Postgraduate Curriculum in Dermatology: Expectations, Reality, and the Way Forward

Curriculum is broadly defined as the totality of student experiences that occur in the educational process. Bralslavsky defined it as “why, what, when, where, how, and with whom to learn.”[1] Post-graduate medical regulations of Medical Council of India (MCI), which has since been adapted by National Medical Commission (NMC) state that "curriculum must be competency based; there should be a modular approach; learning shall be essentially autonomous and self-directed; and a combination of formative and summative assessment should be used for evaluation.”[2]

NMC further elaborates the expectations from postgraduate (PG) medical training in India. Important among them are to develop the following attributes in the learners: community orientation; ability to critically appraise scientific literature; ability to carry out research, presentations and publications; medical ethics; and effective skills to communicate to patients and their relatives, teachers, superiors, members of other departments, as well as the peer group. The learner should be able to identify social, economic, environmental, biological, and emotional determinants of health. The medical post-graduates in the country are expected to acquire fundamentals of health economics, pharmaco-vigilance, medico-legal aspects, medical informatics, and medical audit. They should develop managerial skills to organize and supervise health care services; be proficient in documentation; and should develop “skills in using educational methods and techniques as applicable to the teaching of medical/nursing students, general physicians, and paramedical health workers.”

These expectations are in line with the competencies recommended by World Federation for Medical Education (WFME) such as patient care, medical knowledge, interpersonal and communication skills, appraisal and utilization of new scientific knowledge, ability to function as supervisor, trainer and teacher in relation to colleagues, medical students and other health professions, capability to be a scholar contributing to development and research, professionalism, interest and ability to act as an advocate for the patient, knowledge of public health and health policy issues including practice of cost-effective health care and health economics, and ability to identify and carry out system-based improvement of care.[3] Although many of these could be relevant in other disciplines too, this article examines how these expectations are being realized in PG education in dermatology in India today [Table 1]. Some suggestions to achieve these are also provided.

Community Orientation

As of now, PG medical training in India, if not exclusively, centered in tertiary care teaching hospitals. Although this allows the students to see patients with severe forms of disease (which is essential for their professional development), do they get sufficient opportunities to see the more common presentations of diseases as they exist in the community? The present day students are generally well trained to deal with severe and complicated and unusual presentations of diseases they get to see in medical colleges. However, they should also be well equipped to deal with the usual forms of diseases which wait for them in the community after their training. In short, the learning needs to be more contextualized. One method to facilitate this is to provide them more exposure to hospitals of secondary care such as district and taluk hospitals; and primary care such as patient care, medical knowledge, interpersonal and communication skills, appraisal and utilization of new scientific knowledge, ability to function as supervisor, trainer and teacher in relation to colleagues, medical students and other health professions, capability to be a scholar contributing to development and research, professionalism, interest and ability to act as an advocate for the patient, knowledge of public health and health policy issues including practice of cost-effective health care and health economics, and ability to identify and carry out system-based improvement of care.[3] Although many of these could be relevant in other disciplines too, this article examines how these expectations are being realized in PG education in dermatology in India today [Table 1]. Some suggestions to achieve these are also provided.

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Current scenario
Training mostly centered in tertiary care institutions; little exposure to the community
Less than optimal involvement of medical colleges, especially in private sector, in national health programmes
Journal clubs more focused on content than methodology; limited training to apply critical appraisal skills to solve day-to-day medical problems
Suboptimal quality in research makes them difficult to get acceptance in good journals
No formal or structured training during residency
No formal or structured training during residency
Inadequate emphasis during training; no formal or structured training during residency

Suggested actions
More exposure of residents to hospitals of primary and secondary care and the community
Greater role for medical colleges, including those in private sector, in the conduct of National Leprosy Eradication Programme, National AIDS Control Programme
Greater emphasis to critical appraisal in journal clubs; encouragement to use critical appraisal of evidence in clinical situations
More training, support, and guidance by clinical epidemiology units in medical colleges; mentorship
More training; include ethical aspects in formative assessment
More training; faculty to act as role models; residents to perform under supervision and provide feedback; include in formative assessment
Training through external faculty—from other departments like pharmacology, forensic medicine, library sciences, humanities, and management schools

Table 1: Expectations from post-graduate students of dermatology and suggested actions to achieve them

| Expectations | Current scenario | Suggested actions |
|--------------|-----------------|------------------|
| To have community orientation | Training mostly centered in tertiary care institutions; little exposure to the community | More exposure of residents to hospitals of primary and secondary care and the community |
| To take active part in implementing national health programmes pertaining to DVL | Less than optimal involvement of medical colleges, especially in private sector, in national health programmes | Greater role for medical colleges, including those in private sector, in the conduct of National Leprosy Eradication Programme, National AIDS Control Programme |
| To have skills for critical appraisal of scientific evidence | Journal clubs more focused on content than methodology; limited training to apply critical appraisal skills to solve day-to-day medical problems | Greater emphasis to critical appraisal in journal clubs; encouragement to use critical appraisal of evidence in clinical situations |
| To be able to do research of good quality and publish them | Suboptimal quality in research makes them difficult to get acceptance in good journals | More training, support, and guidance by clinical epidemiology units in medical colleges; mentorship |
| To be adequately sensitized about medical ethics | No formal or structured training during residency | More training; include ethical aspects in formative assessment |
| To have good communication skills | No formal or structured training during residency | More training; faculty to act as role models; residents to perform under supervision and provide feedback; include in formative assessment |
| To be adequately sensitized about health economics, pharmaco-vigilance, medico-legal aspects, medical informatics, medical audit and medical management | Inadequate emphasis during training; no formal or structured training during residency | Training through external faculty—from other departments like pharmacology, forensic medicine, library sciences, humanities, and management schools |

as community health centres and primary health centres; and finally, the community itself. The district residency program announced in 2019 is a step forward in this regard.[4] How it will roll out and how effective it would be, remains to be seen.

Involvement in National Health Programmes
The curriculum envisages that PG students in dermatology should be trained in various national programmes related to leprosy, STD, and HIV. In our country, such national health programmes are being implemented primarily through the general health services. Involvement of medical colleges, especially those in private sector, is currently suboptimal. There should be greater efforts to involve all medical colleges in such national programmes. This would ensure that, once passed out, the residents will be able to contribute more effectively to the control of these diseases and contribute more to achieve the targets of sustainable development goals (SDGs) related to health.

Critical Appraisal of Scientific Literature
Journal clubs are important components of the teaching schedule of PG students. Often their focus is on the content of published articles and not on the methodology. Conclusions are often given more importance than analysing the validity and reliability of the results. Providing greater emphasis to critical appraisal skills in journal clubs would help our residents to apply such skills in clinical scenarios too such as in the outpatient departments, wards, or operation theatres. This would help to make their decisions more evidence based.

Research and Publication
The regulations state that before PG students appear for the final examination, they should have presented at least one poster and presented one paper at a national/state conference.[2] In addition, they should have published/received acceptance or submitted for publication one research paper during the period of PG training. As most PG departments face repeated inspections by NMC, most of these requirements are adhered to, at least in letter. However, the scientific quality of such presentations and publications needs to be improved further.

The purpose of having thesis during PG training is to develop skills for research. But, how many of the PG theses get published in good quality peer reviewed journals? Efforts are needed to provide more training, support, and guidance to our PG students to conduct research of greater quality. Establishing clinical epidemiology units in the medical colleges would be a welcome step.

Limited access to statisticians and journals and lack of time are commonly cited as hurdles for research. But developing a good attitude towards research is equally important. We need to encourage our residents to ask questions and train them to explore systematically to find answers to medical problems. Mentorship should also be strengthened further.
Medical Ethics

Are our PG trainees sufficiently grounded in medical ethics? They should get sufficient opportunities to apply the core values of medical ethics—such as autonomy, beneficence, non-maleficence, and justice—during their training. We could also monitor their progress on this key aspect of medical education and include it in their formative assessment.

Communication Skills

In the current medical world, communication skills are very important. When residents start their course, there could be variations in their “natural” or “innate” ability to communicate with others. We must aim to improve this to a basic minimum level by the end of the residency. Senior teaching faculty should try to be role models. They could also supervise the residents when they communicate with patients in real-life situations and provide necessary feedback. Communication skills too could be included in formative assessment.

Health Economics, Pharmaco-vigilance, Medico-legal aspects, Medical Informatics, Medical Audit, and Medical Management

We need to introspect how far these important components of curriculum find place in today’s otherwise crowded teaching schedule. The expertise of faculty of dermatology may not be sufficient to provide training in these areas. We may consider using external teaching faculty—from departments like pharmacology, forensic medicine, library sciences, humanities, and management schools. The potential of interdepartmental and interdisciplinary training in PG medical training should be explored further.

Assessment

Assessment is critical for success of any curriculum. The present system of having one all important summative assessment at the end of 3 years is probably not the best method. We should introduce a more comprehensive and continuous evaluation [Table 2]. We should also decide what should be evaluated during practical examination. Is it enough that we test the ability to diagnose and manage a few usually “expected” severe diseases such as vesiculo-bullous diseases, exfoliative dermatitis, and connective tissue diseases? Instead, we should give more importance to evaluate their ability to manage common diseases which are present in a usual outpatient setting. The formative assessment may incorporate concepts like feedback and reflection.

Most of the points discussed above are relevant to postgraduate training in any medical subject—especially clinical subjects. Now let us examine some issues of greater relevance to dermatology.

Clinical Dermatology Versus Procedural Dermatology and Cosmetology Debate

This is an era of lively debate between primacy of clinical versus cosmetology and dermato-surgery. While being proud of our glorious tradition in clinical dermatology, let us not be prisoners of the past. What is needed is a healthy balance between these areas during PG training. We should also try to define our boundaries with other specialties, such as plastic surgery and facial surgery, working in related fields. There is a key role for academic institutions to make the practice of dermato-surgery and aesthetic dermatology more evidence based, by critically evaluating efficacy of various procedures. The utility and relevance of various surgical procedures in dermatology in our country also could be assessed.

Changing Gender Trends

Dermatology has to address gender issues in its workforce. Over the last two decades, there is a noticeable shift to increased female-to-male ratio among those who join for post-graduation in dermatology. While not being judgmental about it, let us examine what are the opportunities and challenges it presents to the training and practice of dermatology. Does this female preponderance result in any change in the outlook of the specialty (as viewed by others)—especially in a social milieu of considerable gender inequality? Cultural values, including those related to gender, are dynamic in nature and are bound to evolve over a period of time, too.

Coming to more practical issues, many females undergoing training nowadays have to grapple with the issue of pregnancy, lactation, and parenting of young kids. How effectively do they handle this dual pressure of building a career and bringing up a family? One may argue that handling pressure

| Topics/issues | Current scenario | Suggested actions |
|---------------|-----------------|------------------|
| Assessment    | More focus on summative assessment | Introduce continuous and comprehensive evaluation; include common diseases in the assessment; include feedback and reflection in formative assessment |
| Clinical dermatology—procedural dermatology debate | Need for more clarity | Achieve a healthy balance between these two aspects; create evidence on the utility and relevance of dermatology procedures |
| Changing gender trends | Increased female-to-male ratio among residents | More sensitivity to the special issues of female residents |
from multiple sources is not limited to women. However, in the social structure prevailing in our country, such pressures would be felt more acutely by female residents. Faculty and administrators should be more sensitive about this.

It is always the right time to evaluate the curriculum—its strengths and weaknesses. By analysing it, we can find the way forward. In this brief write-up, the effort was to make a few observations as well as to raise some questions. One may not have ready-made answers to all of them. But let us keep asking such questions. As Maimonides, the famous philosopher told, “Teach thy tongue to say ‘I do not know’, and thou shalt progress.”

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Conflicts of interest
There are no conflicts of interest.

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