopulmonary Resuscitation Quality: Improving Cardiac Resuscitation Outcomes Both Inside and Outside the Hospital. *Circulation*. 2013;128(4):417-35.
11. Yannopoulos D, Aufderheide TP, Abella BS, Duval S, Frascone RJ, Goodloe JM, et al. Quality of CPR: An important effect modifier in cardiac arrest clinical outcomes and intervention effectiveness trials. *Resuscitation*. 2015;94:106-13.
12. Issenberg SB, McGaghie WC, Petrusa ER, Gordon DL, Scalese RJ. Features and uses of high-fidelity medical simulations that lead to effective learning: a BEME systematic review. *Medical Teacher*. 2005;27(1):10-28.
13. Wayne DB, Didwania A, Feinglass J, Fudala MJ, Barsuk JH, McGaghie WC. Simulation-based education improves quality of care during cardiac arrest team responses at an academic teaching hospital: a case-control study. *Chest*. 2008;133(1):56-61.
14. Global strategy on human resources for health: Workforce 2030. Available at: <https://www.who.int/publications/i/item/9789241511131>. Accessed on 17 July 2025.
15. American Heart Association Addresses Need for Lifesaving Skills Education and Training | Williamsburg Yorktown Daily. Available at: <https://wydaily.com/latest/2024/02/07/american-heart-association-addresses-need-for-lifesaving-skills-education-and-training/>. Accessed on 17 July 2025.

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