



Net Consensus Statement

# How to improve dermatology teaching and learning at the undergraduate level? Recommendations by a faculty panel of Kerala state Branch of the Indian Association of Dermatologists, Venereologists, and Leprologists

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## ABSTRACT

The undergraduate dermatology curriculum and teaching have to reflect the sea of changes that the specialty has undergone in recent years. In tune with this, the Kerala branch of the Indian Association of Dermatologists, Venereologists, and Leprologists (IADVL-K) planned an initiative to draft an advocacy document containing recommendations to improve the standard of undergraduate training, especially with regard to the implementation of competency-based medical education and training of attitude, ethics, and communication skills (AETCOM). A four-member panel was constituted by the state president for this purpose. The committee conducted virtual discussions and consultations with experts, following which a draft advocacy document was prepared on which suggestions from all members of IADVL Kerala were sought. Four core areas of change in undergraduate dermatology teaching and learning along with the agencies that could initiate such changes were identified. This initiative from a professional organization has attempted to harness opinions of the faculty of dermatology of an entire state and provide important insights into the direction in which undergraduate dermatology training should be oriented in the coming years in our country.

**Keywords:** Undergraduate dermatology teaching, Dermatology curriculum, Competency-based medical education, Undergraduate education

## INTRODUCTION

Over the years, the perception of dermatology as a specialty has changed considerably. It is imperative that these changes get reflected in the undergraduate curriculum and teaching methods. Although the developed countries are way ahead in fine-tuning and updating their curriculum periodically after discussion with all the relevant stakeholders, such discussions are mostly limited to the universities in India.<sup>[1-4]</sup> Hence, the Kerala branch of Indian Association of Dermatologists, Venereologists, and Leprologists (IADVL-K) planned an initiative to seek the opinions of the dermatology teaching faculty across the state and formulate a proposal for modifications in the current undergraduate curriculum and training in dermatology. Our aim was to improve the standard of undergraduate training in dermatology, venereology, and leprology (DVL).

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## Objective

The objective of the study was to draft an advocacy document containing recommendations to improve the standard of undergraduate training, especially with regard to the implementation of competency-based medical education (CBME) and training of attitude, ethics and communication skills (AETCOM).

## MATERIALS AND METHODS

A four-member panel – which included a coordinator – was constituted by the state president of IADVL-K in January 2020, for this purpose. All members were actively involved in teaching of dermatology at the undergraduate or postgraduate levels or both. Focus group discussions, key informant interviews, and conclaves as previously planned could not be fully implemented due to the unexpected COVID-19 pandemic; however, e-discussions were carried out and the committee prepared a draft document after internal consultations. This was circulated among a group of subject experts (senior teaching faculty of various medical colleges) selected by the committee members. The draft modified by the experts was circulated among all members of IADVL Kerala from whom suggestions were invited in the latter half of 2020. The final document prepared in February 2021, incorporated the suggestions thus received.

## RESULTS

We identified four core areas in which changes in the existing model were suggested.

### Academics and teaching-learning methods

#### *Reorganize dermatology teaching schedules and methods*

In the teaching schedule for MBBS batches up to 2018 admission, the entire undergraduate clinical training in dermatology was during the fourth and fifth semesters of MBBS. The non-clinical subjects in this phase of training are pharmacology, microbiology, and pathology. The students complete the summative examination in these subjects only by the end of 5<sup>th</sup> semester. The panel felt that having a good, basic knowledge in these important paraclinical subjects is essential to understand the DVL subjects effectively. Therefore, it was decided to recommend to the university that the major part of the teaching (clinical and theory) in DVL be scheduled after the 5<sup>th</sup> semester.

With CBME being implemented from 2019 batch, this issue is expected to be resolved as clinical posting in dermatology is scheduled to be done in three parts – 2 weeks each in the 4<sup>th</sup>, 6<sup>th</sup>, and 8<sup>th</sup> semesters.<sup>[5]</sup> It was decided to hold discussions with other departments regarding scheduling these postings

in an effective manner fitting in with the overall teaching schedule.

#### *Teaching-learning methods*

- i. Small-group teaching methods were identified to be most useful both in the outpatient clinics and inpatient wards. As suggested by National Medical Commission (NMC), problem-based learning modules should be introduced for teaching undergraduates. Faculty-student ratio will have to be increased than the minimum stipulated by NMC, especially to make small-group teaching methods effective. Regarding lecture classes for the full batch, it was felt necessary to reorganize the topics based on the relevance from an undergraduate perspective. Efforts are to be taken to make these large-group teaching methods more interactive.
- ii. The panel unanimously agreed that newer methods of learning including e-learning should be thoroughly explored. This has assumed added significance in the coronavirus disease 2019 (COVID-19) and post-COVID-19 era. Both synchronous and asynchronous methods of e-learning should be developed. Developing comprehensive virtual platforms for interactive e-learning will help undergraduate learning in dermatology. The resources thus developed could be shared and disseminated for the benefit of the entire dermatology community
- iii. The panel felt that concerns regarding the content and practice of CBME curriculum should be addressed. Wide discussions regarding the practical concerns in implementing CBME curriculum in dermatology should be held among all faculty members. Time and space constraints for planning and execution of the teaching-learning methods as per CBME curriculum should be specially considered.

#### *Efforts to address attitude, ethics, and communication skills*

The members felt that this part deserves special attention, however, it is expected to be addressed with the effective implementation of AETCOM modules as part of the new CBME-based curriculum.<sup>[6]</sup>

#### *Procedural and basic laboratory skills training*

The panel felt that it is necessary to introduce specific time slots for imparting appropriate procedural skills, to undergraduate students.

#### *Integration with other departments*

The panel emphasized the need to integrate learning effectively with other departments – clinical and non-

clinical. This too was expected to become more effective with the introduction of the new CBME-based curriculum. A list of subjects – during appropriate phases of training – which are to be included in integrated sessions may be identified.

**Dermatology posting during internship**

There was a consensus that dermatology should again be made a compulsory subject during internship, considering that skin diseases are common in the community and every medical graduate should feel confident to manage common skin problems effectively. The recommendations are summarized in Table 1.

**Research and publishing**

There is a need to increase awareness regarding facilities – fellowships/scholarships – offered by agencies such as Indian Council of Medical Research for research. IADVL itself could introduce steps to promote research among undergraduates. Undergraduate students could be encouraged to be part of department research and publications. Dermatology departments could take leadership or collaborate with other agencies to provide research methodology training. Mentorship for research can begin in undergraduate period. Introductory workshops on critical appraisal of scientific literature, statistical analysis,

**Table 1:** Recommendations regarding improvement of undergraduate training in dermatology and the agencies needed for implementation – academics and teaching-learning methods.

No.	Issue to be addressed	Suggested actions	Remarks	Concerned agencies
1.	Reorganize dermatology teaching schedules and clinical postings of undergraduate students	Have interdepartmental discussions regarding the suitable time and duration for clinical postings in the department Introduce small-group teaching methods in the OPD and ward Lecture classes for the entire batches – topics to be reorganized in view of relevance from an undergraduate perspective Interactive large-group teaching methods and careful selection of content		Teaching departments, university, curriculum committees of the institution
2.	Innovate and explore newer methods of e-learning	Both synchronous and asynchronous methods of e-learning may be promoted		University, departments
3.	Address concerns regarding content and practice of CBME curriculum	Hold wide discussions regarding the practical concerns in implementing CBME curriculum in dermatology Time and space constraints to be addressed for implementation of the teaching-learning methods as per CBME curriculum Faculty-student ratio to be increased to implement more small-group teaching methods		Teaching departments, university, curriculum committees, NMC
4.	Improve the attitude, ethics, and communication skills	Introduce appropriate AETCOM modules for undergraduates	Skill building required	University, curriculum implementation committee, UG teachers UG departments
5.	Training in procedural and basic laboratory skills	Introduce time slots for procedural and laboratory skill training during clinical postings		
6.	Integration of teaching with other departments	Pre-set list of lecture/classes with specification of semesters	Internal arrangements in the departments for carrying out the classes	UG departments, institutional academic cells, and curriculum committees
7.	Dermatology posting during internship	Discussions required to make dermatology rotation mandatory during internship		College academic council, university, NMC

OPD: Outpatient department, CBME: Competency-based medical education, UG: Undergraduate, NMC: National Medical Commission, AETCOM: Attitude, ethics and communication skills

and scientific writing would also help undergraduate students. Possibilities for interdepartmental collaborations should be explored to improve research capacity. Rewards for research would also help to generate more interest even at undergraduate level. Table 2 summarizes the recommendations on this topic.

**Assessment**

Importance of introducing 360 degree assessment was emphasized by the group. This could be achieved by keeping a log book and a daily activity book. These are to be verified by the faculty-in-charge on a daily basis. Portfolios including feedback from teachers, peers, nursing, and other auxiliary staff can be created and reflective assignments could be used for formative assessment. Objective structured clinical examination and multiple-choice questions should be used for formative assessment at the end of each session of clinical postings [Table 3].

**Faculty-related suggestions**

More capacity building and skills training facilities for faculty should be implemented. This can be done with the support of the medical education unit of the institution. Regular workshops would help to modify teaching programs periodically, in response to the changing trends in education.

IADVL can be part of these activities by providing subject-specific training in dermatology. Specific training for developing and implementing e-learning courses in the specialty should be instituted.

In-services training of teachers should be made mandatory. Access to journals could be improved by IADVL, government, and the respective managements. Introducing sabbatical leave to faculty would help opportunities for exposure to other centers of excellence – national and international – ensuring continuation in the service.

Research should be incentivized more. More institutional support systems including the state board of medical research and greater access to other research funding can be helpful. Staff pattern should be increased in proportion to the increased work load over the years. Greater clerical support to departments would help teachers to provide more time to teaching activities. Faculty portfolios including a “reflection” component could be promoted. The recommendations regarding faculty related aspects are compiled in Table 4.

**DISCUSSION**

This exercise could identify several core areas which could be targeted to improve undergraduate teaching and training in dermatology. We could also identify the appropriate

**Table 2:** Recommendations regarding improvement of undergraduate training in dermatology and the agencies needed for implementation – research and publishing.

No.	Issue	Suggested actions	Concerned agencies
1	Promoting research	Increase awareness regarding ICMR support to undergraduate research/scholarships IADVL could introduce research provisions for UGs More sources for funding research to be identified Research methodology training programs for UGs Interdepartmental collaborations for promoting research	IADVL, undergraduate departments, institutional research committee
2	Encourage publications	Steps to provide incentives to publish in indexed journals Workshops on statistical analysis and scientific writing	Undergraduate departments, college academic council, institutional research committee, university

ICMR: Indian Council of Medical Research, IADVL: Indian Association of Dermatologists, Venereologists, and Leprologists, UG: Undergraduate

**Table 3:** Recommendations regarding improvement of undergraduate training in dermatology and the designated agencies needed for implementation – assessment.

No.	Issue	Suggested actions	Remarks	Concerned agencies
1	360 degree assessment	Strict maintenance of log book and daily activity book to be signed by the faculty-in-charge daily Feedback forms from the teachers, peers, nursing, and other auxiliary staff to be included in the log book Additional training in OSCE/ MCQs and inclusion in end-of-posting exams	Uniform format of log book in all colleges Competency based assessment to be emphasized	Undergraduate departments, medical education units, university

OSCE: Objective structured clinical examination, MCQs: Multiple-choice questions

**Table 4:** Recommendations regarding improvement of undergraduate training in dermatology and the designated agencies needed for implementation –faculty related.

No.	Issue	Suggested actions	Remarks	Concerned agencies
1	Capacity building and skills training for faculty	Regular workshops IADVL can supplement specialty specific training in dermatology teaching-learning methods E-learning courses by experts in the field to explore the possibility in the present scenario		IADVL, university, DME, managements of the medical colleges, medical education units of the medical colleges
2.	Regular knowledge updation by faculty	To provide sabbatical leave To provide periodic training Improved access to reading materials		University, DME, managements of the medical colleges, medical colleges
3	Greater quantity and quality of research	To provide incentives to do research Greater access to research funding Institutional support system for research		University, DME, managements of the medical colleges, departments
3	Staff pattern	To be increased proportionate to the increased work load over the years; greater clerical support to departments	At present, hugely increased load of patient care is resulting in compromise of teaching	NMC, university, DME, managements of the medical colleges

IADVL: Indian Association of Dermatologists, Venereologists, and Leprologists, DME: Directorate of Medical Education, NMC: National Medical Commission

agencies who could take lead in initiating or promoting such changes.

There are several areas where the university is the appropriate agency to take initiative. These include ensuring a uniform teaching schedule in all institutions under it, whether private or government. Curriculum implementation is an important area where universities could take a leadership role. Promoting research, providing research funding, inculcating research environment in affiliated institutions, giving training in research-related areas, and making research publications available for teachers and students are a few other segments where the university can contribute significantly. Introducing timely reforms in assessment is yet another significant revision that the universities could adopt.

The managements of the institutions – government or private – also have an important role to ensure adequate infrastructure for academic activities. These include provision of sufficient space for teaching and sanctioning adequate posts of faculty – in accordance with the number of students as well as the patient load. There is a tendency for managements to ensure only the minimum staff requirement as per NMC recommendations. This is unjustifiable, as a major part of the work of teachers in clinical departments like dermatology is directed towards the management of patients. If the patient load is more, unless there is a proportional increase in the number of faculty, the quality of teaching is likely to be affected adversely. Effective

governance of institutions is critical in developing an environment conducive for learning. Coordination among various departments is also a vital function to be attended to by the institutions.

Departments are the last, but vital links in delivering the goods related to academics. They should ensure that the plans regarding teaching and assessment envisaged in the curriculum are realized to the maximum extent possible.

As an umbrella organization, our professional association – IADVL – has a vital role to play. Capacity building among faculty through workshops and facilitating research through guidance, support, and research grants can be carried out by IADVL. In addition, activities like preparing advocacy documents – of which the present exercise is an example – can be effectively taken up by the professional association.

This exercise and the resultant document have some limitations. We could not conduct physical meetings (including focus group discussions and key informant interviews) as originally planned due to the restrictions imposed by COVID-19 pandemic. We tried to overcome this, by resorting to electronic methods of communication. Another limitation of efforts such as these is that the opinions generated are usually of the more motivated participants. Last, but not the least, the opinions of only one group of important stakeholders – the faculty – were sought. Opinions

of the students as well as administrators would have provided more diverse viewpoints regarding the subject. Future efforts may try to overcome these limitations.

Despite these limitations, we believe that harnessing opinions of the faculty of dermatology of an entire state, as we have attempted, can provide important insights into the direction in which undergraduate dermatology training should be oriented in the coming years in our country. This advocacy document prepared by our professional organization has the potential to improve the standard of undergraduate training in dermatology in our state and our country.

#### **Declaration of patient consent**

Not required as there are no patients in this article.

#### **Financial support and sponsorship**

Nil.

#### **Conflicts of interest**

Dr. Neelakandhan Asokan was President of IADVL - Kerala when this project was implemented. Dr. Mary Vineetha,

Dr. Kidangazhiathmana Ajithkumar and Dr. Neelakandhan Asokan are on the editorial board of the Journal.

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