

Health Professional Education

Foundation course – A fundamental requirement for Indian medical graduates as per graduate medical regulations

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ABSTRACT

A foundation course for newly joined Indian medical graduates is essential for their induction into the medical profession. They learn about various soft skills and other nuances, which will help them adapt to the new professional learning environment. In our institute, the course is conducted based on the Graduate Medical Education Regulations of the National Medical Commission (NMC) of 2019. The process of organization, planning, and execution of the foundation course is described in a step-wise manner. The student activities are planned in various large groups and small groups under each module put forth by the NMC. The modules include the orientation module, skills module, field visit to community health center module, professional development and ethics module, enhancement of language and computer skills module, and sports and extra-curricular activities module.

Keywords: Foundation course, MBBS, Phase 1

INTRODUCTION

The concept of foundation courses for newly joined undergraduate medical students has been evolving continuously in medical academia for decades. Sri Ramachandra Medical College and Research Institute (SRMC and RI) is a constituent college under the Sri Ramachandra Institute of Higher Education and Research (SRIHER), a Deemed University. SRMC and RI is a top-ranking institution in the country. The institute is on a mission to actively promote medical education, healthcare, and research and pursue excellence in all areas. We also strive to preserve core higher values and ethics by consciously honoring the expectations of the people we serve in all fairness. Our vision is to be locally and globally responsive in areas of education, healthcare delivery, and research. Students hail from different parts of the country and abroad to our institute every year. Two hundred and fifty students are enrolled in the MBBS program annually through a meritorious counseling system mandated by the Graduate Medical Education Regulations of the National Medical Commission (NMC).^[1,2]

The latest revised medical curriculum presented by the NMC in 2019 focuses on competency-based medical education. It has introduced the foundation course as a critical addition to

the new curriculum which is divided into various modules that have specific objectives to be achieved. Although this recent introduction is novel in many ways, the faculty at SRMC and RI is very familiar with conducting the course with at least a decade of experience in conducting the course for students. The foundation course was started initially as a 1-day icebreaker session along with an orientation program for students on their 1st day of joining college. It slowly evolved into a week-long program tailored to meet the students' needs.^[3] The program during that time included an introduction to all the pre-clinical, para-clinical, and clinical subjects and an orientation to the campus facilities. The students also had an introduction to medical ethics, professionalism, medical law, research methodology, medical terminologies, alternate health systems, and community-based learning. The course also included activities such as healthy debates, yoga, meditation, stress management, time management, basic life support (BLS), physical fitness, communication skills, life skills, and language training. Steadily, the program has been expanded to the current month-long course based on the feedback given by students and administrative stakeholders.^[4]

The current model of foundation course was started for the I-MBBS batch of 2019–2020. The segments have been

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revised and personalized to meet the NMC guidelines.^[5] The foundation course is designed to sensitize the newly joined Indian medical graduate with the skills and knowledge to help them in getting adjusted to the new college environment as per graduate medical regulations 2019.

The objective of the program is to orient students to all aspects of the university environment and to equip them with important basic skills required for patient care.^[6,7] The foundation course sessions are planned to facilitate a period of adjustment and familiarization with the new environment for the newly joined 1st-year MBBS students. Sessions covering an introduction to the MBBS course curriculum, methods of learning, usage of newer technology, and communication with peers would facilitate their transition from high school learning to medical college.

CONDUCT OF EACH MODULE OF THE FOUNDATION COURSE

Structure of the Foundation Course Committee

The entire course of the program is coordinated by the Dean of the medical college, the Curriculum Committee chairman, who nominates the Foundation Course Chairman. The chairman enlists the Foundation Course Committee with 22 faculty members. The Committee is involved in methodically selecting topics for each module and assigning the selected topics to appropriate faculty members. Module coordinators are selected for each module from the committee. They take care of the planning and implementation of each module. The module coordinators are faculty members from the departments of Phase I (Anatomy, physiology, and biochemistry). Each module coordinator also engages the assistance of two faculty members under each module – the facilitators, who will take care of day-to-day organization at the grassroots level. The facilitators also supervise the logistics and technical matters along with the staff of the Medical Education Unit. The module coordinator then nominates faculty members and teams from all over the university to handle individual sessions in each module. An organogram of the foundation course system is depicted in [Figure 1].

Conduct of the course

The rich experience of the faculties and super specialists from various departments in the university is brought in for conducting and facilitating the sessions. Since SRIHER is a university, we have the privilege of involving specialists from other parts of the university too. Faculty of Management, Faculty of Nursing, Faculty of Physiotherapy, Faculty of Clinical Psychology, Faculty of Allied Health Sciences, and Faculty of Biomedical Sciences are also brought on board to enlighten the students on various aspects of the course. The schedule and objectives are structured well in advance. Mock sessions are also conducted before the start of the course to

anticipate and troubleshoot any difficulties that may arise. Each day of the course is divided into 7–8-h time slots and sessions are scheduled meticulously.

The student activities are planned as large group (LG) sessions and small group (SG) sessions. For SG sessions, students are divided into 12 groups with 20–21 students in each group. Each SG is then taken care of by a facilitator. Following the inaugural sessions, the foundation course sessions are started. The modules include the orientation module, skills module, field visit to community health center module, professional development and ethics module, enhancement of language and computer skills module, and sports and extra-curricular activities module.^[8,9] These modules are fulfilled over 175 h.

An online and hybrid pattern of classes

The classes were conducted in a completely offline manner for the 2019–2020 batch. However, in 2020, due to the pandemic, the course was conducted entirely in the online mode for 2020–2021 batch.^[10] When the 2021–2022 batch arrived, the most of the pandemic-related restrictions were relaxed, and we were able to conduct the course in a hybrid manner. Many sessions were held online whereas a few sessions were taken offline.

Orientation module

The orientation module is conducted over 30 h. The various activities are summarized in [Table 1]. The main aim of this module is to orient the students to our institution, and its practices, and to inculcate the values and responsibilities expected of a medical graduate. The students are also given an overview of the curriculum, teaching-learning methods, and assessments. A pandemic module has been introduced as a part of the orientation module in 2020, to introduce awareness among the students regarding the COVID-19 pandemic. Sessions in this module were managed by faculty members from the pre-clinical and clinical departments.

Skills module

The skills module is conducted with 23 h of LG lectures and 12 h of SG sessions. The skills module is the major distinguishing feature in our foundation course, where all the SG practical activities are conducted in our fully equipped and dedicated skills laboratory by our expert clinicians from the Department of Accidents and Emergency (A and E). Hands-on training in first aid and BLS is given to our students using mannequin models by our skilled facilitators. The students learn the basics of infection control, perform hand hygiene, learn to dispose of biomedical waste appropriately, and use personal protective equipment (PPE). Expert faculty members from the Infection Control Committee and the Department of Microbiology facilitate these sessions. The details of the skills learned through this module are summarized in [Table 1].

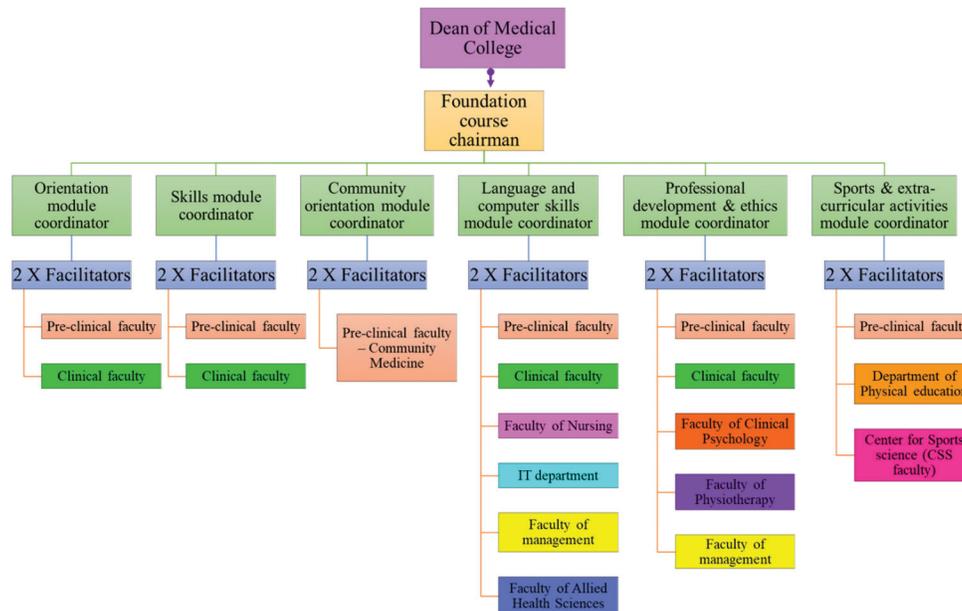


Figure 1: Organogram of the Foundation Course Committee.

Field visit to community health center module

The students are taken for a visit to the community health centers. They visit two community centers, namely, a rural health training center and an urban health training center. Students visit these centers in SGs to facilitate maximum observation and interaction. The value of community health-care services is imparted to the students and they are made aware of national health goals and policies and are made to observe interactions with patients. A total of 8 h is dedicated to this module. At the outset, the students are made aware of the importance of family and community health.

Professional development and ethics module

In this module, the students are initiated on the concepts of altruism, empathy, ethical behavior, and the professional doctor-patient relationship. They also learn the importance of collaborative learning, pedagogy, and teamwork. The conduct of this module is very interesting as it involves maximum collaboration with team members from numerous faculties of the university (Management, nursing, allied health sciences, clinical psychology, physiotherapy, etc.). Various topics under this module are rounded up in 40 h of LG lectures, panel discussions, and SG practical activities.

Enhancement of language and computer skills module

Students hail from all parts of the country and around the globe to our institute. Hence, they need to learn about the local language for effective communication with the patients. Experts in Tamil and English are brought in from the Faculty of Nursing and Faculty of Management to meticulously handle these sessions. The students also need expertise in basic software and computer skills for better learning and effective patient

management in the digital era. The skilled IT professionals of the institution provide hands-on training in basic computer skills for the students. This module is conducted in 40 h of didactic lectures and SG practical exercises.

Sports and extracurricular activities

The sports and extracurricular activities modules are included to demonstrate the importance of work-life balance. These sessions offer an opportunity for students to have compulsory physical activity to demonstrate and showcase their talents. The physical director and the faculty of sports science, these sessions are scheduled all day throughout the week, finalized in a total of 22 h of activities.

White coat ceremony

The white coat ceremony for the 1st-year MBBS students is held during the foundation course. The dignitaries of the institution, the Vice-Chancellor, Dean of Medical College, and Dean of Students address the students on the importance of the white coat. The history and evolution of the use of the white coat in the medical profession are narrated to them. The core values and responsibilities expected of an Indian medical graduate are also discussed. Following the dignitaries' address, the students don their white coats for the 1st time and take their pledge. Following the white coat ceremony, students are also given an opportunity to express their understandings, expectations, and impressions of the white coat.

BENEFITS OF A STRUCTURED FOUNDATION COURSE

Foundation courses help the students orient themselves to the college environment and familiarize themselves with the

Table 1: List of topics covered under each module of the foundation course.

| Orientation module | Enhancement of language and computer skills module |
|--|---|
| <ol style="list-style-type: none"> 1. Roles and responsibilities of a doctor 2. Roles and responsibilities of an IMG 3. Expectations from the society, Experiences as a doctor and vice versa 4. Institutional rules and regulations - Judicious use of institutional rules and regulations 5. Reflective writing 6. Role of a physician at various health-care levels 7. History of medicine 8. Holistic approaches to health care 9. Introduction to alternate medicine and evidence-based medicine 10. Introduction to mentors and Importance of the mentorship program 11. Introduction to principles of Family Practice 12. Revised NMC curriculum –outlines 13. Formative and summative assessments 14. Career options – Panel discussion 15. Introduction to the pandemic 16. Introduction and a visit to facilities on campus (Administrative facilities, MEU, all depart. esp. preclinical Departments, Hostel, Mess, canteens, DTP center, G-block, CRE, Library, Animal house, Vidyasuda, Ground) | <ol style="list-style-type: none"> 1. Communication– <ol style="list-style-type: none"> i. Basics ii. Importance of communication skills iii. Methods and barriers iv. Use of social media v. Listening and Communicating vi. Professional communication in the health-care team (interactive lecture) vii. Empathy in communication viii. Breaking Bad News ix. Interaction - patient and family x. Listen – Reflect – Respond xi. Communication with a person with a disability xii. Reflection 2. Information Technology <ol style="list-style-type: none"> i. Introduction ii. Online Resources 3. Computer skills- <ol style="list-style-type: none"> i. Basics ii. Using a computer - Introduction to using Word, Excel, and PowerPoint. iii. Moodle software 4. Language skills <ol style="list-style-type: none"> i. Importance of local languages ii. English Language iii. Local (Tamil) language 5. Visit to Active Learning Centre |
| Skills Module | Professional development and ethics Module |
| <ol style="list-style-type: none"> 1. First Aid <ol style="list-style-type: none"> i. Introduction to first aid and its applications ii. First aid management in a patient with <ol style="list-style-type: none"> a. fracture and seizures b. fainting c. bleeding from an external wound d. heat-related emergencies e. Asthma and Anaphylaxis victims f. Management of shock, chest pain, snakebite, drowning, and burns 2. Basic Life Support <ol style="list-style-type: none"> i. BLS in adults ii. Basic Life Support in Paediatrics iii. BLS modifications in pregnant and intoxicated patients iv. Difference between Infant, Paediatrics, and adult CPR v. Introduction and applications and AED 3. Hand hygiene, PPE <ol style="list-style-type: none"> i. Introduction to hand hygiene, PPE ii. Steps of hand hygiene iii. History of Hand hygiene - Ignaz Semmelweis iv. Need for hand hygiene, hand wash, and surgical hand wash v. Personal protective equipment 4. Health-care-associated infections <ol style="list-style-type: none"> i. Introduction and need to prevent health-care-associated infections ii. Strategies to prevent health-care-associated Infections | <ol style="list-style-type: none"> 1. Professionalism <ol style="list-style-type: none"> i. Role of a physician, professional attributes ii. Importance of professional and ethical behavior iii. Concept of Professionalism and ethics (interactive lecture using case vignettes) iv. Consequence of unprofessional and unethical behaviour v. Altruistic Behaviour - Role play 2. Working in the health-care team <ol style="list-style-type: none"> i. Role of a doctor ii. Video presentation/interactive session iii. Panel discussion 3. Learning skills <ol style="list-style-type: none"> i. Self-directed learning and collaborative learning ii. Pedagogy and its roles in learning skills (Interactive lecture) iii. Role of mentoring (interactive lecture) iv. Group learning and group dynamics 4. Disability competencies <ol style="list-style-type: none"> i. Rights of persons with disabilities act ii. Understanding Disability etiquette iii. Medical and social model of disability (Interactive session) iv. Respect for a person with a disability – Panel Discussion 5. Soft skills <ol style="list-style-type: none"> i. Stress and its significance ii. Methods of stress management |

(Contd...)

Table 1: (Continued).

| Skills Module | Professional development and ethics Module |
|---|--|
| iii. Need for immunization and WHO, CDC, and hospital policies on healthcare workers' immunizations iv. Universal precautions - Spill demo, recap of standard precautions, and hand hygiene. v. Needle Stick injuries- – NSI protocol 5. Biomedical Waste Management– i. Introduction and Categories ii. Segregation of biomedical waste iii. Life cycle of biomedical waste iv. Methods for disposal of biomedical waste, Biomedical Waste Management Regulation 2016 v. Hazards of improper segregation of biomedical waste, impact on the environment. 6. Documentation 7. First-Aid and BLS hands-on training | iii. Prioritization of time iv. Importance of time management - (Interactive lecture) v. Distractions and interruptions vi. Interpersonal relationships vii. Importance of interpersonal relationship 6. Miscellaneous i. Role of yoga, meditation music, and dance in health care ii. Cultural diversities iii. Address by alumni 7. White coat ceremony i. History and purpose of the white coat ceremony ii. White coat ceremony |
| Community orientation module | Sports and extracurricular activities module |
| 1. Community Centre visit i. Rural health training center (RHTC) ii. Urban health training center (UHTC) | 1. Sports i. Importance of sports and athletics. ii. Indoor activities iii. Outdoor activities iv. Athletics v. Events covering all activities 2. Extracurricular activities i. Importance of NSS, NCC, and Bharat Scouts and Guides ii. Development of interest to take part in social activities through these organizations' activities iii. NSS |

campus. Through SG activities, they get to interact closely with their mentors and form a strong base value system to carry forward in their profession. The students learn about the several authorities and their roles in the institution and how to approach them. They get to bond with their peers and have a good socializing opportunity with their friends. The students learn about important morals and principles, which will set a strong basis for them to carry forward throughout their lives. They learn a plethora of soft skills like maintaining doctor-patient relationships, time management, stress management, reflective writing, ethics, and teamwork which will help them in a long way in their future career.

FEEDBACK AND RECOMMENDATIONS FOR THE FUTURE

Feedback was obtained from the students in a structured manner at the end of each module. The feedback was recorded using 5-point Likert scales in Google forms/Moodle forms. Parameters such as time management, completion of defined objectives, level of interaction, adequacy of AV-aids, and infrastructure were considered using close-ended statements.^[6,8,11-13] The students were also asked to specifically comment on any suggestions for the future as open-ended

questions. Some students pointed out the need to include research-related orientation sessions. There were also suggestions to include more interactive SG sessions and more community visits. There were a few suggestions to complete the local language module before the community visits so that they can improve their interactions during field visits.

CONCLUSION

In the coming years, we can slightly modify the course design to include the suggestions thoughtfully. Shorter sessions can be clubbed together whereas longer sessions can be split to provide adequate time for completion. Few sessions on a basic introduction to medical research can be included in the study. Perspectives, inputs, and feedback on the foundation course can be obtained from the faculty members also in the future to develop constructive insights.^[9,14] Continuous improvement is an essential part of medical education and we can continuously evolve every year based on feedback and expert guidance.

Declaration of patient consent

Patient's consent not required as there are no patients in this study.

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Nil.

Conflicts of interest

There are no conflicts of interest.

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