

Health Professional Education: current & Future perspective

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Introduction

The Government of India recognizes 'Health For All' as a national goal and expects health professional training to produce competent health work force towards meeting this goal. India is also signatory to Millennium Development Goals and Sustainable Development Goals. However, the medical & health education and health care in India are facing serious challenges in content, competencies and approaches.

The burden of diseases in India is still large. Though there has been some improvement, national statistics reveal wide disparities between different states as also rural/urban areas with regard to access to basic quality health care services. These are generally attributed to inadequate infrastructure and lack of resources. However, health manpower shortage specially so physician, both generalist and specialist, inequitable distribution of manpower and resources, and deficiencies in the quality of medical and allied education also need careful and critical analysis and improvement.

Today, India has the highest number of medical colleges and allied health institutions in the world. This unprecedented growth has occurred in the past two decades in response to increasing health needs of the country. The most significant challenge for regulatory bodies like the MCI, DCI, INC, CCM & other allied councils has been to balance the need for more medical colleges and allied health institutions with the maintenance and improvement of quality standards. The globalization of education and health care and India's potential as a destination of choice for quality education and health care has brought the issue into sharper focus.

Distance education, which offers affordable education to masses, has grown significantly in the recent past; high quality central institutions have also exhibited strong growth. Emergence of applied science courses such as

actuarial science, clinical optometry, drug regulatory affairs, biotech, dietetics and applied nutrition

In India, progress in health professional education are driven by several factors such as -

- Increase in collaborations between Indian and foreign universities for faculty support and curriculum design, joint research, student faculty exchange and twinning programs
- Public Private Participation (PPP) has increased higher health professional education which led in the share of the unaided private sector in terms of the number of institutions and enrolment.
- The Government, on its part, has increased the higher education budget and implemented several technology initiatives to improve the quality of higher education.
- Initiatives include guest lectures by industry practitioners, management development programs, live projects, consulting assignments, joint seminars, scholarships etc.

While the higher education system in India has witnessed significant expansion and progress over the past decades, there are some systemic issues that need to be addressed systematically.

1. **Social values:** There is significant disparity in higher education including health professional across genders, social groups and geographies.
2. **Economic values:** Low employability of graduates perceived by industry
3. **Intellectual values:** India is lagging behind than other countries specially in university rankings and research output.

The way forward

To meet the MDG/SDG , India has to strive hard to adopt fast transformational and innovative interventions that would be required across all levers

of the higher education system including Medical & Health education to achieve international standards and targeted goals of education in India

Pillars / levers of higher professional education	Shortcomings/ challenges	Possible interventions / solutions
Curricula and pedagogy	Current curricula are not reflecting the need based requirements	<ul style="list-style-type: none"> • Adopt a learner-centred paradigm of education • Introduce multi-disciplinary, career oriented, and skill-based courses • Include courses on Value education, bio-ethics, socio-environmental sciences for societal awareness and development • Encourage lifelong learning for professionals • Provide students the choice of entry/exit from the higher education system • Adopt new pedagogical techniques (blended learning, flipped classroom, experiential learning, Problem based learning, Community oriented medical education etc) • E-learning modalities including simulations • Adopt newer methods of assessment & evaluation (OSPE/OSCE, Mini Cx, DOPS etc)
Faculty	Vacant faculty positions Inadequate Teacher's training High student teacher ratios	<ul style="list-style-type: none"> • Ease faculty recruitment norms and offer incentives for attracting faculty • Retain high-quality faculty by implementing tenure based and rewards-based systems • Incentivize/facilitate faculty development and exchange programs with top-end institutions • Offer value added courses
Research	Low focus on Research specially in translational	<ul style="list-style-type: none"> • Lack of inter- institutional , industry involvement & other modes of PPP for quality research • Attract best-in-class faculty to conduct research • Adopt the mentor model to develop research capabilities in Indian institutions • Promote collaborations with international institutions, industry, and research centres for generating high-quality basic and applied research • Encourage community-focused/development oriented research at academic institutions
Partnerships	High quality partnerships with foreign institutions Partnership restricted to institutions	<ul style="list-style-type: none"> • Strengthen industry-academia linkages across all aspects of the education value chain, from curricula and faculty to infrastructure, research, and few placements

		<ul style="list-style-type: none"> · Encourage tie-ups between higher education institutions and providers of skill-based training to conduct skilling modules
Infrastructure	Most institutions are not meeting standard infrastructure norms. Allocated funding for infrastructure development are not being utilized effectively	<ul style="list-style-type: none"> · Target capacity enhancement for socially- and geographically-deficient segments · Incentivize high-quality private and foreign participation · Widen access through virtual classrooms and MOOCs · Leverage Government initiatives in technology such as NKN, NMEICT
Funding	Low government spending on research relative to other countries	<ul style="list-style-type: none"> · Provide competitive access to public research grants to all institutions · Encourage corporate and alumni funding. Link public funding to institutional performance · Promote PPP funding · Promote community & individual based funding
Governance/Leadership	Multiple regulatory bodies with duplication and ambiguity of regulations	<ul style="list-style-type: none"> · Simplify the regulatory framework, move increasingly towards autonomy and self regulation of institutions, introduce mandatory accreditation · Enforce mandatory disclosure of key financial and operational information by all institutions, create a centralized repository of all info related to higher education in India · Provide a thrust to internationalization of leadership, separate ownership and management for effective governance

To implement above transformational and innovative interventions following three Types of institutions will be required:

Foundation institutions	Career-focused institutions	Research based institutions
Access to affordable education to eligible and deserving students	Focus on critical thinking, reasoning and problem solving skills	Centres of excellence for knowledge creation
Major role in promoting equity and access	Industry and sector-aligned courses. Strong industry linkages across the education value chain	High focus on multi-faceted research delivered by stellar faculty
Wide range of courses. Holistic education	Entrepreneurship training	Inter-disciplinary areas of scholarship
Providing skill-based and competency training	Faculty with industry experience	State-of-the-art infrastructure. High-quality collaborations for cutting-edge research arena

Brief description of some of the core strategies to achieve high quality relevant health professional education:

1. The learner-centred paradigm of education

In the learner-centred paradigm of education, students are encouraged to take greater responsibility for their learning outcomes. The professor ceases to be the fount of knowledge filling the empty receptacles of students' minds; instead, students actively participate in the discovery of knowledge. They are encouraged to be reflexive and thoughtful learners, learning from themselves, their peers and their immediate environment just as much as they would from their professors. Accordingly, the teaching-learning methodology involves less lecturing and note taking and more hands-on activities to allow for experiential and interactive learning.

By placing the student at the centre of the learning process, the approach on the one hand has enabled institutions to devise new and innovative ways to reach diverse learners, and on the other, helped students discover and exercise their distinctive learning styles to chart an educational pathway that is personally meaningful and relevant.

2. Intensive use of technology

Online platforms and ICT tools have helped take higher education to millions of students. Students today increasingly learn from leading faculty at elite institutions beyond the four walls of their classrooms as top-tier institutions have donned the mantle of being content generators. Professors collaborate across universities to collectively create and distribute for Technology has not only been instrumental in addressing the demand fundamentally changed the nature of several educational processes.

E-learning has become the tool for self learning with critical analytical approach and also acts as a great democratize, allowing students to learn at their own pace certain content and exercises multiple times with special tools to aid their learning.

Finally, the hybrid model (where part of the program is taught online and part in person) has become particularly popular among adult and working professionals looking to gain additional credentials. The model provides them

with the flexibility to access course material as their schedule permits.

In short, technology has been nothing short of disruptive for Indian higher education, solving for three of India's pressing problems – access, equity and quality - at once.

3. Reforms in governance

a) Diminishing role of government in governance:

Over the years, the government has gradually withdrawn from direct management of public institutions, devolving governance to boards comprising academics, alumni and external members. Instead, it exerts indirect forms of control based largely on mechanisms such as performance recognition. The erstwhile regulatory regime of multiple bodies with conflicting and overlapping mandates has given way to a single independent regulator that is largely hands-off, with the regulatory focus shifting from 'high barriers to entry' to 'high standards for accreditation'. Self-regulation and self-critique has now become the norm.

The government's role as a provider of funding has also seen some shifts. Over the 13th and 14th plan periods, the funding model has moved from funding for institutions to funding for individuals (including faculty, students and researchers). As a result, institutions can no longer solely on government monies for operations and expansion, but are increasingly taking greater responsibility for sourcing funding, further increasing their autonomy to plan their own futures.

b) Moving from monitoring inputs to regulating outcomes:

Traditionally, regulatory bodies in Indian higher education have been focused on monitoring inputs. Universities were assessed on the size of built spent on computers and so on instead of on student learning outcomes, their employment readiness or performance in standardized tests. A conscious effort to reverse this anomaly has been made over the years by linking public funding with

Performance variables. Attempt has also been made to shift the thrust from consumption of allocated funds to outcomes from utilized funds, effecting, at the same time, greater autonomy in the use of allocated funds as well

as greater institutional responsibility towards their effective utilization.

c) Compulsory accreditation:

The move towards regulating outcomes has been accompanied by the introduction of a more sophisticated quality assurance system based on the establishment of a national accreditation agency for higher education and also several other agencies with a specialized focus. As a result, claims to quality can no longer be based on internal judgment by institutions themselves but have to be justified by an external process of peer review and assessment by quality rating agencies. While the model has been in practice for many years before India adopted it, what is rather distinctive about the Indian accreditation system is that each tier of universities has a different rating scale, allowing stakeholders to make comparisons across like variables. Periodic assessment and review allows institutions to move up or down the hierarchy of grades within their tier, or even move across tiers. Further, in order to prevent an oligopolistic scenario from building inadvertently, the accreditation system allows fledgling institutions to grow and find a foothold before subjecting them to extensive scrutiny.

d) Enabling environment for private and foreign participation:

Among universities had effectually started to blur, with recommendations from the a first step in this direction. Thanks to lower barriers to entry and the evolution of a mandatory accreditation system, quality benchmarks have become the sole basis of differentiation among universities within a certain tier. Today, foreign education providers are also treated on par with Indian institutions, they too being subjected to the same accreditation norms.

e) Thrust towards internationalization:

The last 20 years of reform underpinned by the desire and commitment to emerge as globally competitive education system. Internationalization has been a powerful driving theme, enabling the Indian higher education sector to both be in consonance with global standards as also emerge a leader in higher education globally. India's higher education institutions are today global in all senses of the word, not least of which is leadership.

1. Strategies adopted by Medical Council of India for quality health professional education.

The following modifications have been made in the existing curricula to accommodate the aspirations of the defined goals and competencies:

1. Newer learning experiences through introduction of foundation courses placed at crucial junctures, clerkships/ student doctor clinical mode of teaching and electives.
2. Early clinical exposure starting from the first year of the MBBS course.
3. Alignment and integration (horizontal and vertical) of instruction.
4. Integration of principles of Family Medicine
5. Emphasis on clinical exposure at secondary care level.
6. Competency based learning.
7. Adoption of Contemporary Education Technologies (Skills lab, E-learning, Simulation)
8. Greater emphasis on self-directed learning.
9. Integration of ethics, attitudes and professionalism into all phases of learning.
10. Encouragement of learner centric approaches.
11. Assessment of newer learning experiences, competencies, integrated learning and subject specific content.
12. Acquisition and certification of essential skills.

2. Strategy For large Scale Faculty Development for India:

Regional Learning Facilitation Centres are established for continuous faculty development programs. Training of the trainers is the essence of successful implementation of our reforms.

Conclusions:

While it is important to address the existing shortcomings in the Health Professional education system, it is more important to move towards a bold and inspirational vision

In order to realize the goals, a transformative and innovative approach would be required across all the levers of higher education: from curricula and pedagogy

to the use of technology to partnerships, governance and funding. Making rapid progress over the next two decades would require a committed and concerted effort from all stakeholders involved i.e. academia, industry, and Government.

A stratified three tiered structure that enables seamless vertical and horizontal mobility of students would be able to create the desired intellectual, economic and social value. The implementation framework suggests the

student at the centre-stage to foster innovation and choice, an ICT architecture that will increase access, equity and quality.

A transparent governance framework that will enable autonomy and self framework for governance which proposes a mechanism based on outcomes and strong institutional accountability, clearly delineating the role and responsibilities of the government as well as public and private higher education institutions.

