THE INDIA FORUM
A JOURNAL-MAGAZINE ON CONTEMPORARY ISSUES

August 14, 2025

# A Costly Number is Behind India's Medical Education Woes

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*A rapid expansion in medical colleges has been justified by India's poor doctor-to-population ratio. The shortage of doctors, though, might be an invented figure.*

One of the most significant developments in India over the past decade and a half has been a tremendous increase in the number of medical colleges. In 2011, we had 314 colleges (the most for any country in the world). The number catapulted to 780 as of July 2025. India still tops the global list, with Brazil coming a distant second (389 colleges).

The policymaker's answer to why we have so many medical colleges is that the country's healthcare needs are huge due to its massive population. More colleges are the only way to remedy a shortage of doctors (more specifically, of biomedical or 'allopathic' doctors), the logic goes, a shortage that until recently left India with fewer than one doctor per 1,000 people. That's a ratio supposedly recommended by the World Health Organization (WHO), which has been a longstanding target for policymakers. A parliamentary committee in 2016 rued that "despite having the most number of medical colleges in the world […] India is way behind in achieving the targeted [biomedical] doctor population ratio of 1:1000 as per WHO norms".

Except, no such WHO recommendation exists.

Worse, the government's pursuit of this chimeric ratio-much of it in opposition to medical education experts' cautions-has led to counterproductive decisions and explains several of the new challenges in healthcare today: an ever-increasing number of inadequately provisioned and corruption-fuelled medical colleges churning out poorly trained doctors.

## When India Had a Problem of Plenty

Until fairly recently, expert opinion within and outside government held that India had a sufficient number of biomedical doctors. Such views hinged upon then-prevalent understandings about what the doctor-to-population ratio meant and served.

The statistical measure of doctor-to-population ratio began to be commonly used in the early 1800s in the US and some European countries as a descriptive measure of the state of medical services, rather than as a standard to achieve. An early Indian example of the latter form of usage came from N.S. Hardiker, a doctor who lived in the US for some time. Writing in the 1918 issue of the New York City-based journal *Young India*, under the title "India's high death rate: Why?", Hardiker's calculations and analysis echoed the then-current anticolonial critiques to argue that the colonial government's low levels of health provisioning - including a doctor-population ratio of 1:3000 in his reckoning - were responsible for the country's high death rate.

> How did expert opinion in India go from assessing that India's doctor-population was more than adequate to claiming, just within a decade, that it was so low it needed interventions on a major scale?

Notably, Hardiker did not make any claims about an ideal doctor-population ratio. On the contrary, in the mid-1940s, the colonial government-commissioned Health Survey and Development Committee (known after its chairman as the Bhore Committee), after comparing India with countries which were showing excellent healthcare outcomes during that time, especially the UK, the US, and the Soviet Union, decided to suggest a target ratio. They recommended that India should aim for a ratio of 1:2000, to be achieved by 1971 (up from its then proportion of 1:6300).

About a decade after independence, the Mudaliar Committee thought this ratio to be unnecessarily high. Everyday medical care involved many "routine" tasks which did not need "highly trained members of the medical, nursing or dental professions". Its more modest recommendation was a ratio in the range of 1:3000 - 1:3500. This line of thought was standard in a period of renewed interest in community health and primary care, and by 1981, the Ramalingaswami Committee predicted that India would soon have more doctors than it needed.

By the early 1990s, the country had attained a biomedical doctor-population ratio of 1:2300, a ratio which then policy experts deemed not only to be adequate, but even an excess. In their assessment, "as compared to the number of medical personnel, paramedical

personnel are less numerous. The Government has taken a decision not to open new medical colleges in the country but to increase the number of paramedical institutions and to strengthen existing ones" A decade later medical education experts in India were writing that "the doctor: population ratio has already exceeded that required by the country and [the more urgent challenge is that] there is mal-distribution of their services."

When we juxtapose this pre-2000s history with the past 15 years, we are left wondering: How did expert opinion in India go from assessing that India's doctor-population was more than adequate to claiming, just within a decade, that it was so low it needed interventions on a major scale? As it turns out, this policy about-face took place in the context of a major global shift in thinking about human resources for health.

## WHO Recommendations and Caveats

Doctors are only one part of a region's healthcare infrastructure, and health outcomes depend upon a host of socioeconomic, political, and environmental factors, in addition to the numbers of other healthcare practitioners like nurses, midwives, and community health workers. It is therefore quite impossible to conduct specific public health studies on how many *doctors* it would take to help a community or a country reach a pre-determined optimum level of health overall.

Careful studies have avoided prescribing targets. When an international group of public health researchers based at Harvard University in 2004 published the *Human Resources for Health: Overcoming the Crisis* report, they "quantif[ied] health worker shortages not to seek numeric precision but to offer a sense of the scale of gaps. We use an *arbitrary* minimum worker density threshold of 2.5 workers (doctors, nurses, and midwives) per 1,000 population" [emphasis added]. Their ratio was derived from a choice to focus on two services as surrogate markers for adequate healthcare: immunisation (measles in this case) and skilled attendance at birth. After comparing countries across the world, they found that the prospects for achieving 80% coverage of these goals "are greatly enhanced where worker density exceeds 2.5 workers per 1,000 population".

The WHO's 2006 World Health Report took a statistical leaf out of this study and arrived at a "remarkably similar threshold" of 2.28 health care professionals per 1000 population to define health worker shortages. It modified this analysis in 2016 by expanding its definition of adequate healthcare coverage, and proposed a new threshold figure of 4.45 physicians, nurses and midwives per 1000 population to identify shortages.

There are three crucial points to note about the 2006 and 2016 WHO reports: they focused on an optimum density of *health workers* and not of *doctors* alone; they acknowledged that their definition of health workers (as consisting of doctors, nurses, and midwives) excluded other important worker groups like pharmacists and community health workers; and they emphasised that their particular definition of shortages (as workforce density below either 2.28 or 4.45 workers per 1000) did not eliminate the need for each country to make its own context-specific assessment about workforce sufficiency.

In either case, there was no suggestion from the WHO that countries should aim for a 1:1000 doctor-population ratio as a standard.

## Inventing the Norm

If the WHO has never made any normative recommendations regarding the doctor-population ratio, why did Indian policymakers start claiming that they wanted India to achieve a 1:1000 ratio "as per WHO norms"?

The earliest official reference I could find was in the Medical Council of India's (MCI) "Vision 2015" report released in 2011, which, "after detailed inputs from various working groups came to a consensus that the targeted doctor population ratio would be 1:1000 and achievable by the year 2031". The ratio of 1:1000 was so unprecedented that an editorial in the *Indian Journal of Public Health* labelled it the report's "most sensational component".

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Despite the sensational departure from precedent, the idea of the 1:1000 doctor-population ratio would quickly become the raison d'être of India's broader healthcare policy, especially after the Planning Commission's High Level Expert Group on Universal Health Coverage gave it a stamp of approval a few months after the MCI report.

Here is where things get curious. The expert group's report acknowledged the 2006 WHO threshold of 2.28 health workers per 1000 population. Yet, a few paragraphs later, it stated that "we are still far from the WHO norms of one doctor per 1,000 population". No source or reasoning was provided for this 'norm', but it is possible that the group arrived at this number by separating out the proportion of doctors from the broader health workers threshold. Either way, it was a major misattribution. The central place of the report in public health discourse and policy spaces during that time ensured that this misattribution was here to stay, elevated to the status of fact.

Once the highly debatable idea that India suffered from a low doctor-to-population ratio was turned into fact, the policy of rapidly creating new medical colleges followed. The High Level Expert Group championed "a phased addition of 187 colleges in underserved districts […] for equitable health care accessibility across the states." The then union government took this particular recommendation quite seriously: in March 2012, then Health Minister Ghulam Nabi Azad said that 46 new medical colleges had been established "just in the last two years raising the number from 289 to 335 at present".

The focus on increasing the number of medical colleges survived the change in government in 2014. Experts at the NITI Aayog, the successor to the Planning Commission, welcomed this push. Outside, others sounded cautious alarms. Madhav G. Deo, a member of the MCI, wrote in the *Indian Journal of Medical Research* that the policy was "ill advised", claiming- in the kind of impertinent metaphors that veteran physicians often use-that it "would reduce the medical colleges to *pathshalas* (primary schools)". The *Indian Journal of Public Health* worried about the "potential danger of compromising the quality [of biomedical education] further."

Nevertheless, the state's quantitative enthusiasm would not diminish, and as of July 2025, India has 780 medical colleges.

## Reaching the 1:1000 target - again and again

In June 2022, the health ministry announced that the doctor-population ratio in the country had reached 1:834, "better than the WHO standard of 1:1000". This claim was intriguing. Just a few months before the announcement, Vinod K. Paul, a doctor and a member of the NITI Aayog, had said that India would be able to achieve the "WHO norm of having a doctor per 1,000 population" by 2024 (i.e., two years into the future). Only a year ago, government representatives estimated the ratio in the range of 1:1400 to 1:1500.

The only way such a dramatic improvement in such a short time could have happened was if a very large pool of doctors had been suddenly created. That was exactly the case, except that this immense pool had been around all this while: doctors trained in the AYUSH systems. When the government finally declared the "achievement" of having surpassed the 1:1000 ratio, it was indulging in a statistical sleight-of-hand.

> Considering the ground realities of India's highly compromised education quality, it is clear that not many of the thousands of new medical graduates annually will contribute to public welfare.

To quote from the 2022 statement, "there are 13,08,009 allopathic doctors registered [...] Assuming 80% availability of registered allopathic doctors and 5.65 lakh AYUSH doctors, the doctor-population ratio in the country is 1:834." Two years later, the ministry would make similar calculations and revise the ratio to 1:811, which is the current official figure.

The expanded definition was not a shot out of the blue. Many public health experts have advocated including AYUSH doctors in the overall number of doctors in the country, especially since they are university-trained and familiar with primary biomedical care. Editors with the *Journal of Family Medicine and Primary Care*, apparently exasperated by the constant references to the 1:1000 norm, had declared in 2018 that India had "already achieved" this target considering the graduates of AYUSH medical colleges were also counted, and "policy makers need to move forward from the fixation and excuse of scarcity of doctors."

The health ministry itself had, in the past, included AYUSH doctors in its count and arrived at results that bettered the 1:1000 target.

In 2007, when India had only 269 medical colleges, the ministry had calculated a doctor-population ratio of 1:870 by accounting for AYUSH doctors. As late as 2015, the ministry used their numbers to project a doctor-population ratio of 1:855. It remains a mystery why AYUSH doctors were evicted from the equation after 2015, or what changed for them to be welcomed again in 2022.

The fog of statistical amnesia and about-faces doesn't end there. Even though the union government patted itself for having handsomely surpassed the hallowed 1:1000 target, it continued to divert precious resources towards the building and approval of even more medical colleges. India has added nearly 200 colleges since 2022, bringing the number to 780.

There is no sign the government intends to pause. In February 2023, then Health Minister Mansukh Mandaviya claimed that, though some doctors had expressed reservations to him about further increases in medical seat numbers, the government was committed to ensuring that Indian doctors provided their services not only in India, but across the world, and "kept the globe healthy through Heal By India". For NITI Aayog's Vinod Paul, the targets had shifted; the 1:1000 ratio "may suffice for low-income nations," but for a country "aiming to be a global leader, we need 3 per 1,000 - this must be our goalpost by 2040".

Such strange assertions, completely divorced from decades-old Indian public health precedent and wisdom, raise questions about why doctor numbers are considered an end in themselves, instead of as a means towards public well-being. Equally problematic is the rhetoric of India as (an unsolicited) supplier to the healthcare services of other countries. While the emigration of health professionals out of low- and middle-income countries is a complex issue, it is absurd to see a national government say that it is training more and more doctors so that they can be sent to work in other countries -rather than pay attention to its, millions of poorly-paid health workers, and extreme health disparities. Could there be reasons other than health and well-being behind the government's single-minded focus on expanding the number of medical colleges?

## Unemployable doctors?

Many of the new medical colleges established since 2010 have been commercial enterprises, with the government handing over well-established public district hospitals to private entities as a concession for building colleges. According to the Jan Swasthya Abhiyan, this is part of an "implicit aim to re-shape the health sector as a sector that runs along the lines of corporate industry, with profit maximisation rather than health outcomes as its goal". The journalist Rema Nagarajan's comprehensive survey of several PPP-mode medical colleges has shown that the expenses of studying in these colleges are prohibitive for the majority of Indians, raising serious questions about the further monopolisation of the medical profession and leadership by privileged-class and -caste individuals.

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Other issues have been widely reported. Bribes have facilitated illegal governmental approvals for many poor-quality medical colleges. Admission procedures have been marred by irregularities and corruption, resulting in the disillusioning prospect of students with extremely poor academic records (with ranks as low as 22 lakh amongst 23 lakh candidates) becoming doctors and (mis)handling life-and-death situations.

The number of good medical teachers has hardly increased to keep pace with the number of colleges. Most of the new colleges, including government ones, have shown a complete disregard for the seriousness of the process of medical education and training.

Almost every warning against this numerical obsession has been confirmed in inspections by the National Medical Commission (NMC). A news report quoted officials saying that a large number of medical colleges had "inadequate and poor infrastructure, absence of faculty during teaching hours, deficiency in clinical material [e.g., shortage in the number of cadavers for anatomy classes], and student grievances on issues such as ragging, inadequate hostels, and poor student-teacher relationship". Despite these findings, the NMC has refused to make its college assessment reports available to the public.

Considering the ground realities of India's highly compromised education quality, it is clear that not many of the thousands of new medical graduates annually will contribute to public welfare. Will they find jobs or opportunities for specialisation (and then employment)? Or as the Himachal Pradesh Chief Minister plainly said a few months ago, will the new doctors "find themselves in the unemployment queue"?

## Reflections

The question to ask is: What does it even mean to have so many medical colleges? Without any meaningful development in patient rights and social justice on the horizon, what does it mean that lakhs more individuals from marginalised groups will be turned into 'teaching material' for students from these new-and often substandard-colleges?

India's medical education policy has, to the detriment of the public, become primarily a pursuit of numbers for numbers' sake. A country which, not too long ago, was committed to addressing the mal-distribution of doctors instead of furiously increasing their numbers, and which decelerated or even froze the approval of new medical colleges in service of quality or other public health goals, has today converted the intensive pedagogical labour of *physician training* into a monotonous factory-style task of *doctor production*. In

the years to come, the people of India will be spending much time and energy just trying to recover from or ameliorate the negative repercussions of this numbers-based policy.

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