



Association of National Board Accredited Institutions

Committed to Excellence in Medical Education

A White Paper on

Enhancing the Availability of Competent Specialists through the Reformation of Higher Medical Education

Enhancing the Availability of Competent Specialists through the Reformation of Higher Medical Education

Strengthening Higher Medical Education in India: Options, Opportunities and Outcomes

A White Paper

by the

Association of National Board Accredited Institutions (ANBAI)

Based on the proceedings of the ANBAI National Conclave held on 22 September 2018 at the Indian Institute of Science, Bangalore and in light of recent developments in the health sector

Acknowledgements

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Executive Summary

The present inadequate state of healthcare in our nation can be attributed, in large part, to one major factor: the shortage of specialists.

With the introduction of DNB postgraduate courses in 1975, the availability of competent specialists throughout India has increased significantly. This has been made possible by the active involvement of private healthcare institutions, who cater to 60-70% of the healthcare requirement in our country.

On 22 September 2019, the Association of National Board Accredited Institutions (ANBAI) held a national conclave at the Indian Institute of Science, Bangalore, providing a platform for non-health sectors to share experiences and best practices with key stakeholders in the health sector, including the National Board of Examinations (NBE) and the Medical Council of India (MCI). The aim of the conclave was to strengthen post-graduate medical education in India, and thereby enhance the availability of competent specialists to serve the public.

One key reason for the shortage of specialists is the lack of qualified teachers in higher medical education. Currently, only teachers as defined by MCI and NBE guidelines are recognised to train specialists. We recommend the creation of an independent certifying body to be entrusted with the training, accreditation and certification of all teachers, including those in the private sector and those with foreign qualifications.

We also recommend adequate assessments of post-graduate training institutes and reviews of curricula to ensure quality, innovation, creativity, and flexibility in teaching and learning interactions. Emphasis should be laid on the use of technology, soft skills development, research, data analysis and the use of Artificial Intelligence during postgraduate training. Qualifying examinations should be introduced in order to ensure uniformity in assessment across the country. Feedback by students and teachers should form an integral part of the course to improve teaching outcomes and the quality of training,

The issue of equivalence of NBE degrees with MCI degrees in all respects should be addressed and implemented immediately.

The vast amount of clinical material and expertise available in our country should also be utilised in the post-graduate training of foreign specialists in order to help address the global shortage of specialists. The concept of externship during post-graduate training should also be explored.

The Ministry of Health and Family Welfare and NITI Aayog have taken measures to increase the number of seats for post-graduate medical students, but these efforts have been hindered by the corresponding sharp increase in stipends for NBE students in several states, making it unaffordable for the institutions and thereby leading to a reduction in the intake of post-graduate students. Thus, it is important to ensure that institutions can afford to conduct NBE training.

The implementation of these recommendations and the subsequent strengthening of post-graduate medical education is bound to enhance the availability of competent specialists across India and ensure quality, affordable and accessible care to all the citizens of our country.

1. Introduction

India is, undoubtedly, one of the leading healthcare tourism destinations of the world, offering world-class treatment with state-of-the-art facilities at affordable and competitive costs. However, an analysis of the quality of healthcare services available to its own citizens reveals a significant shortage of specialists, especially in the semi-urban and rural areas.

Realising that the capabilities of medical colleges are limited when it came to the matter of producing more specialists, the Government of India established the National Board of Examinations (NBE) in 1975, with the objective of providing an alternative pathway for aspiring medical graduates to become specialists. Since then, the NBE has introduced several priority post-graduate medical courses (resulting in the qualification of the Diplomate of National Board – DNB) to reduce the shortfall of medical specialists in India through an efficient all-India examination. These courses have the potential to further transform the education and healthcare delivery system in India

The standardised qualifying examination of the NBE is often cited as a gold standard, and can be further improved upon by ensuring uniformity in assessment. Since the introduction of the DNB courses, about 60,000 competent specialists have already been produced. These doctors are making a significant contribution to the delivery of healthcare in India. NBE graduates are also greatly in demand internationally, contributing to the healthcare delivery system in many countries. However, there are some limitations in ensuring that the process of medical education (which is both technology-based and process-oriented) results in quality education across the board. In order to discuss these gaps, the Association of National Board Accredited Institutions (ANBAI) organised an event in Bengaluru on 22 September 2018 at the Indian Institute of Science, Bangalore, attended by NBE officials, MCI members, ANBAI members and several eminent scholars from sectors outside the healthcare sector.

This white paper documents the curation of this event, presenting its outcomes and providing recommendations on how to accelerate the transformation of post-graduate medical education in India, especially in light of the recent developments in the healthcare sector.

1.1 The Challenges of Medical Education in India

Rural India has a shortage of over 12,300 medical specialists (Davey *et al.*, 2014). This results in a heavy workload for the available specialists, affecting the quality of care accessed by the vulnerable and underserved populations in remote areas. The main reason for this shortage is the lack of teachers as defined by present regulations that restrict the training of specialists. According to the MCI, there has been a definite drop in the standards of medical education in India, with only half a dozen medical institutions considered to be “Centres of Excellence”, and even fewer central institutions where the infrastructure is adequate. As part of reforms, the MCI subsequently unveiled ambitious plans to double the number of medical seats in the country by 2025. However, it will not be possible to provide quality post-graduate medical education to the massive majority of medical students in India without improving the infrastructure in private and government-run medical institutions.

1.2 Purpose of the Conclave – Medical Education and the Need to Look Beyond

While reviewing the role played by NBE in promoting and improving specialist courses in identified hospitals, the paper also analyses the potential policy issues relating to DNB and the policy changes required for sustainable human resources for health, by enhancing the quality of specialist training. The overall aim of this paper is to augment the availability of competent specialist services in both public and private sector hospitals.

Based on the discussions during the conclave, the paper recommends strategies that will assist national-level and state-level efforts to improve post-graduate courses, enhance the availability of competent specialists, and achieve Universal Health Coverage in India

2. Methodology

The purpose of the ANBAI Conclave was to identify and illustrate practical approaches for integrating innovations into strategies that will improve post-graduate medical education in India.

Panelists of varied disciplinary backgrounds from different organisations of eminence shared the best practices in their corresponding professional courses and incorporation of relevant components aimed at strengthening the NBE and other post-graduate programmes.

The organisations present included (in alphabetical order):

Christ University, Bengaluru

Indian Institute of Management, Bengaluru (IIMB)

Indian Institute of Science [IISc], Bangalore

National Law School of India University [NLSIU]

National Board of Examinations [NBE]

Medical Council of India [MCI]

The Institute of Chartered Accountants of India (ICAI)

3. Discussion

3.1 Introduction of a Teachers' Accreditation Cell to ensure an adequate number of teachers

- The shortage of medical teachers in higher education is because only those teachers defined as per MCI and NBE guidelines are recognised to train specialists, and their numbers are very limited. For this reason, it is crucial that the present definition of a teacher be revisited. There are a number of competent and qualified specialists (including those with foreign qualifications) in the private sector, who could be considered teachers. If post-graduate qualified doctors with adequate experience could be trained and certified by an appropriate body (such as a Teachers' Accreditation Cell), they could be considered as post-graduate medical teachers on fulfilling the necessary criteria as laid down by the certifying body [the Teachers' Accreditation Cell]. This would immediately increase the number of teachers, in turn enabling a greater intake of postgraduate students. This body could also ensure the continued evaluation of teaching outcomes and maintain quality through re-certification and continuous professional development programmes, including distance learning.

3.2 Increase in the number of seats to address the shortage of specialists

- Private healthcare provides 60-70 percent of healthcare delivery in India. Private hospitals with adequate training facilities (including single-speciality hospitals) should be encouraged to introduce DNB and other post-graduate courses.
- All major government hospitals (including public sector, railways, defence, etc.) with adequate training facilities should also be encouraged to start post-graduate training programs.
- College of Physicians and Surgeons (CPS), Mumbai - the oldest post graduate training institute in the country to be strengthened, with representation of MCI and NBE on the Governing Board.

3.3 Integrating technology for an improved learning process

- The appropriate technology should be incorporated within the post-graduate medical curriculum so that students are up-to-date and can apply it in their clinical practice.
- A four- to eight-week long course in the utilisation of available technologies (such as robotics, artificial intelligence, simulation-based learning, etc.) should form part of the curriculum for the students.
- A distance-learning mode using technology should also be incorporated.

3.4 Introducing innovations in teaching

- Trainees should be assigned to a chief mentor (preferably on a one-to-one basis) as well as to other mentors (on a rotation basis) for overall personality development to improve the quality of doctors that emerge from the institution.
- The NBE examination system should focus on problem-solving and be more competence-based rather than memory-based.
- Post-graduate students should be provided with an opportunity to undergo short periods of exchange posting by way of externships at Institutes of Excellence.

3.5 Curriculum and curriculum review

- Curricula should be revised regularly based on feedback from stakeholders, and incorporate new developments in teaching, training methods, content, soft skills, communication, leadership, ethics, public health implications, research and information technology.
- Training should be conducted to promote innovation, creativity, flexibility in teaching-learning interactions and quality research.
- The key to maintaining high-quality DNB post-graduate medical courses is to have rigorous evaluation and institutional support. At present, many post-graduate institutions ensure that all the required facilities are available only at the time of inspection. Also, there is inspector variability which sometimes can adversely affect the outcome of these inspections. A regular mechanism of assessments using technology to ensure continuous quality training is recommended. All DNB courses should have a mechanism of scientific review, and the research proposals must be scrutinised by the research committee.
- The teaching outcomes should be evaluated at regular intervals with the relevant set of criteria to oversee the desired change in the interactive relationship between teaching and student learning behaviour.
- The post-graduate course curriculum should be designed to determine the optimal level of acquiring competencies, and to balance medical education with a humanistic approach in order to develop continued community orientation and patient-centric service delivery. The medical education system needs to empower the trainees to learn and practice in line with geographic socio-cultural, economic, technological, and behavioural patterns in addition to the medical sciences. A good balance of hands-on training and academics should be ensured during post-graduate training.

3.6 Soft-skills training

- Training in soft skills (including medical ethics, moral values, compassion, effective communication skills, leadership, presentation and public speaking) should also be a part of the curriculum.

3.7 Post-graduate medical research and the integration of big data analytics, diagnostic and predictive features in healthcare

- Teachers must be trained in the methods and relevance of quality research so that they can inculcate critical thinking among their trainees.
- An appropriate budget and adequate time should be allocated for research training institutions.
- Teachers should inculcate the scientific temperament in their students in order to encourage research in their respective fields.
- Institutes such as the Indian Institute of Science should be attached to medical colleges and other post-graduate institutions for doctorates in medical research, to avail of the high-calibre guidance and infrastructure available. Post-graduate students, likewise, should be encouraged to take up research in basic sciences.
- India, by virtue of its huge population, provides medical scientists with an excellent opportunity for research work which can ultimately ensure quality and affordable healthcare to our citizens. The research outcome should be translated into practice as evidence-based medicine from our own data. In order to do this, more teachers and students must take up research in various medical fields. The knowledge gained through research will be useful to patients only if it is incorporated and applied within clinical practice.

3.8 An efficient feedback loop to improve medical education

- A system of feedback, such as teacher evaluation by the students, is vital to improve the quality of teachers within medical education. Feedback from all stake holders (students past and present, teachers and others) should be obtained on a continuous basis to keep abreast of the recent advances and to maintain quality.

3.9 Qualifying examination

- The National Board of Examinations at present has an effective qualifying examination. The exams are conducted at a neutral venue with independent examiners. Further improvements to include ways and means to ensure uniformity in assessment across the country need to be explored and implemented.

3.10 Affordability of medical institutions offering DNB courses

- The current fee structure of DNB courses is among the least for postgraduate courses in our country. It is important that post-graduate students be paid a stipend in order to cover their reasonable expenses. However, the recent sharp hike in stipends in some states has resulted in a situation where the financial ability of the institution to run the course is seriously affected. This has resulted in their intake of students being curtailed, defeating the recent measures by the NITI Aayog and the MoHFW to increase the number of seats both in the private and public sector. Therefore, there is an urgent need to standardise and arrive at a reasonable stipend uniformly applicable throughout the country keeping in mind the financial sustainability of the Institution.

3.11 The importance of equivalence

- The equivalence of DNB degrees with MD and MS degrees must be safeguarded, as this will ensure an adequate number of teachers, which in turn will effectively address the shortage of specialists. In spite of numerous efforts by the concerned organisations, the failure in implementing the equivalency has been a great discouragement in promoting NBE courses.

3.12 Training specialists for the global community

- Well-trained and competent specialists from India can also meet global needs. India has a huge repository of clinical material, knowledge and a vast amount of human resources. The world over, India-trained specialists are contributing significantly towards the health needs of countries including the USA, the UK and other developed countries. Keeping this in mind, India should leverage the need for specialists all over the world and start post-graduate training for foreign specialists.

4. Recommendations for Post-Graduate Education

- Enhance the availability of competent teachers by redefining the criteria of medical teacher.
- Set up a certifying body [Teachers' Accreditation Cell] to train and accredit teachers, provide continuous professional development, and revise the curricula at regular intervals.
- Post-graduate training should include technology, soft skills training, innovations and research.
- Integration of big data diagnostics and predictive features in healthcare should be included.
- Feedback should be collected periodically from all stakeholders including students and teachers, analysed and incorporated into NBE education.
- The qualifying examination should be further improved to ensure uniformity in assessment across the country.
- All major government hospitals should consider providing postgraduate courses including DNB training with modern academic-research facilities.
- Private hospitals should be encouraged to start DNB courses, with requirements to be reviewed periodically without compromising on quality.
- Use of technology for adequate assessment of post graduate training institutions to ensure facilities for quality training is recommended.
- The concept of externship should be considered and encouraged.
- Research on evidence-based management in healthcare should be promoted with an adequate budget.
- International post-graduate courses should be considered for foreign graduates in order to meet the global requirement of specialists.
- The financial affordability of institutions conducting DNB courses should be considered.
- Equivalence of all post-graduate medical degrees should be implemented.

5. Glimpses of the Conclave



Left to Right - (Dr.) Fr. George Edayadiyil, Chancellor, Christ University, Bangalore; Prof. Biman Bagchi, Dean, Faculty of Science, Indian Institute of Science, Bangalore; Prof. Dr. Raghunath, Professor of Corporate Strategy and Policy Chair, Centre for Corporate Governance and Citizenship, Indian Institute of Management (IIM), Bangalore; Mr. K. Raghu, Former President, Institute of Chartered Accountants of India (ICAI), Bangalore; Prof. T. V. Subba Rao, Senior Professor, Chairman of the P.G. Council and Director of Research and Development, National Law School of India University, Bangalore; Dr. Reena Nayyar, Additional Secretary, Medical Council of India, New Delhi; Dr. Abhijat Sheth, President, National Board of Examinations, New Delhi.



Medical Council of India, National Board of Examinations and Association of National Board Accredited Institutions members at the conclave



The audience – around 400 delegates from all over the Country.

