"Project Eklavya": To Transform the Indian Health Education System

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Abstract: Over 6.3 lakh students have taken this year's pre medial test in India. The total number of MBBS seats in the country is around 52,300. The current doctor population ratio is 1: 1700. The country needs 1, 00,000 graduates yearly to achieve a ratio of 1:1000. Since graduates from public and private funded medical institutions are not motivated to serve in rural settings, increasing the number of places or establishing new medical institutions may not be an effective solution to the issue, as observed by Hazarika. The medical education model proposed in this article, which includes common entry and exist test with flexibility of learning medical education, will make medical education available to all deserving candidates irrespective of their caste, creed, financial status and, most importantly, geographical location. Any deserving candidate from even the remotest part of the country can access the best medical education using the powerful tool of information technology and the vast medical educators' pool of talent and experience available in the country and abroad. [Saxena R et Al NJIRM 2015; 6(3):118-124]

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Introduction: Recent post in Times of India[1] has given us real scenario of graduate medical education in India.

"Over 6.3 lakh students took this year's pre medial test. The total number of MBBS seats in the country is around 52,300. Government colleges have a little fewer than 25,000 seats. The All-India quota is 15% of these, excluding institutions like AIIMS and JIPMER. Therefore, lakhs vie for around 3,700 seats. That's where the 0.6% success rate comes in. Even if all 52,000 seats were up for grabs, only 8% aspirants would make it. With such a huge demand-supply skew, many parents and students are often desperate to adopt fair and foul means to grab a seat and rackets have sprung up over the years tapping this desperation.

In the government sector, 183 colleges have less than 25,000 seats. Government medical college seats are coveted for offering education at highly subsidised rates, costing between Rs 25,000 to Rs 75,000 for the four-and-a-half year course, and most of these colleges offer better education. The private sector offers just 19,000 seats, if we leave out management quota (approximately 30% of seats), which are sold for Rs 55 lakh and Rs 80 lakh. Even from these 19,000, thousands are diverted to the management quota to be sold every year for hefty sums. Not only do most private colleges charge between Rs 15 lakh and Rs 40 lakh for the MBBS course, most aren't known for quality of education. With the government for decades not investing enough in starting more medical colleges and increasing number of seats, the private sector is making a killing."

India has significantly lower number of doctors and other allied health workers than that recommended by global norms. The current doctor population ratio is 1: 17002. The country needs 1, 00,000 graduates yearly to achieve a ratio of 1:1000. The best doctor: patient ratio is in Cuba which is 1: 125. An effort is being made to bring up the ratio in India to 1: 1000. To bring about this change, the Ministry of Health and Family Welfare, Govt. of India has decided to increase the number of medical seats, either by increasing the numbers in already existing medical colleges or by establishing new medical colleges3. At present we have 52,305 seats in 398 medical colleges for undergraduate students[4]. The Cabinet Committee on Economic Affairs (CCEA) on Thursday cleared a health ministry proposal to add 10,000 seats in state and central government medical colleges in a move aimed at reducing the nation's disease burden[5].

Further, as per Press Trust of India | New Delhi (May 22, 2015), Medical Council of India is planning to relax norms for starting new medical Colleges[6]. On the other hand, India is already facing gross shortage of medical teachers[7]. This fast expansion of medical colleges has resulted in gross shortage of teachers estimated to be currently 40 per cent[3]

The report of the National Initiative for Allied Health Sciences (NIAHS) observed that "There is a total national shortage of approximately 64 lakh AHPs (Allied Health Professionals) with highest gaps in the states of Uttar Pradesh, West Bengal, Maharashtra, Bihar and Andhra Pradesh[8] "

The report said the Union Ministry of Health and Family Welfare aims to address the shortage by establishing one national and eight regional institutes of allied health sciences across the country. The report also recommended that new methods of teaching and training should be introduced in the public sector to keep up with changing technologies and new age educational methods such as e-learning, web tools, SIM models and others[8]

Since graduates from public and private funded medical institutions are not motivated to serve in rural settings, increasing the number of places or establishing new medical institutions may not be an effective solution to the issue, as observed by Hazarika[9].

"Although the production of health workers has expanded greatly in recent years, the problems of imbalances in their distribution persist. As India seeks to achieve universal health coverage by 2020, the realization of this goal remains challenged by the current lack of availability and inequitable distribution of appropriately trained, motivated and supporting health workers".

Over and above this, day by day maintenance cost of the Medical College is increasing[10, 11,12] and so fee is also increasing and hence a credible solution with long term implications that is universal, economical and not infrastructure intensive needs to be sought actively and on an urgent basis.

Strategies being currently implemented by the stakeholders to overcome existing problems

1. Recognition of foreign Post Graduate Medical Qualification[13]: But since they are trained in another country, their skills may not match the requirements of our country. They have the additional burden of paying in foreign currency, are susceptible to security and demographic problems of that country and need to readjust to the demands and requirements of India once they come back. All these problems can be solved by the alternative model proposed in this article, preventing valuable currency and manpower draining out of our country.

2. Scheme for up-gradation/strengthening of Govt. Medical Colleges by way of central funding during the XI Plan[14]

3. More Medical Colleges in India approved for conducting M.B.B.S. course[15]

4. The MCI has proposed relaxation of norms for the total number of beds and area per class room required in order to encourage setting up of more medical colleges in unrepresented areas of the country[16].

The above said proposals will no doubt increase the number of doctors coming out of medical and paramedical schools but may not address the skewed under-representation of medical professionals in the rural areas. Moreover, as most of these medical colleges which will come up in future will be private funded, there will be no respite from the high fees of medical education, making this a non-affordable proposition to most under-privileged but deserving candidates. The Mudaliar report stated that only 2.2% of rural villages had allopathic (conventionally trained) doctors[17]. While the doctor: patient ratio has improved in the country, the problem of skewed distribution vis-à-vis rural areas remains unchanged[18].

Thus there is a need to simultaneously look at alternative models of imparting medical education. We propose an alternative model of imparting medical education:

"Project Eklavya":
Changing Face Of Indian Health Education System

The Story Of Eklavya[19]: Long ago there lived the Pandavas and the Kauravas, the princes of Hastinapura. All the princes were taught archery by Sage Dronacharya. The Pandava prince, Arjuna was Drona's favourite student. Ekalavya, a poor commoner boy also wanted to be Drona's pupil but Drona refused to teach him.

Ekalavya was a determined boy. He carved a statue of Drona on a tree trunk in the forest and started practising in front of it. Time went by. One day the princes and their teacher came to the same forest. As Arjuna aimed at a particularly difficult target, an arrow pierced the target. Shocked, the boys and their teacher looked around. They saw Ekalavya, who went up to touch Drona's feet. "Who is your teacher?" Drona asked. Ekalavya quietly led him to the statue. The great sage was astonished by the drive, enterprise and dedication shown by Eklayya who had surpassed Arjuna without any "formal" training. This is perhaps the first recorded instance of the power of self-directed learning. However, Drona did not want anyone to be better than Arjun. Arjun felt humiliated, jealous and looked accusingly and self-righteously at Drona. Drona thought for some time and said, "If I am your guru, give me my gurudakshina." "Surely, sir," bowed Ekalavya. "I want your right thumb, replied Drona. Ekalavya wordlessly cut off his right thumb and laid it at Drona's feet[2].

This incident amply demonstrates the enterprise and potential of India's untapped youth (typified by Eklavvya), the limitations and the so called righteousness of the prevalent medical education system in India (typified by Dronacharya) and the prejudice and sense of "entitlement" felt by the elite who have been trained by the prevalent system (typified by Arjuna)

Based on our ancient Indian example we propose that:

- ✓ National board should be formed for screening of students for admission and assessment, Online examination, and develop a pool of teaching faculties & expert clinicians for assessment only.
- ✓ Admission process **ENTRY LEVEL FOR SCREENING** should be by conducting national level examination including basic knowledge of the subject, Attitude. Traits (Love, compassion, & humanitarian nature etc)
- ✓ **FLEXIBILITY OF AGE**: The students can earn while learning, and there would be no compulsion of attending lecture only for attendance record. it means freedom of choosing the learning method.
- ✓ **Student will have freedom to learn from any authenticated source:** Faculty of government / private sector. This center can be authenticated by setting up apex body like National Board of Examinations (NBE); NBE courses have become popular in India because they are easily accessible, cost less and follow the principles of adult learning where the training is directed towards the end result.

(The National Board of Examinations was established in 1975 with the prime objective of improving the quality of the Medical Education by elevating the level and establishing standards of post graduate examinations in modern medicine on an all India basis. In addition to Postgraduate teaching institutions under MCI, there are more than 450 accredited institutions imparting training in various Broad and Super specialities for the award of postgraduate qualification in Broad and super specialities. The setting up of a National Body to conduct post graduate medical examination was intended to provide a common standard and mechanism of evaluation of minimum level of attainment of the objective for which post

graduate courses were started in medical institutions)[20]

- ✓ The alternative model proposed has the potential to cause a paradigm shift in the medical education field & training, and assessment can be done at multiple centres, thus circumventing the need for institutional requirements. This is a breakdown model where needs and resources are distributed evenly (e.g., .accredited hospitals, primary health centres etc) instead of concentrating at a particular location (e.g. Medical school) making efficient use of existing resources rather than investing heavily in building new, expensive resources which are a burden on our economy.
- ✓ Theoretical assessment can be done online while clinical knowledge should be judged by conducting clinical examinations by using innovative assessment tools like OSPE, OSCE & case based studies.
- ✓ There should be Yearly examinations (Theory & practical Exams) and Final Exit Examination followed by Internship. As Ministry is also planning to have common exit exam [21]: -

  "The health ministry is planning an exit exam for MBBS students passing out of government as well as private medical colleges. The move comes in the wake of concerns over the quality of doctors being produced in the country. The draft proposal prepared by the ministry suggests using the existing Foreign Medical Graduate Examination (FMGE) as a voluntary exit exam. FMGE, a screening test recognized by the MCI, was introduced in 2002 as a qualifying examination for Indian students holding medical degrees from other countries and intending to practice medicine in India. The health ministry is now considering using FMGE as a benchmark for all MBBS doctors."

- ✓ Efficiency tests every 3 years will be made compulsory in order to maintain the highest standards of medical practice and skill.
- ✓ The progress and development of India is largely dependent on how the youth of the country is harnessed through proper education and skill training. If youth of the country is unemployed and frustrated, we are losing a valuable national asset and India cannot progress. Strength of country is totally dependent upon youth, so they should be self dependent & have multiple opportunities to fulfil their aspirations and eventually become competent enough to lend their hand towards development of the Nation.
- ✓ Foreign student can also apply for this course; it will automatically generate revenue in India.
- ✓ By implementing this alternative model we can reduce the burden of education on Government and society.
- ✓ It will be self directed & self motivated learning (which has been proved a successful model worldwide). As a result, students will be more focused on their studies & it will definitely increase the enthusiasm for learning.
- ✓ This alternative model aims to change the mindset of the society and academia from looking at educational institutions as the only source of knowledge and learning and open their perspective to the unlimited possibilities that can be achieved using information technology and inherent talent of professional excellence already existing in our country.
- ✓ Mandatory 1 year rural & 1 year urban internship after final MBBS exams – This will address the skewed ratio of doctor: patient in rural India.
- ✓ It is imperative that for this model to function efficiently, the assessing body should be competent, accountable & transparent.

Advantage of this project:

- ✓ Student can gain his/her medical knowledge by any of his local clinician on one to one basis & can appear for yearly online examinations.
- ✓ Freedom of Education for Youth!!
- ✓ It will improve quality of doctors & increase doctor: patient ratio and also increases the quality of medical services in rural areas.
- ✓ It will increase the wave of self-learning in students. Students will avoid going abroad for higher education which is very expensive for the common man in India. "Good teacher will be given more respect rather than Institute".
- ✓ This model aims to provide opportunity for students who are talented but underprivileged and will complement the existing system of conventional medical education imparted through institutions.
- ✓ International student can also apply for this course – India will become the hub for assessment of students – Quality to be maintained in whole approach both clinical & theoretical.
- ✓ The most important and visible hindrances to health education in India, viz lack of infrastructure, lack of doctors, corruption, business in education system & etc can be circumvented by this model.
- ✓ This will be an alternative way & opportunity to the students who cannot afford time and/or money for full time medical education, but have the potential for higher education such as MBBS.
- ✓ Every student has the right to education of good quality & of his capabilities.
- ✓ Equality of Opportunity in Educational Institutions: Article 29(1) of Indian constitution states "No citizen shall be denied admission into any educational institution maintained by the State or receiving aid out of State funds, on grounds only of religion, race, caste, language or any of them."
- ✓ The Fundamental Rights of the Indian Constitution has also adopted the fourfold ideal of justice, Liberty, Equality and Fraternity. Our Constitution laid down that in the eyes of law, everyone should have an equal status, to no one the justice be denied, everyone should have liberty of thought, expression.
- ✓ The fundamental right of equality clearly signifies that in the eyes of law no distinction can be made on the basis of any position, caste, class or creed. Side by side the right of equality of opportunities to all is also provided. The equality of opportunity is meaningless, unless there are equal opportunities for one's education.
- ✓ The well-known Kothari Commission, 1964-66 recommended that Central Government should undertake the responsibility in education for the equalization of educational opportunities with special reference to the reduction of inter-state differences and the advancement of the weaker section of the community

Are we first doing this? A Big "NO"

1. In India we have National Board of Examination at more than 450 centers across India for post graduate studies that are entrusted with maintaining quality and authenticity of medical learning and assessment
2. University of Edinburgh is running course of Internal Medicine (Online Distance Learning) MSc, PgCert, PgDip[22] : This online program has been designed to provide comprehensive understanding of the processes, investigation procedures and treatment options for common diseases students encounter in general medical practice
3. University of Southern Queensland provide Bachelor of Health course online[23]
4. MFM Family Medicine (Online Distance Learning) - 2 Years (Part-time)[24]
5. Various Countries providing with Online Courses[25,26]

6. The British Institute of Homeopathy27: The British Institute of Homeopathy provides online homeopathic education and training.. BIH is in the process of applying to the Accreditation Commission for Homeopathic Education in North America (ACHENA), which when complete will give the school accredited status in the homeopathic community

Conclusion: Just like the information technology revolution made our country bridge the conventional development route and take a giant leap by sidestepping various hindrances & challenges to becoming a developed country, the medical education model proposed in this article will make medical education available to all deserving candidates irrespective of their caste, creed, financial status and, most importantly, geographical location. Any deserving candidate from even the remotest part of the country can access the best medical education using the powerful tool of information technology and the vast medical educators' pool of talent and experience available in the country and abroad. This is one **"Make in India"** story that will surely be a boon to the students and population alike and make our country a healthier place which will attract medical tourism and generate foreign revenue.

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