

# Barriers to Recruitment, Onboarding and Retention of Faculty in Government Medical Colleges of India



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## List of Abbreviations

ACR	Annual Confidential Reports
AETCOM	Attitude, Ethics Communication
AICTE	All India Council of Technical Education
AIIMS	All India Institute of Medical Sciences
AMC Vizag	Andhra Medical College
AP	Andhra Pradesh
BJMC Ahmedabad	B J Medical College Ahmedabad
CIMS Bilaspur	Chhattisgarh Institute of Medical Sciences, Bilaspur
CISP	Curriculum Implementation Support Program
CU	Central University
DGME	Directorate General of Medical Education
DMC Dibrugarh	Dibrugarh Medical College, Dibrugarh
DoHFW	Department of Health and Family Welfare
DPC	Departmental Promotion Committee
EDL	Essential Drugs List
GMC	Government Medical College, General Medical Council
GMC Haldwani	Government Medical College Haldwani
GMC Tanda	Dr. Rajendra Prasad Government Medical College, Tanda
GMC Villupuram	Government Medical College Villupuram
HP	Himachal Pradesh
IDI	In-depth Interviews
IIM	Indian Institution of Management
IIT	Indian Institute of Technology
ILBS	Institute of Liver and Biliary Sciences
IMS	Indian Medical Services
INI	Institutes of National Importance
KPI	Key Performance Indicators
LLRM Meerut	Lala Lajpat Rai Memorial Medical College, Meerut
MAMC Delhi	Maulana Azad Medical College, Delhi
MC	Medical College
MCI	Medical Council of India
MMC Mysore	Mysore Medical College and Research Institute, Mysore
MoHFW	Ministry of Health and Family Welfare
MRB	Medical Services Recruitment Board
NFDP	National Family Development Program
NIRF	National Institutional Ranking Framework
NITI Aayog	National Institution for Transforming India
NMC	National Medical Commission
NPA	Non-Practicing Allowance
OPD	Out-patient Department
PG	Post-Graduate
PGIMER	Postgraduate Institute of Medical Education & Research



PGIMS Rohtak	Pt. B D Sharma Postgraduate Institute of Medical Sciences, Rohtak
RBCW	Revised Basic Course Workshop
SMS Jaipur	Sawai Man Singh Medical College, Jaipur
SPSC	State Public Services Commission
TN	Tamil Nadu
UGC	University Grant Commission
UKD	Uttarakhand
UP	Uttar Pradesh
UPSC	Union Public Service Commission
VSS Burla	Veer Surendra Sai Institute of Medical Sciences and Research, Burla
WHO	World Health Organisation

# Executive Summary

As per the prevailing National Medical Council (NMC) norms, India should have 1,38,028 faculty in existing 602 medical colleges. However, the actual number of faculty registered with the NMC are 96,649 (inclusive of *regular* and *contract* faculty), resulting in a vacancy or possible shortage of 29.98%. The present study examines the challenges of the availability of qualified medical faculty in India through the lens of *existing* and *potential medical faculty*.

Therefore, the NITI Aayog conceived this study with an aim to “*Study the barriers to recruitment, onboarding and retention of faculty in medical colleges; to suggest improvements for streamlining processes, and inform policy.*” The objectives included – (a) study of the barriers to recruitment and onboarding of faculty in medical colleges; (b) understand the perception of stakeholders as regards to recruitment, onboarding and retention of faculty.

A mix of twelve old and new Government Medical Colleges, representing North, South, East, West, Central, and North-East regions, were recruited into the study. The sample included a total of 654 participants across stakeholders – Faculty, College and State level Management, and Students from the twelve colleges. The sample maintained the requisite mix of specialists and super-specialists across clinical, para-clinical & pre-clinical departments.

## **Study Findings**

The Management from the study institutes reported an overall vacancy of over 10-20% after accounting for contractual staff. Only, Sawai Man Singh Medical College, Jaipur (0%); Mysore Medical College and Research Institute, Karnataka (0%); Government Medical College, Villupuram, Tamilnadu (4%); Government Medical College, Tanda, UKD (10%), and Veer Surendra Sai Medical College, Burla, Odisha(10%); reported under 10% vacancy. *No separate disaggregated data on contractual versus regular vacancy was shared* by the colleges/ states, except for that from TN and Chattisgarh.

Highest vacancies were reported in super specialities and surgical specialities (5-15%) and in pre-clinical specialities like anatomy and forensic medicine (1.5-6%). The commonest reasons for such vacancy was attributed to:

- a) recruitment process delays, sometimes as high as 2-4 years, especially from sanctioning to advertisement of positions,
- b) high paying jobs in private sector for surgery and super-specialities,
- c) preference for postings in metros or home locations,
- d) change in NMC guidelines (2019) to disallow recruitment of Postgraduates in Basic Sciences, and allow recruitment of only MBBS students as faculty. This inflexibility to fill vacancies in pre and para-clinical specialities only with medical graduates.

With respect to cadres, analysis of data from the study colleges shows a 35-45% shortage, at the level of Associate and Assistant Professor, with over-filling at Associate Professor (18-40%) and Professor (10-20%) cadre/s. The policy of assured career progression without an objective appraisal system, has created a top-heavy ‘inverse pyramid’ organisational structure in all the study college/s. Further, the lack of a well-developed pipeline for career progression for Professors in the college/s has led to





Professors working at the same job responsibilities as that of Assistant Professors, resulting in dissatisfaction around individual career growth, irrespective of the financial security for the cadre.

Two thirds of the Management respondents felt that the permission to hire contractual faculty has improved the overall shortage by 5-20% in the last three years. Factors contributing to unfilled positions and persisting faculty shortage was attributed it to:

- a. transfers to other colleges to meet NMC norms before inspection/s,
- b. assured promotions leaving vacancies at lower cadres,
- c. contractual faculty leaving upon contract closure or for better opportunities,
- d. delays in faculty recruitment at state commission/s affecting vacancies and HR planning,
- e. majority college officials (94%) preferring not to recruit 'Visiting Faculty' because of their non-inclusion in faculty head count by NMC, and their general inability to enforce accountability amongst such recruits.
- f. lack of pre-emptive sanctioning of positions based on analytics of potential vacancies, resulting in recruitment delays
- g. insufficient rollout period for colleges to make provisions for adequate faculty and infrastructure to cater to State Orders for additional MBBS seats.

**Faculty and college management informed that states did not pay heed to the high student/teacher ratio and low doctor/patient ratio prevalent in their institutions, but only sanctioned/ fulfilled positions based on basic minimal requirements as per NMC guidelines.** The adequacy of this ratio was analysed using faculty's *primary* workload around academics and *secondary* workload around patient care against NMC norm and current data of patient workload in study colleges. The academic workload was well within reasonable expectations. For calculating patient load, we have used *actual* faculty numbers belonging to clinical specialties, who are involved in patient care in OPD, IPD and Emergency. The calculations revealed that **the overall patient care workload is of the of magnitude 3-4 times higher than reasonable limits of 20 patients/day/faculty.** This is in line with the feedback from management and faculty that **heavy patient workload is a hindrance to honouring their teaching responsibilities. Therefore, it is necessitated to dynamically assess faculty work load across cadres for assessing the faculty requirement and use contractual hiring to support the increasing workload as a top-gap for the recruitment process time.**

### **Recruitment Challenges**

State Level recruitment is typically conducted by the State Public Services Commissions ("SPSCs") or Medical Recruitment Board (MRB) in select states. Although, the hiring time varies substantially across recruitment steps in the states, 51.4% faculty informed that the average time taken for completion of one recruitment (from advertisement of vacancy, to issue of offer letter) cycle was about 7months (203 days) for regular positions, and 3months (94 days) for contractual positions. While sanctioning of a position itself typically takes 2-3 months, **the biggest bottleneck to recruitment by SPSC is the step from sanction to advertisement, which sometimes takes 2 to 4 years in select states.** *The challenge is the uncertainty of timeline for this leg of the process, for approval and constitution of the Board for selection.* Post approval/ sanction the recruitment of vacant positions is fairly streamlined. **However, states (Uttarakhand, TN, Odisha, Karnataka, AP) with a separate MRB are more effective with predictable timelines, leading to fewer vacancies.**

Over 70% of the faculty responded that there is no prescribed annual hiring cycle for regular faculty; and the hiring of contractual faculty happens on a need-basis, which is *continual*. Only 16.2% (n=179) of the participants responded that the process-time for regular recruitment is more than one year.

The most challenging barriers to recruitment as expressed by the faculty and management, were:

- Lack of Access to Information on Vacancy Status (61%)-no database on vacancies/ filled status;
- No contact point in college or DME to seek clarification (61.5%);
- Lack of information around terms and conditions of employment; such as transfers, difficult area postings, recruitment & promotion rules, leaves, roles and responsibilities etc.

Other barriers as cited by management respondents as barriers to faculty recruitment were –

- Non-cancellation of an unfilled vacancy for 5 years,
- Process delays on complaint resolution within the government setup,
- 70% of management respondents iterated that at least 20-25 Court cases each year pertaining to non-transparency in recruitment and retention (DPCs) is usual in all states, which bars regular recruitment for these unresolved position/s pending court decision. For instance, in Uttarakhand out of the 312 recruitments done in the last 2 years, only 70-80 joined. 128 cases of recruitment remain pending since 2018 due to:
  - Difference in eligibility criteria for contractual and regular hirings.
  - Issues related to regularization of contractual positions/ change in policy.

A deep dive of select court cases around terms and conditions of employment shows that some of the key processes that were challenged in the court of law were related to –

- Ambiguity on the requisite qualification,
- Non-adherence to selection process,
- Eligibility criteria overlooked during selection,

### **Retention Challenges**

The retention challenges are a factor of student and faculty aspirations of a career in the field of medicine and the extent to which these aspirations were met. 234 medical faculty across specialities and cadre (Senior Residents, Assistant Professors, Associate Professors, Professors) at different stages of their careers were interviewed on their career aspirations and its fulfilment. Survey indicated that the overall the faculty are self-motivated in the beginning of their career for a career in medicine (89%); because of passion for the subject (94%), service to the needy (80%), prestige associated with being professor (87.5%), greater exposure to scientific challenges in patientcare (86.4%). However, commercial considerations and desire to have a better quality of life, make them change the course of their career, primarily towards private practice in a clinic or hospital. Location also happens to be a significant influencer in the decision to join a medical college as faculty. Most respondents (71.4%) were inclined to be in a Metro or Tier-1 cities, and 36% preferred a work location near their home.

Survey indicates that the faculty haven't been overtly enthusiastic about realisation of their aspirations after joining the medical college. **More than half of the respondents shared that their expectations for most components of their work environment were not met.** However, none of the reasons were critical enough to leave a government job. **Overall attrition across study states is less than 5%.** Most of the attrition was attributed amongst other factors, to:

- Contractual staff leaving at the end of contract or getting regularized;

- Staff (including contractual) leaving for better opportunities especially with upcoming AIIMS in each state.

The feedback from most faculty respondents' point to the following as primary grievance:

- While regular annual increments are always available, there was no performance-based incentive within the defined role (87.6%). **There are no incentives to promote good performance and no disincentive for a non-performer, resulting in a lack of accountability.**
- The management across colleges pointed out that there's no system of monitoring workload (71.4%) or measuring accountability (80%).
- Lack of mentoring into a new role, especially managerial (68.4%);
- Lack of transparency in tenures/ promotions and transfers (62.2%).

Further, training of faculty, which could have been used for personal career growth within the specialty, were restricted to NMC mandate on limited topics - teaching techniques, research methods. Most faculty in management roles are grappling to lead in an administrative role; but there are no specific trainings to help faculty to transition into management roles.

### **Quality and effectiveness of student education**

Effectiveness of education is one of the crucial outcomes of barriers to recruitment and retention of faculty in medical colleges. The study revealed that over 88% students prefer studying in a government medical college, for greater opportunity to learn (85%) and see more patients (82.3%). In terms of career aspiration, the preference to become a professor (40.3%) follows closely next to providing patient care (54.7%) for the students. Another 22.5% students expressed interest in Hospital Management & Research, and thus are equally potential candidate as far as seeking job in medical colleges is concerned.

The satisfaction levels of students with regards to quality of teaching changed with growing breadth and depth of involvement in clinical practice, academics and research. The dissatisfaction levels have grown progressively from clinical years of studentship (40-50%) into internship (65-70%) and stabilized during post-graduation at 55%, as students realised the need to take personal initiative into academics and research in their pursuit to seek excellence. The topmost reason for dissatisfaction were: lack of time for research or bedside teaching (70.6%), disparity in infrastructure across specialty (64.7%), backdated syllabus & teaching style (55.9%), lack of clinical or research skills being imparted (67.6%), lack of role models (61.8%), lack of quality teaching staff (67.6%), among other variables. The students informed on the systems that are in place and those not in place, shown as under:

Students' feedback on compliance to guidelines	Students' feedback on non-compliance to guidelines
<ul style="list-style-type: none"> <li>• 91.3% of the scheduled classes are conducted (n=303). Of which               <ul style="list-style-type: none"> <li>○ 39.9% are taken by senior residents (n=264),</li> <li>○ 48.4% are allocated to tutor/assistant professor (n=263), and</li> <li>○ 44.9% classes are allocated to associate/ professors (n=256)</li> </ul> </li> </ul>	<ul style="list-style-type: none"> <li>• Students informed that following are not held every day               <ul style="list-style-type: none"> <li>○ 37.8% clinical rounds not held (n=312)</li> <li>○ 56.9% evening rounds not held (n=209)</li> <li>○ 41.7% bedside teaching not held (n=218)</li> </ul> </li> <li>• 57.3% informed that no system to provide feedback on quality of teaching (n=314)</li> </ul>



**The analysis of student satisfaction around academics (clinical bedside teaching, evening rounds, clinical grand rounds) with availability of regular and contractual faculty, revealed that student satisfaction levels were higher in colleges (n=4) with higher percentage of regular faculty @85-100% as against 35-50% in colleges with over 30-50% of contractual staff (n=3). The Chi-square test revealed strong relationship between private practice and compromised medical education with p-value less than 0.05.**

A deep dive into the reasons for dissatisfaction as expressed by the students and faculty, reports almost non-existent research ecosystem. Over 90% faculty reported on inadequacy and inappropriateness of both hard and soft infrastructure to foster academics and research.

### **Role of Institutions in Regulation & Governance of Medical Education**

Secondary research in select countries (US, UK, Brazil among others) indicated that one of the reasons for challenges to recruitment and retention could be attributed to the lack of role clarity between the agencies regulating, governing and managing the medical education in the states. The role of NMC is clearly regulatory - to lay down policies and regulations to maintain standard and quality of medical education; and that of medical colleges is that of an implementor of decisions. However, the role of DMET is unclear and seems to be overlapping between regulatory and executive functions. Ideally the regulatory roles between NMC and DMET are shared by the federal and state/provincial councils.

**Of the sample states, only a few have documented the emphasis on imparting quality medical education (AP, Assam, TN) as a part of their charter. To strike a balance between academics, research and patient care in medical colleges, Brazil has defined and shifted the role of each stakeholder from a teacher-centred and hospital-based approach to student-centred and community-based education, to use each bed as a teaching bed across the system.**

### **Recommendations**

The lifecycle of a medical graduate in academia traverses through three stages:- The career aspirations of a budding medical graduate develops primarily from past experiences of their seniors; that gets rationalised when the aspiring student faces the challenges of job market. The aspirations finally get aligned with the organization that matches closest to their expectations, resulting in retention of the individual within the select organization or medical college. **A system's framework was therefore considered to analyse and find solutions for Talent Management: The Talent Management Framework (TMF), in 3 phases of Talent Planning, Talent Acquisition and Talent Retention.**

#### **A. Talent Planning**

The key challenge to planning as evidenced in the study is lack of reliable data on exact number of faculty or even practicing doctors in each state and each medical college across the country. Based on the study findings, it is recommended that:

- Each student (potential faculty) entering medical education should be provided with a **unique pan-India ID number, so that lifecycle of an individual as a medical professional is tracked.** This will avoid duplication and provide reliable data on pool of doctors across career streams.
- To begin with, a **centralized registry of faculty qualified to teach could be maintained by NMC, and made publicly available; to avoid duplication of faculty** across colleges in India.
- A real time data base of faculty pool on a digitized platform will facilitate regular cycle of faculty planning and recruitment, and offer visibility around promotions and superannuation.



### **B. Talent Acquisition (Recruitment)**

- *To address the talent requirements of critical service like the health service as well as medical education, MRB has emerged as an effective solution.*
- *Most advanced practice of recruitment is capturing students through campus selection and recruit the students before they start exploring alternate career streams/ post-graduation.* Current survey indicates that nearly 44% of the respondents, at various levels of their student life, do prefer to join as a faculty, or a potential career in medical education system. One of the ways to take care of this talent pool is to engage with them early (as in TNMSC model). Capturing the aspiring undergraduate through campus selection, from a larger and better talent pool, helps to remove uncertainty from a student's career and showcases a clear time-bound path to an academic career.
- *The Tamilnadu Medical Systems Corporation, Counselling Transfer and Promotional (TNMSC CTP) Policy with an end-to-end HR thinking. An integrated institutional structure for campus recruitment and career path was created for the entire medical workforce in the public healthcare delivery system, not just medical colleges. So, state level recruitment decisions are made based on not just students in their final year undergrad courses, but also existing pool of faculty and practitioners across the state public health system. The system allows flexibility for inter cadre deputation, if a person has the requisite eligibility.*
- *The TNMSC CTP Policy captures the talent early on in their final year (campus hires) through counselling and creating awareness around career path across the state health service in public health, teaching, hospital management basis their choice of post-graduation, and preferred postings. Students after their postgraduation and a mandatory one-year probation, are hired at an Assistant Professor level. The decadal learning and success of TNMSC CTP in the Tamil Nadu medical education system, is worth emulating in other states.*
- Lateral entry of mid-career practitioners (clinical practitioners, academicians, and researchers), distinguished professionals at a senior Associate Professor/ Professor level – as **“Professor of Practice (PoP)”** in medical colleges can be explored with separate clinical and academic career paths. However certain aspects must be considered before institutionalizing the practice in medical education, that such faculty are hired with the same degree of rigor as adopted for full-time faculty so that the right type of candidate is identified, and mandatory participation in teacher training programs, prior to joining as a faculty.

### **C. Talent Retention:**

The study revealed that the Annual Confidential Reports (ACRs) were never a reliable or comprehensive performance management system, since faculty and management reported that colleagues generally do not write adverse or objective comments. **Management respondents from AIIMS Delhi, PGI Chandigarh, IIT Delhi, IIM Indore suggested two workarounds to this cultural aspect around an objective performance appraisal system – to segregate the annual appraisal system from the promotion appraisal system:**

- Creating an objective Promotional Appraisal System with external members in selection committee, such as in AIIMS, New Delhi and PGI, Chandigarh - **all the positions to be open positions after Associate professor level**, allowing inhouse prospective faculty compete with other potential faculty from all over the country.

- In this assessment, all possible inputs including academic performance, research output, clinical performance, annual appraisal ratings, personality assessment, are taken into consideration during the interviews. The **signalling effect of this assessment process is that promotions to the next level are not automatic** and is eventually dependent on the merit of the candidate, irrespective of annual appraisal cycles.
- **Longer duration of regularised contract, like** Liver and Biliary Sciences (ILBS) and Rajiv Gandhi Cancer Institute, on regular contract of 4 year period each, with appraisal by an institute committee and external subject matter experts to decide on extension for next 4 year period.

**Creating an objective performance appraisal system with a set of outcome-based key performance indicators (KPI)**, including indicators for (a) teaching and learning outcomes, (b) research outcomes, (c) healthcare delivery outcomes; aligned with the state's broader education goals or that of the medical colleges will be a great system to be explored.

**“Pay-4-Performance”**, such as in TNMSC and ILBS model wherein the faculty is allowed to take a portion (approx. 10- 25%) of the OPD/ IPD fees they consult, over and above their salary, has served well to incentivise the faculty.

#### **D. Development of Career Path**

- **Create a separate professionally trained administrative cadre for managing the college administration and hospital operations of the institute.** A professional team to ensure implementation of administrative decisions taken by the technical heads of the institution (dean and medical director), will free up the administrative time spent by otherwise busy faculty for teaching and research.
- Recognizing that each position of hospital administrator, dean, director an executive position and requires full time dedication for the particular role ***Plan the career path for a pool of senior faculty interested in administrative positions of Dean (academics or research or examination) and Medical Director with management development program (MDP) before getting posted to such positions.***
- ***Dedicated HR team within each medical college*** would to address this creation of admin cadre and manage career pathways for individual faculty members.

#### **E. Creating an Ecosystem for Medical Research**

- ***Engineering and Medical education are applied sciences and institutes therefore should be expected to prioritize applied research*** with a direct bearing on a product and/or process development of a commercial nature. So, it makes the current line of thinking of basic research resulting in publishing papers, is shifted towards a better **industry-academia induced translational research**. Creation of state-of-art hard and soft infrastructure to carry out high end medical research calls for ***Industry funding for setting up research Centre of excellence.***
- Dedicated institutional budget to stimulate research activities similar to that in AIIMS/ PGIMER.
- Creation of a ***critical number of Medical Institutes of Excellence (beyond the known INIs) by designating and developing one Medical College in each state as a Center of Excellence.*** This COE would act as a pivot for the network of hospitals within the state.



# **Chapter 1 – Introduction & Study Design**

## 1.1. Purpose of the Study

Only eleven among India's 36 states and union territories meet the WHO recommendation of 1:1000 doctor to population ratio, while none in the public healthcare sector manage to make the cut. As of 2019, the public healthcare system operates at a ratio of 0.93 (allopathic) doctors for 1000 people.<sup>1</sup> The states with the highest shortfall of doctors – Uttar Pradesh, Chhattisgarh, Odisha, and Madhya Pradesh – house a huge share of India's rural population of more than 0.8 billion.<sup>2</sup>

Currently, India has 602 medical colleges, producing 90,825 MBBS graduates every year, of which 269 (44.4%) are in private sector.<sup>3</sup> The government intends to add at least one medical college in each district of the country in phased manner under the scheme "Establishment of new Medical Colleges attached with existing district/referral hospitals", by – (a) establishment of new Medical Colleges attached with existing district/referral hospitals, (b) upgradation of existing State Government/Central Government medical colleges to increase MBBS seats in the country and, (c) strengthening and upgradation of State Government Medical colleges for starting new PG disciplines and increasing PG seats. Under three phases of the scheme, 157 new medical colleges have been approved, out of which 63 medical colleges are already functional.<sup>4</sup> With the proposed sharp increase in the number of medical colleges, the demand for medical faculty is set to rise. However medical colleges in India are grappling with the issue of unavailability of appropriately trained adequate number of medical faculty.

As per the prevailing NMC norms, India should have 1,38,028 medical faculty nationally. However, the actual number of medical faculty registered with the NMC is 96,649, inclusive of both regular and contract faculty (since NMC considers contract faculty in the count for college's faculty strength at any given point of time); **resulting in a vacancy of 29.9%**.

- This vacancy levels remain in spite of the fact that on an average, each vacancy attracts at least 50-60 candidates across our study states;
- A total of 166 doctors' posts vacant in 4 teaching hospitals under Delhi govt was reported in 2016. Highest vacancy of 83 posts in Maulana Azad Medical College;
- UCMS, Delhi associated with GTB Hospital had 43 vacancies; GB Pant Institute of PGMER, associated with super specialty hospital had 36 vacancies in neurosurgery, neurology, gastroenterology, and cardiology.
- Punjab's functioning private medical colleges reported a shortage of at least 100 members of teaching faculty (*Deswal BS et al*).
- Dr BR Ambedkar State Institute of Medical Sciences, Mohali, remained a non-starter for the academic year 2020-21 despite an extension from Supreme Court to grant extension for permission; as faculty complement required couldn't be recruited. Reason was the failure of the government to complete the process of faculty recruitment for the college.<sup>5</sup>

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<sup>1</sup> <https://data.worldbank.org/indicator/SH.MED.PHYS.ZS>; As per latest available National Health Profile India 2019, the number of doctors possessing recognised medical qualifications (Under I.M.C Act) in India at the end of 2018, was 11,54,686. This doesn't include Ayush doctors who also serve the same public health system, if included the doctor patient ratio would be better than required 1:1000. As per Census 2011, the total population of India is 1210.8 million.

<sup>2</sup> National Health Profile, India 2019;

<sup>3</sup> NMC Website at <https://www.nmc.org.in/information-desk/college-and-course-search>, accessed on 22 Feb, 2022.

<sup>4</sup> <https://pib.gov.in/PressReleaseIframePage.aspx?PRID=1766061>, accessed on 12 April, 2022.

<sup>5</sup> <https://www.tribuneindia.com/news/chandigarh/staff-hiring-incomplete-mohali-medical-college-yet-to-begin-operations-138320>





The vacancy in turn, can potentially have effect on

- a. Quality of medical education,
- b. Ability to increased post graduate courses in the existing colleges,
- c. Increased strain on existing teaching staff.

*Therefore, the NITI Aayog, has conceived the present study to examine the challenges around availability of medical faculty in India through the lens of existing and potential availability of medical faculty.*

The reasons for acute teaching faculty shortage in many states has been attributed to:

- Delays in faculty recruitment process (Rajiv Gandhi Institute of Medical Sciences, Telangana), as authorities were in a bind over vast difference in salaries (almost 50 %) between the existing contract faculty and the proposed new contract recruitments.<sup>6</sup>
- The Federation of Resident Doctors Associations in Delhi highlighted that poor doctor to patient ratio led to long working hours stretching to 36–48-hour work days in hospitals. In super-specialized disciplines, such as neurosurgery in GB Pant, limited OPDs and long waiting for surgery stretching over months was attributed to shortage of doctors.
- Despite increasing hospital beds from 41,706 in 2010 to 48,096 in 2014, an increase in bed to population ratio from 2.54 to 2.71, recruitment of faculty had not kept pace, said officials.
- To tide over the faculty shortage, the Delhi govt advised deans to directly appoint Senior Resident doctors (SRs) as Associate Professors (AP) after 3 years of training, to address the delays of Union Public Service Commission (UPSC).<sup>7</sup>

Abbas et al (2017) in their study on motivation and satisfaction level among medical teachers in the hospital managed by Employee State Insurance Corporation (ESIC) of India found that about 60% of teachers were satisfied with their jobs but reported the lack of performance-based incentives by the institute being one area of dissatisfaction.<sup>8</sup> Jaiswal et al (2015) studied job satisfaction of doctors, and all medical staff in the RML hospital through self-reporting. They found that only about half of the doctors were satisfied with their jobs in the medical college.<sup>9</sup> Lack of motivation for a career in academia is seen to be a global issue in the field of medicine.<sup>10</sup> However, studies that focus on the factors influencing career choices of medical professionals as well as their experience in medical education in India are far and few.<sup>11</sup>

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<sup>6</sup> <https://www.thehansindia.com/posts/index/Telangana/2018-08-20/Faculty-recruitment-drive-at-RIMS-put-on-hold/406576>

<sup>7</sup> <https://indianexpress.com/article/cities/delhi/shortage-of-doctors-in-teaching-posts-citing-upsc-delays-delhi-govt-advises-deans-to-use-senior-residents/2016>

<sup>8</sup> Motivational and Satisfaction Level Among Medical Teachers in India: A Questionnaire Based Survey at [http://ijcr.com/uploads/2333\\_pdf.pdf](http://ijcr.com/uploads/2333_pdf.pdf), accessed on 22 June, 2021

<sup>9</sup> Jaiswal, Poonam & Gadpayle, Adesh & Modi, Rajesh Kumar & Padaria, Rabindra & Singhal, Ashok K Sachdeva, Sandeep & Vajala, Ravi. (2015). Job satisfaction among hospital staff working in a government teaching hospital of India. Medical Journal of Dr. D.Y. Patil University. 8. 131. 10.4103/0975-2870.153136.

<sup>10</sup> Reck SJ, Stratman EJ, Vogel C, Mukesh BN: Assessment of residents' loss of interest in academic careers and identification of correctable factors at <https://jamanetwork.com/journals/jamadermatology/fullarticle/406556>

<sup>11</sup> Ryan C, Ward E, Jones M. Recruitment and retention of trainee physicians: a retrospective analysis of the motivations and influences on career choice of trainee physicians. QJM. 2018 May 1;111(5):313-318. doi: 10.1093/qjmed/hcy032. PMID: 29452409.

## 1.2. Pilot Study Findings

Therefore, to understand the issues on ground, a pilot study was carried out in *Delhi, Haryana and Uttar Pradesh*. The pilot study of interviews with faculty and college management revealed that:

### a. 50-60 candidates apply for each vacancy;

- But 60% reservation reduces seats for general candidates;
- Shortage of medical faculty is more in clinical sciences and super specialties, as compared to pre/paraclinical area;
- The delay in receipt of job offers subsequent to selection, results in loss of potential medical faculty to private job or practice;
- SC/ST vacant positions cannot be swapped, resulting in expiration of the position after 5 years;
- The reserved candidates too leave for better postings in large Urban localities, due to availability of wider choice and do not prefer rural postings;
- Those who join, leave within 6 months, as there are no employment bonds;
- Unfilled reserved seats are not set free for general candidates, so departmental shortage continues.

### b. State-specific issues

- NMC recommends 1 yr. Senior Residency (SR) for entry into Assistant Professor (AP) level. However, Maulana Azad Medical College, Delhi requires 3yrs of Senior Residency for AP, pushing the faculties in Delhi down by 3 yrs. than their counterparts in other states;
- All Departments considered together as single unit for recruitment in UP. As a result, department starting with alphabet with 'अ' (in Hindi), such as Orthopedics gets the first chance to fill its vacancies. By the time the hiring opportunity arises for Medicine/ Surgery/ OBG etc., the aspirants join elsewhere.

### c. Issues around financial and non-financial incentives

- No incentives schemes/ options for posting couple-doctors together: in same institution or location;
- 'Disparities in salaries between Govt. and Private is a cause for early ejection from the system';
- NHM has streamlined contractual appointments, allowing SRs to be hired on a higher package @ INR 1 lakh than that of a regular Assistant Professor joiner (Rs 80,000/-), triggering inter and intra departmental dissatisfaction;
- Salary inadequate, and not respectable to support a decent living for medical faculty;
- Financial incentives for specialists are inadequate to attract them to teaching, and to offset the opportunity cost of earning in private practice, especially in surgical specialties;
- Salary structure not at par across states and cadres;
- No incentives to carry out administrative work, alongside patient care and academics;
- Doctors may join anywhere in the country in their initial years but prefer a transfer to their local/ home or state positions later on, resulting in vacancies in their earlier positions;
- Non-Practicing Allowance ("NPA") and other incentives (difficult area posting or hardship risk allowance) are miniscule and non-attractive compared to clinicians doing private practice;
- Eligibility criteria: Minimum criteria prescribed by NMC (around senior residency, publication requirements, etc.,) renders interested industry experts, practicing clinician's ineligible to serve as faculty.

### 1.3. Study Objectives

The aim of the study was to: ***“Study the Barriers to timely recruitment, on-boarding and retention of faculty in medical colleges and make recommendations to streamline the processes and undertake informed policy interventions.”*** The objectives included:

1. ***“Study the Barriers to Recruitment & Onboarding of Faculty in Medical Colleges”;***
2. ***“To understand the perception of stakeholders as regards to recruitment, onboarding and retention”.***

For the purposes of the study, following definitions were used:

- “Retention”— as faculty staying in the same medical college for over 5 years
- “Stakeholder” categories include; Faculty (Senior Resident, Assistant Professor, Associate Professor, Additional Professor, Professor); Deans, Medical Directors, In charge Medical Establishment, Director General Medical Education, Students (Section 1.3.2).

### 1.4. Study Approach & Methodology

#### 1.3.1. Research Approach

Given the aim and objectives of the study, a mixed method of both qualitative and quantitative survey was adopted. *Further, this being a qualitative assessment, it was critical to assess different category of stakeholders, rather than collecting data to ascertain statistical significance of the challenges witnessed.*

- a. Primary Objective: Study the barriers to recruitment & onboarding of faculty in medical colleges
  - Review secondary data on faculty vacancies—national & selected government medical colleges
  - Desk review on trend of faculty vacancies in last 2 years in selected medical colleges & data in public domain
  - Primary survey with administrative department in the selected medical colleges to understand the life cycle of faculty recruitment and on-boarding process.
  - Primary survey with administrative department and Dean’s office in the selected medical colleges to understand the barriers to recruitment, on-boarding and retention of faculty in these medical colleges
  - Primary survey with officer in charge recruitment and approvals at Directorate of State Medical Education on barriers to recruitment and retention at the level of the directorate
- b. Secondary Objective: Understand the perception of faculty as regards recruitment, onboarding, and retention
  - Primary survey with faculty of different cadres across clinical and paraclinical departments to understand barriers to recruitment, onboarding and retention
  - Primary survey with students on perceived quality of teaching

**Secondary review of literature** was undertaken to explore the possible best practices nationally and internationally for recruitment and retention of faculty in medical colleges.

**Interviews were held at Institute of National Importance (INIs)** with Deans, Directors of, such as the All India Institute of Medical Sciences (AIIMS), New Delhi; Post Graduate Institute of Medical Education and Research (PGIMER), Chandigarh; Indian Institute of Technology (IIT) Delhi; Indian Institute of Management (IIM) Indore to understand their practices that have been able to:

- Facilitate development of an academic and research & development ecosystem

- Facilitate recruitment and retention of faculty
- Streamline performance appraisal and career growth of faculty
- Establish processes to draw feedback and improve effectiveness of education

### 1.3.2. Study Design and Sample Size

**Inclusion criteria:** A total of twelve Government Medical Colleges from twelve states were recruited for the study, in consultation with the NITI Aayog. The colleges and the states were representative of North, South, East, West, Central, and North-East regions of India. The colleges chosen were a mix of old (incorporated before year 1990) and new colleges (incorporated after year 1990).

**Exclusion criteria:** Only those government medical colleges that were commissioned before 2014 were chosen, as colleges commissioned after 2014, would either not have, or would have just completed 5 years of operations – one full cycle of MBBS education, and would not be able to comment substantially on the study subject. Care was also taken to not choose Institutes of National Importance (INIs), as the comparisons and analysis would get affected. Non-governmental (private and/ or trust) medical colleges were not included.

The representative sample of medical colleges recruited for the study is given below in Table 1.

**Table 1 - Medical Colleges Selected for Survey**

State	Institution & Location	Year of Inception	Annual Intake	Status of MCI Registration
Andhra Pradesh	Andhra Medical College, Visakhapatnam	1923	200	Permitted for increase of seats from 200 to 250 under EWS quota (103rd constitution amendment) for 2019-20.
Chhattisgarh	Chhattisgarh Institute of Medical Sciences, Bilaspur	2001	100	Renewal of recognition with increase in seats from 100 to 150 granted when degree awarded on or after 2020-21.
Gujarat	B J Medical College, Ahmedabad	1946	250	Permission for admitting 250 students granted for 2021-22.
Haryana	Pt. B D Sharma Postgraduate Institute of Medical Sciences, Rohtak	1960	200	Permitted for increase of seats from 200 to 250 under EWS quota (103rd constitution amendment) for 2019-20.
Himachal Pradesh	Dr. Rajendra Prasad Government Medical College, Tanda	1996	120	Renewal of permission for admission of 120 seats (including EWS quota) granted for 2021-2022.
Karnataka	Mysore Medical College and Research Institute, Mysore	1924	150	Permission granted for 150 seats for 2021 - 22.
Assam	Assam Medical College, Dibrugarh	1947	200	Permitted for increase of seats from 170 to 200 under EWS quota (103rd constitution amendment) till 2021-22.
Odisha	Veer Surendra Sai Institute of Medical Sciences and Research, Sambalpur	1959	150	Permission for admitting 200 students renewed till 2021-22.
Rajasthan	SMS Medical College, Jaipur	1947	250	Recognised for increase of seats from 150 to 250 on or after February 2018.

<b>Tamil Nadu</b>	Government Villupuram Medical College, Villupuram	2010	100	Recognized when degree granted on or after February, 2015
<b>Uttar Pradesh</b>	LLRM Medical College, Meerut	1966	150	Recognized for 150 seats. Source.
<b>Uttarakhand</b>	Government Medical College, Haldwani	2001	125	Permitted for increase of seats from 100 to 125 under EWS quota (103rd constitution amendment) for 2019-20.
<b>Delhi</b>	Maulana Azad Medical College, Delhi	1958	250	Permission for annual intake of 250 seats granted for 2021-22.

Source: As per NMC Data as on 25-10-2021 18:16; <https://www.nmc.org.in/information-desk/college-and-course-search/>

Table 2 gives the sample size chosen for each of the stakeholders:

**Table 2 - Sample Size for Primary Survey with Stakeholders**

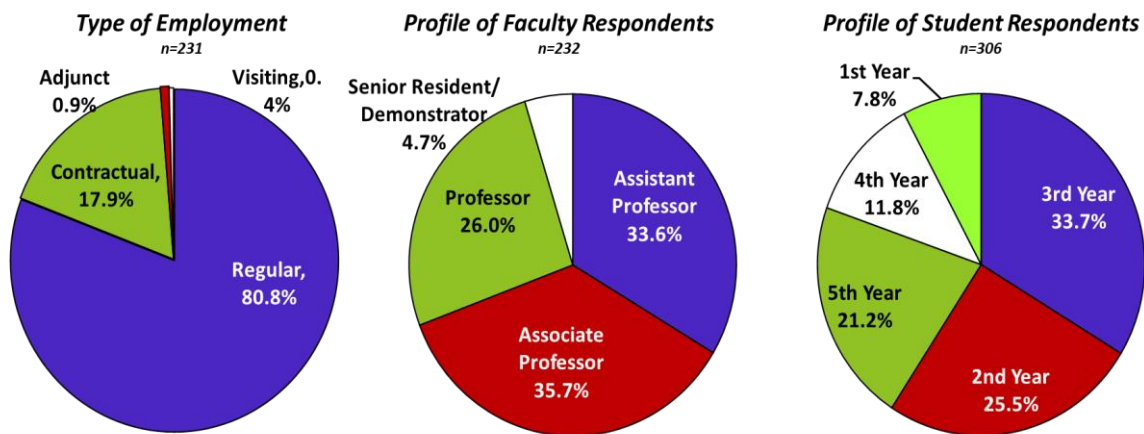
Stakeholders	Sample Size defined	Sample Collected	Sampling Method
<b>Desk Review</b>	26	5	Data sheets to be filled out by DGME and Medical College Offices
<b>Dean/College Management</b>	39	23	At least 3 officials from MC (Dean/ Medical Director/ Director Administration (HR)/ Director Research/ Medical Superintendent)
<b>DGME</b>	13	6	Secretary/ DG Medical Education
<b>Faculty</b>	234	251	At least 18 faculty interviews were planned from each MC. 1 junior, 1 senior per department, 1 at assistant/associate level, and one Additional/Professor or Head of the of Department.
<b>Students</b>	104	360	At least 7-8 students per MC, covering all the five years, including interns and post graduate students were interviewed.
<b>Total</b>	<b>416</b>	<b>645</b>	Details of the data collected in each college is Annexed as Annexure 1

Note: IDIs were also undertaken with management of AIIMS, Delhi; PGI Chandigarh; IIT Delhi; IIM, Indore to understand good practice.

While recruiting the faculty for the survey, it was ensured that the sample is a mix of the twelve specialties and the sample adequately represented clinical, para-clinical & super-specialties cadres. These twelve specialties included - Medicine, Surgery, Pediatrics, OBG, Orthopedics, Anatomy/ Physiology, Pharmacology, Microbiology, Pathology, Urology, GI Surgery, and Cardiology. If any of the twelve specialties was not available in a given medical college, a parallel category was considered.

Apart from the planned numbers of face-to-face interviews, efforts were made to reach out to a larger set of stakeholders, using online tools. The snapshot of the profile of our survey respondents is shown in Figure-1.

**Figure 1 - Profile of respondents**



### 1.3.3. Study Limitations

Out of the 12 medical colleges recruited for the study, the faculty and students of 2 medical colleges (Dr. Rajendra Prasad Government Medical College, Tanda and Pt. B D Sharma Postgraduate Institute of Medical Sciences, Rohtak) were unable to participate in the study, even as the state cooperated to share the relevant information and facilitated management interviews. However, the study overall ensured that the break-up of sample across the categories of stakeholders is maintained.

Due to the COVID-19 restrictions, 100% field survey was not conducted physically. The desk-research at the medical colleges and at the department of medical education, including 65% faculty and 19% student interviews were undertaken physically offline. Remaining 35% faculty and 81% student opted to fill the online form. However, all the college management and the state level interviews were undertaken through a video conferencing, except for INIs, where we could undertake face-to-face interviews.

Since the sample size is only 12 medical colleges, and the recommendations stand relevant; the findings cannot be directly extrapolated to all medical colleges across the states.

**The study was substantially handicapped because of lack of access to data**, for various reasons. Therefore, some critical analysis couldn't be undertaken because of non-availability of granular level data at the source itself:

- Data for Desktop Review was not readily available at the colleges and DMET (except in Chhattisgarh, Delhi, TN, Uttarakhand),
- Even in these states, data wasn't readily available; DMET had to contact the colleges to collect information,
- Colleges informed of being bound only by RTI to get information,
- Colleges uploaded data only during NMC visit, after NMC visit data gets archived, which is not accessible to researchers or academicians.

### 1.3.4. Study Instruments, and Training of Investigators

#### Questionnaires

Separate set of questionnaires were designed for different stakeholders and modifications were included to bring in further clarity in research questions, after the pilot study (Annexure 2).

### Engagement of Appropriate Survey team

Since, this was a specialized study that required in-depth understanding of the medical education, senior staff of SahaManthran that constituted of doctors, educationists, human resource experts, and social researchers conducted all the online/offline meetings with the DGME, Dean, Faculty and Students to assure impactful probing to elicit the requisite clarity. Further, the faculty and students were encouraged to self-fill the online tool (Annexure-1) with support of our medical researcher on the ground where possible.

### Training of Survey team

Since, this was more of a qualitative study all the state level medical researchers were trained on the art of probing.

#### **1.3.5. Data collection and management**

A web-based Computer-assisted personal interviewing (CAPI) tool was developed using Kobo Collect, which is based on Open Data Kit (ODK) platform for the data collection. The collected data were regularly monitored by the M & Experts using a standard data viewing and editing dashboard. Data raw data were exported in STATA (Quantitative) and Atlas.ti (Qualitative) for analysis.

### Qualitative data management

The data dictionary/ codebook was developed to define column attributes, specify the range of allowable values, and standardize data coding (e.g., yes = 1, no = 0). Data entry errors were minimized by using a pre-developed web-based data collection tool. Additional cleaning and editing of data for outliers and inconsistencies were performed regularly during data collection, and finally, the data was cleaned and coded using Atlas.ti.

### Quantitative Data Management

All the quantitative data was collected in a web-based Kobo Collect application. Some data were collected using the printed version of the same questionnaire and were entered on the same tool immediately after quality and consistency checking. Monitoring and Evaluation (M&E) experts reviewed and cleaned all the data during data collection to minimize inconsistency.

### Cleaning of Raw Data

Before exporting the raw data to STATA format, for analysis, data validation, filtering & cleaning was undertaken. All plausibility and data consistency checks were undertaken.

### Transcribing and checking

All IDIs were recorded with due consent of the respondent/s and transcribed verbatim before uploading the data on the statistical tools.

### Security and Confidentiality

All data was stored under a password-protected secure cloud server, and only authorized personnel had access to extract the requisite data for analysis.



# Chapter 2 – Study Findings



## 2.1. Overall Existing Vacancy Status

As per the prevailing NMC norms, India should have 1,38,028 medical faculty nationally (detailed in Table 3). However, the actual number of medical faculty registered with the NMC is 96,649 inclusive of regular and contract faculty as NMC considers contractual faculties in the head count for institute's faculty strength at any given point of time, resulting in a vacancy of 29.9%, (total vacancy-41,379).<sup>12</sup>

**Table 3 - Estimation of Total Number of Medical Teacher Requirement in India**

Maximum Permissible Seats	Number of Colleges	Faculty Requirement per Institute as per NMC Norms	Faculty Requirement as per NMC Norms
50	13	148	1,924
100	137	178	24,386
150	307	219	67,233
200	75	287	21,525
250	70	328	22,960
<b>TOTAL</b>	<b>602</b>		<b>1,38,028</b>

Source: NMC college and course search and NMC procedure to start a new college standard; <https://www.nmc.org.in/information-desk/faculty-medical-students-information/>

The faculty shortage across cadre is evidenced even with the Institutes of National Importance (INIs) such as the All-India Institute of Medical Sciences (AIIMS), New Delhi and Postgraduate Institute of Medical Education and Research Chandigarh, India (PGIMER). Even as AIIMS and PGIMER were set up as autonomous medical colleges by the federal government under the special Act of Parliament in 1956 with autonomy to recruit faculty within the ambit of Government Financial Rules (GFR) and decide beyond the NMC norms; shortage is a reality for them too. For instance, AIIMS reported the following staff shortage (refer Table-4). Similarly, PGIMER had about 23% faculty shortage as against sanctioned strength in 2019-20 (refer Table-5).

**Table 4 – AIIMS, New Delhi Vacancy Position**

Description	Sanctioned	Filled	Vacancy
<b>Number of Teaching Departments – 42; Number of Teaching Centres – 7</b>			
Faculty members	1,095	759	27.4 %
Non-faculty staff	12,318	10,189	17.3 %

Source: AIIMS Annual Report 2019-20

**Table 5 – PGIMER, Chandigarh Vacancy Position**

Description	Sanctioned	Filled	Vacancy
Group A – Faculty	728	565	22.4%
Group A - Non-faculty	1,535	1,495	2.6%
Group B	3,974	3,549	10.7%
Group C	2,339	1,565	33.1%

Source: PGI Annual Report 2019-20

<sup>12</sup> College and state-wise disaggregated data on actual number varies constantly. Therefore, consolidated the total

Our interviews with the Deans and Directors of AIIMS and PGIMER clarified that their faculty estimates were based on overall workload per faculty with regards to teaching, research, and patient load, cumulatively making their requirements greater than NMC’s prescribed norms. Further, the INIs, as a practice hire faculty with *attitudes* aligned across levels for teaching and research, and do not merely fill a position for the sake of regulatory compliance. The AIIMS discussion clarified that there was no genuine crisis of faculties, and the vacancies prevail because of inability to find the right candidates.

Contrary to the INIs, the vacancy challenges in state medical colleges were more systemic in nature. Therefore, *for the purposes of the study to estimate the breadth and depth of the problem, following definitions were used:*

- “**Vacancy**” has been defined-- as positions remaining vacant for over 1yr;
- “**Shortage**” — as faculty vacancy greater than 10% remaining open beyond 6 months (because NMC allows 10% shortfall with warning, and beyond 6 months the continuation of shortage draws de-licensing as penalty); and
- “**Retention**” – as faculty staying in the same medical college for over 5 years

## 2.2. Vacancy Status of Study Colleges

The disaggregated data on vacancy status in the public domain (Institutes updated their portals only prior to NMC visit) was available only from 8 colleges (See Table 6). Desktop research data was made available only by 4 study colleges (in Tamil Nadu, Chhattisgarh, Uttarakhand and Rajasthan). Other study colleges could not furnish despite repeated reminders, NITI letter and our team member standing on ground in the state DMEs and colleges. Colleges and DMEs both acknowledged that they didn’t have the latest data. None of the DMEs had readily available updated consolidated data for all the state medical colleges, except for Chhattisgarh and Tamil Nādu.

**Table 6 - Vacancy Status in Study Institutes**

College	NMC approved seats	Faculty required as per NMC	Faculty sanctioned by states	Faculty filled	Vacancy against sanctioned/ norm	Vacancy in percentage	Status as on date
Dr Rajendra Prasad GMC	120	219	NA	123	96	44%	19/02/2021, as per site
Lala Lajpat Rai Memorial Medical College	150	219	NA	128	91	42%	23/9/21-as per site
Govt. Medical College, Haldwani	150	219	NA	127	92	42%	07/09/2020-as per site
Chhattisgarh Institute of Medical Sciences	180	287	335	217	118	35%	Sept/2021-as per Data Sheet
Mysore Medical College	150	219	309	200	109	35%	Sept/2021 As per data sheet

Assam Medical College & Hospital	200	287	311	259	52	17%	11/03/2020, as per site
Sawai Man Singh Medical College	250	328	613	604	9	1%	Sept/2021- as per Data Sheet
Villupuram Medical College, Villupuram	100	178	198	179	19	10%	Oct 2021- Data sheet

**Note:** Vacancy against sanctioned position always supersedes vacancy against a norm here. The above data pertains to overall vacancy status – including both Contract and Regular faculty.

Source:

[https://cimsbilaspur.ac.in/MCI\\_Data/Teaching\\_NonTeaching\\_Staff/faculty\\_list\\_25feb2019.pdf](https://cimsbilaspur.ac.in/MCI_Data/Teaching_NonTeaching_Staff/faculty_list_25feb2019.pdf),  
<http://rpgmc.ac.in/clause-info/>, <http://rpgmc.ac.in/wp-content/uploads/2020/05/Teaching-Staff.pdf>,  
<http://dgmeup.in/docs/staffdetail.pdf>, <https://amch.edu.in/pages/about/annual+report>,  
<http://www.vimsar.ac.in/upload/List-of-Teaching-Staffs.pdf>,  
[https://education.rajasthan.gov.in/content/raj/education/medical-education-department/en/administrative\\_reports/administrative\\_report.html](https://education.rajasthan.gov.in/content/raj/education/medical-education-department/en/administrative_reports/administrative_report.html),  
[http://www.vmcvpm.ac.in/vmcvpm/content\\_page.jsp?sq1=facultydetails1743&sqf=2985](http://www.vmcvpm.ac.in/vmcvpm/content_page.jsp?sq1=facultydetails1743&sqf=2985), <https://gmchld.org/wp-content/uploads/2020/07/faculty-09-July2020.pdf>

The vacancy status in study institutes (Table-6) reflects that older institutes like SMS Jaipur, VMC Villupuram, are able to ensure lower vacancy without resorting to hiring of contractual faculty. However, the newer colleges or those which are remotely located, like CMC Chhatisgarh, GMC Haldwani, RP GMC, have depended on contractual recruitment for maintaining faculty requirements.

**Management of most study institutes reported total vacancy of over 10% after accounting for contractual staff, except for Rajasthan (0%), Karnataka (0%), TN (4%), DDN Medical College Uttarakhand (10%), and Odisha (10%).** No Separate disaggregated data on contractual versus regular vacancy was shared by the colleges/ states, except those from TN and Chattisgarh. **TN reported zero percent contractual staff.** Based on management feedback from the study states, following were the key highlights regarding the vacancy status in the colleges (Table 7).

**Table 7 – Vacancy\* Status in Study Institutes based on Management Feedback**

College	Vacancy status in colleges and their reasons, as per management KII
Assam Medical College & Hospital	Varies month to month because of transfers between medical colleges within Assam. Vacancies are filled within short periods by recruitment board. 100% regular employment.
Chhattisgarh Institute of Medical Sciences	Overall, 40% vacancy, despite the contractual hiring - 8% deficiency in professors, 18% deficiency Associate Prof.; maximum vacancy in Asst. Prof. of 66% by sanctioned posts and 46% by NMC norms. 50% deficiency in Radiodiagnosis and another 50% in biochemistry and forensic medicine.
Maulana Azad Medical College	Vacancy of 30-40% across most departments.
PGIMS Rohtak	Approximately 30% in total, 15% due to reserved categories as no suitable candidates available; remaining in Nephrology and paraclinical specialities. Approximately 70% of total (of 410) are regular positions.
BJ Medical College	15-16% vacancies in the last three years. In 2021 - 6%. Approximately 60% are permanent and 40% contractual faculty.

<b>Dr. Rajendra Prasad Medical College</b>	Overall vacancy of 15-20%.
<b>Rajiv Gandhi Medical College</b>	Overall vacancy of 5-20%
<b>Veer Surendra Sai Medical College</b>	Overall vacancy of 10%. There are no super speciality departments. Shortage mostly in paraclinical-No MBBS opting for paraclinical PGs.
<b>Mysore Medical College</b>	No vacancy in the college. With increase in student intake at UG level, 48 APs will have to be recruited; possibly take walk-in interviews and get them approved on the go. Over 38% vacancy in administrative posts - out of 367 sanctioned posts there are 139 vacancies.
<b>Sawai Man Singh Medical College</b>	No vacancy in SMS. Reputation of hospital and legal permission to private practice, makes SMS the institute of choice. In the general departments and specialist department - there are no vacant positions - no sanctioned positions are ever vacant.
<b>Villupuram Medical College</b>	Overall vacancy of 4%.
<b>Govt. Medical College, Haldwani</b>	Overall vacancy of 10%.

Source: Primary survey in study colleges

*\* Please note that the “vacancy” status referred to by the college management is with reference to the “minimal requirements” to meet the basic norms prescribed by NMC. They are NOT based on patient load in the respective hospitals.*

Chattisgarh MC, LLRM MC, Rajendra Prasad MC reported the vacancy status was over 35-45%, because of non-fulfilment of reserved seats (information from management interview) after inclusion of contractual appointees. Except for the Chattisgarh MC, at Raipur where the contractual faculty constitute only 4% of total faculty strength, remaining 4 government colleges of Chattisgarh have over 45-60% as contractual staff.

Further, 94% Management Officials were aware of provision to recruit ‘Visiting Faculty’ under NMC. However, they prefer not to recruit visiting faculties, because of their non-inclusion in faculty head count by NMC; secondly, the general inability to enforce accountability amongst visiting faculty for teaching out of respect for their seniority, as they are usually retired senior professors from within the same system.

### QUICK FACTS

#### NMC Guideline on Visiting Faculty

The NMC under its Board of Governors (under NMC Act 2019, 13th Oct, 2020) had also allowed hiring of ‘visiting faculty’ by medical colleges with an idea to ‘enhance the comprehensiveness and quality of teaching of undergraduate students in pre-clinical, para-clinical and clinical departments. Medical Colleges/Medical Institutions can appoint additional faculty members on part-time basis who shall be known as “Visiting Faculty”. Their qualification requirements will be as per that prescribed in “Minimum Qualifications for Teachers in Medical Institutions” regulations. In case a medical college is unable to provide full time faculty beyond the minimum prescribed, the minimum visiting faculty to be appointed shall be at least 20% of the prescribed faculty. **It is worth noting that the visiting faculty is over and above the Minimum faculty prescribed, and thus is not counted within the minimum faculty prescribed by NMC.**

### 2.3. Vacancy Status by Departments/ Speciality in Study Institutes

From the eight study institutes that shared disaggregated data we analysed the departmentwise vacancies (refer Table 8).<sup>13</sup>

**Table 8 - Department Wise Vacancy Status in Study Institutes**

Departments	Vacancy
<b>Para-Clinical and Pre-clinical Departments</b>	
Physical Medicine & Rehabilitation	6.1%
Microbiology	3.7%
Pathology	2.1%
Forensic Medicine and Toxicology	1.8%
Anatomy	1.5%
Pharmacology	1.2%
Biochemistry	0.6%
<b>Clinical Departments</b>	
General Surgery	14.4%
General Medicine	11.6%
Orthopaedics	11.6%
Anaesthesiology	9.2%
Paediatrics	7.3%
Radiodiagnosis	6.7%
OBGYN	6.1%
Radiotherapy	5.2%
Pulmonary Medicine & TB	3.4%
Community Medicine	2.4%
Oto-rhino-laryngology	2.1%
Psychiatry	1.8%
Ophthalmology	0.9%

*Source: Secondary data and data shared from/by study colleges*

As can be seen from data in Table-8, and as validated by Management/ DGME interviews, highest vacancies are seen in super specialities (radiotherapy, pulmonary medicine) and surgical specialities and in pre-clinical specialities like anatomy and forensic medicine. This was attributed to the following reasons during management discussion:

- Surgery and super-specialities are high paying jobs in private sector and hence attractive,
- And all private (tertiary care) hospitals are mostly in Tier-I metros, so specialists prefer a private sector job, given their propensity for better quality of life,
- With change in NMC guidelines in 2019 to recruit only MBBS candidates reduces the ability of medical colleges to fill some amenable non-clinical positions with non-medical post-graduates (MSc), leading to vacancies in pre-clinical specialities.
- Lowest vacancy is seen in pre/clinical specialities like community medicine, psychiatry. This was attributed to the fact that PGs in these specialities do not have many job openings; and teaching position in medical college is by far the most prestigious.

<sup>13</sup> Respective state level data from 8 college websites—Chhattisgarh Institute Of Medical Sciences, Dr. Rajendra Prasad Government Medical College, Tanda, HP; Assam Medical College & Hospital; Veer Surendra Sai Institute Of Medical Science & Research; Lala Lajpat Rai Memorial Medical College, Meerut, UP; Government Medical College, Haldwani, Uttarakhand; Sawai Man Singh Medical College, Jaipur, Rajasthan; Mysore Medical College & Research Institute, Karnataka; Villupuram Medical College, Tamil Nadu.

## 2.4. Vacancy Status by Faculty Cadre in Study Institutes

Further analysis of data from the study colleges, indicate that shortage is usually seen in **Associate Professor and Assistant Professor cadre at about 35-45%**. The lower levels of vacancy or overfilling at Professor level is because of **Assured Departmental Promotions every 4 years**, leading to a top heavy inverted pyramidal organizational structure in medical colleges (refer Table 9).

**Table 9 – Select Cadre-wise Vacancy Status in Study Institutes across UG & PG Seats**

Institute	Post	Sanctioned/ Norm	Filled	Vacant	Overfilled	% Vacancy
Chhattisgarh Institute of Medical Sciences (CIMS)	Prof	24	18	6	0	25%
	Assoc	61	19	42	0	69%
	Asst.	90	50	40	0	44%
		<b>175</b>	<b>87</b>	<b>88</b>	<b>0</b>	<b>50%</b>
Dr. Rajendra Prasad Government Medical College, Tanda, HP (RPGMC)	Prof	20	29	1	-10	5%
	Assoc	33	26	9	-2	27%
	Asst.	50	46	11	-7	22%
		<b>103</b>	<b>101</b>	<b>21</b>	<b>-19</b>	<b>20%</b>
Assam Medical College & Hospital (AMCH)	Prof	44	35	9	0	20%
	Assoc	73	65	8	0	11%
	Asst.	107	95	12	0	11%
		<b>224</b>	<b>195</b>	<b>29</b>	<b>0</b>	<b>13%</b>
Veer Surendra Sai Institute of Medical Science & Research (VSSIMSR)	Prof	22	24	4	-6	18%
	Assoc	45	51	12	-18	27%
	Asst.	67	112	4	-49	6%
		<b>134</b>	<b>187</b>	<b>20</b>	<b>-73</b>	<b>15%</b>
Lala Lajpat Rai Memorial Medical College (LLRM)	Prof	20	28	4	-12	20%
	Assoc	33	22	17	-6	52%
	Asst.	50	36	20	-6	40%
		<b>103</b>	<b>86</b>	<b>41</b>	<b>-24</b>	<b>40%</b>
Government Medical College, Haldwani (GMCH)	Prof	20	19	6	-5	30%
	Assoc	33	33	6	-6	18%
	Asst.	50	44	12	-6	24%
		<b>103</b>	<b>96</b>	<b>24</b>	<b>-17</b>	<b>23%</b>
Sawai Man Singh Medical College (SMSMC)	Prof	107	227	0	-120	0%
	Assoc	133	128	28	-23	21%
	Asst.	274	170	103	1	38%
		<b>514</b>	<b>525</b>	<b>131</b>	<b>-142</b>	<b>25%</b>
Mysore Medical College & Research Institute (MMCRI)	Prof	29	27	2	0	7%
	Assoc	73	67	6	0	8%
	Asst.	102	81	20	1	20%
		<b>204</b>	<b>175</b>	<b>28</b>	<b>1</b>	<b>14%</b>
Government Villupuram Medical College (GVMC)	Prof	20	18	2	0	10%
	Assoc	26	36	1	-11	4%
	Asst.	38	49	3	-14	8%
		<b>84</b>	<b>103</b>	<b>6</b>	<b>-25</b>	<b>7%</b>
<b>Total</b>		<b>1644</b>	<b>1555</b>	<b>388</b>	<b>-299</b>	<b>24%</b>

Note: The above data pertains to overall vacancy status – including both Contract and Regular faculty.

Source:

[https://cimsbilaspur.ac.in/MCI\\_Data/Teaching\\_NonTeaching\\_Staff/faculty\\_list\\_25feb2019.pdf](https://cimsbilaspur.ac.in/MCI_Data/Teaching_NonTeaching_Staff/faculty_list_25feb2019.pdf), <http://rpgmc.ac.in/clause-info/>, <http://rpgmc.ac.in/wp-content/uploads/2020/05/Teaching-Staff.pdf>, <http://dgmeup.in/docs/staffdetail.pdf>, <https://amch.edu.in/pages/about/annual+report>, <http://www.vimsar.ac.in/upload/List-of-Teaching-Staffs.pdf>, [https://education.rajasthan.gov.in/content/raj/education/medical-education-department/en/administrative\\_reports/administrative\\_report.html](https://education.rajasthan.gov.in/content/raj/education/medical-education-department/en/administrative_reports/administrative_report.html), [http://www.vmcvpm.ac.in/vmcvpm/content\\_page.jsp?sq1=facultydetails1743&sqf=2985](http://www.vmcvpm.ac.in/vmcvpm/content_page.jsp?sq1=facultydetails1743&sqf=2985), <https://gmchld.org/wp-content/uploads/2020/07/faculty-09-July2020.pdf>

For instance, in SMS Medical College Jaipur, we find surplus faculty (negative vacancies/ over filling) at Professor cadre, with substantial vacancy (39%) at Associate Professor level (Table 10). The vacancy of 139 posts at associate professor level, almost equivalent to the extra posts at the level of Professor. In fact, the state of Rajasthan has gone ahead creating an additional cadre of Senior Professors to accommodate the growing number of professors. Further to tide over the gap in base of the pyramid, increased number of contractual recruitment has been allowed at the level of Associate Professors, Senior Demonstrators/ Senior Resident for pre-clinical/ clinical specialities respectively.

**Table 10 – Overall Cadre-wise Faculty Vacancy Status for MBBS Seats at SMS Jaipur**

	Sanctioned Positions	Regular Faculty Posted	Contractual Faculty Posted	Vacancy
Sr. Professor	0	138	0	-138
Professor	144	143	1	0
Associate Professor	356	186	31	139
Asst. Professor	167	158	0	9
Sr. Demonstrator	110	71	20	19
Sr. Resident	303	0	250	53

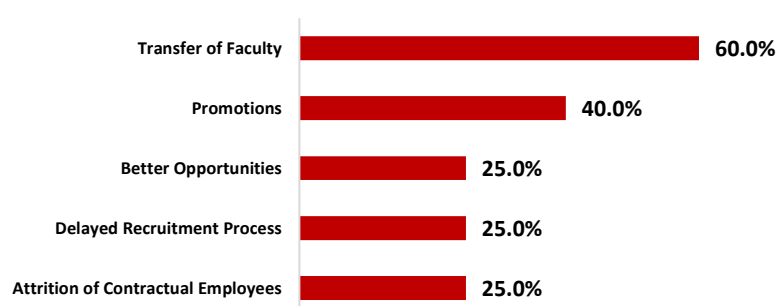
Source: SMS Medical College Jaipur, Administrative Report 2020-2021, uploaded on 05/02/2021, vacancies are across all specialities

Whether the faculty subsequent to promotion to professor cadre continue to carry out the roles and responsibilities of their prior level or the change in role couldn't be ascertained, given the lack of existence of a clear job description for each cadre. However, in their interviews, faculty informed that they continued to work as Assistant Professors despite being financially protected for the professor position.

#### 2.4.1. Management Perspective on Lack of Improvement in Faculty Shortages

While, in our survey, 67% Management respondents (n=17) felt that faculty shortage had improved in the last three years owing to contractual appointments, there were consistent factors at play for the shortage of faculty (Fig 2). They are:

**Figure 2 - Reasons for non-closure of existing vacancies in the study institutes for last 3 yrs.**



- Transfer of faculty to other colleges. In fact, ***while faculty transfers to other colleges within the state, may not affect overall state vacancy numbers but potentially burdens individual medical colleges.***
- Faculty promotion leaves lower cadres vacant especially Associate & Assistant Professor levels.
- Contractual faculty leave on contract closure, or for regular position within or outside the state, or for better opportunities in private sector or AIIMS in each state.
- Delays in the recruitment process, delays in onboarding of faculty, forces new joiners to consider alternative options.
- ***Contractual hiring has become a norm in managing shortages;*** especially for:
  - All new medical colleges to jump-start their operations,
  - Managing recruitments at Senior Resident and Associate Professor levels, emerging out of promotions,
  - Increasing workload in select departments,
  - Delays in recruitment pending decisions on court cases.

Apart from these, there's general shortage of faculty because of:

- Lack of availability of potential recruits for select specialties in the state, e.g., Radiology, Forensic Medicine, Neurology, etc.
- No futuristic sanctions of positions based on analytics on potential vacancy/requirements in terms of workload analysis
- Inability of the colleges to keep pace with Government Order to increase MBBS seats.<sup>14</sup>

**Therefore, the study explored the issues around faculty vacancy and shortage at two levels as per the study objectives:**

- Barriers to Recruitment of faculty, including the planning process around estimation of the requirement
- Barriers to Retention of faculty

## 2.5. Planning for New Positions

NMC issues guidelines regarding the minimum faculty requirement in a medical college based only on student intake (student/ teacher ratio). The management interviews across the board however, revealed that,<sup>15</sup>

1. all the states fulfil this requirement as per the NMC norm; and therefore, faculty strength is never optimal to handle the actual clinical workload. (*Section 2.5.1*)
2. the faculty/college management do not form a part of the state level decision making, and hence remain underprepared to receive increased number of student intake (impacting loads in class rooms, dissection halls, hostels, academic environment, labs). (*Section 2.5.2*)

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<sup>14</sup>[https://www.nmc.org.in/MCIRest/open/getDocument?path=%2FDocuments%2FPublic%2FPortal%2FMeetings%2FBoard%20of%20Governors\(2018\)%2F2019%2F06%2F13%2F19th%20meeting%20of%20BoG%20dt.%2013.6.2019.pdf](https://www.nmc.org.in/MCIRest/open/getDocument?path=%2FDocuments%2FPublic%2FPortal%2FMeetings%2FBoard%20of%20Governors(2018)%2F2019%2F06%2F13%2F19th%20meeting%20of%20BoG%20dt.%2013.6.2019.pdf)

<sup>15</sup> Management feedback from study colleges.



Therefore, the issue was analysed with respect to NMC guidelines for teacher/student ratio and the doctor/patient ratio in the colleges.<sup>16</sup>

### 2.5.1. Faculty teaching and clinical load

In order to validate faculty shortage in a college, faculty's commitment to (a) primary workload (academic activities, hence student/teacher intensity), and (b) secondary workload (clinical activities, hence number of OPD cases/faculty), was analysed.

**Table 11 - NMC Teacher-Student Ratio Guideline for Medical Colleges**

Departments	Faculty Norm	
	100 Seats	200 Seats
<b>Para-Clinical and Pre-clinical Departments</b>		
Anatomy	3	6
Physiology	3	6
Biochemistry	3	6
Microbiology	3	6
Pharmacology	3	6
Pathology	6	8
Forensic Medicine and Toxicology	2	3
<b>SUB TOTAL (PRE/PARA CLINICAL)</b>	<b>23</b>	<b>41</b>
<b>Clinical Departments</b>		
Paediatrics	4	8
Orthopaedics	4	8
OBGYN	4	8
Community Medicine*	5	7
General Medicine	8	14
Pulmonary Medicine	2	2
Dermatology	2	2
Psychiatry	2	2
General Surgery	8	14
ENT	3	3
Ophthalmology	3	4
Radiodiagnosis	3	4
Radiotherapy	4	4
Anaesthesia	7	10
Physical Medicine & Rehabilitation*	2	2
<b>SUB TOTAL (CLINICAL)</b>	<b>61</b>	<b>92</b>
<b>TOTAL</b>	<b>84</b>	<b>133</b>

*\* Although these are strictly not clinical departments, we have considered in this category since they do see patients in OPD/IPD.*

We assessed the **student load per faculty** for General Surgery (clinical) and Anatomy (preclinical) based on faculty strength as per NMC guidelines for 100 or 200 admissions. For calculations the

<sup>16</sup> The individual college assessment reports by NMC which could throw light on the way the faculty shortage is calculated couldn't be accessed on the new NMC portal. <https://www.nmc.org.in/information-desk/college-assessment-reports/>

student load for undergraduate courses for clinical specialities is limited to students in Year 3, 4, and 5 (since clinical studies start in Year-3) and for pre-clinical it was limited to Year 1 and 2.

**Table 12 - Faculty Teaching Load**

General Surgery Department			
No. of Student Admissions / Batch-NMC Norm	a	100	200
No. of Undergraduate Students for Year 3,4,5	$b = 3*a$	300	600
No. of General Surgery Faculty as per NMC	c	4	8
Avg. Student Load / Faculty	$= b/c$	25	25
Anatomy Department			
No. of Student Admissions / Batch—NMC Norm	a	100	200
No. of Undergraduate Students for Year 1,2	$b = 2*a$	200	400
No. Anatomy Faculty as per NMC	c	3	6
Avg. Student Load / Faculty	$= b/c$	33	33

MBBS student intake apart, convention is that each faculty across the college, up to Associate Professor level, supervises a maximum of 4 PG students (2 from each year) for their thesis work and case presentations etc.<sup>17</sup> The secondary data for Post Graduate (PG) medical students across all states (Table A1.2) also indicate the student/ faculty ratio ranges 0.5 to 3, based on overall PG students and total faculty numbers in the state (not specific to a particular department as in Table-9).

While law of averages may seem to have reduced this ratio, we believe that even if we have higher PG student intake in their choice of departments, the faculty/PG student ratio within the department will hover around the same order of magnitude of single digits.

Next, we assessed the **clinical load per faculty in medical college**, based on standard norms in the industry, and also based on actual OPD/ IPD loads from medical colleges (secondary research).<sup>18</sup>

**Table 13 - Clinical Load per Faculty – based on standard assumptions**

All Clinical Departments				Assumptions
No. of Student Admissions / Batch	a	100	200	
No. of Bed required as per NMC	$b = 3*a$	300	600	NMC guidelines
No. of OPD Patients/ Day	$c = 2*b$	600	1200	2 OPD Patients per Bed per Day
No. of IPD admissions/ Day	$d = c/5$	120	240	20% conversion from OPD to IPD in multi-speciality setting
No. of Total Patients (OPD+IPD) / Day	$e = c + d$	720	1440	
Total Clinical Faculty as per NMC	f	61	92	As per Table-9 above
Total Patient Load / Faculty / Day	$g = e/f$	12	16	

*Note: Using the norms used by INIs, including that of CMC Vellore, as illustrated during discussions with them and retrospective estimation from the proposed NMC norms for the given permissible admission.*

This ratio of less than/equal to 20 patients per day (OPD plus IPD), as calculated above, is well accepted as a reasonable patient load for faculty in medical college, given their academic and research responsibilities (as understood during discussions with INIs). It's the normal practice that there is a

<sup>17</sup> Management inputs; Please note that there is no classroom teaching involved in PG courses.

<sup>18</sup> Ramani K.V, Narang Sahil, Roy Debjit: Planning the Activities of Doctors in a Teaching Hospital, <https://web.iima.ac.in/assets/snippets/workingpaperpdf/2313213252013-06-05.pdf>

pyramidal structure of patient referral to an Associate Professor or a Professor. Also Associate Professors and Assistant Professors are not assisted by Sr. Residents in their chambers unlike a Professor, and the type of cases referred therefore vary in terms of criticality or uniqueness, which in turn affects the time spent by faculty for each case. The other aspect, which is often the reason for erratic workload (in line with feedback from Sr. Faculty survey) is the Emergency Cases.

The aforementioned observations, assumptions and its analysis were validated with some actual data of OPD loads from study Medical Colleges.

**Table 14 - Clinical Load per Faculty – based on actual numbers**

Name of the College	Beds	Avg. Daily OPD	No. of Clinical Faculty Filled	No. of OPD Patients/ Day/ Faculty*
Assam Medical College	1277	1250	105	11.9
Rajendra Prasad Medical College	802	1732	58	35.8
VSS Medical College	982	650	142	4.6
Mysore Medical College & Research Institute	1050	790	103	7.7
Sawai Man Singh Medical College	6251	10,000	268	37.3
Government Villupuram Medical College	1100	3245	78	41.6

*\*Note: For calculating patient load, we have assumed actual faculty numbers belonging to clinical specialties (sourced from respective college websites-Table-9), which are involved in patient care. This also excludes Junior Residents, who are not considered under faculty headcounts.*

*Number of OPD days are considered as 300 working days in a year, adjusting for govt. approved holidays, and weekends.*

For calculating patient load, we have assumed *actual* faculty numbers belonging to clinical specialties (sourced from respective college websites-Table-9), which are involved in patient care. It also excludes Junior Residents, who are not considered under faculty headcounts. With a valid argument that there would be a wide variation in actual patient load distribution across specialties based on disease profile of incoming patients in the medical college, because of seasonality, disasters, epidemics, etc., there would be an equivalent time consumption in managing IPD patients. Further, emergency and surgery/procedure cases are generally handled by Senior Residents and ‘faculty on-call’. Although, cases are distributed between the various units of a department based on standard scheduling in hospitals/ medical colleges, and faculty on emergency duty is given post-duty relief as a standard practice, **it is likely that the order of magnitude could be 3-4 times higher than reasonable limits of 20 patients/day/faculty, in addition to the above calculated workload.**

This is in line with the feedback from management and faculty that **heavy patient workload is a hindrance to honouring their teaching responsibilities. Added to this, is the extra hours put in by faculty in administrative tasks including, attending court cases, visits by state officials or dignitaries, etc.. Hence the expectation of institutes’ management is clearly to dynamically assess the work load of faculty across all cadres as the starting point for assessing the faculty requirement and use contractual hiring to keep work load under control.**

### **2.5.2. Inability of the states to keep pace with Government Order (GO) to increase MBBS seats**

College management respondents shared feedback that the state government instructs the institutes to increase seats without consulting the colleges or giving a 3 to 5 years’ timeline to plan for acquiring resources to accommodate more students in hostels and expand lecture theatres/ labs for practical sessions. A fallout of that, is a scenario wherein 35 to 40 students crowd out on a single anatomy table,

and end up just looking at dissected organs, and never get an opportunity to dissect themselves. Secondly, there was a lack of development of student-teacher relationship in the training process.

**Figure 3 - Evidence of approval of BOG to increase EWS seats and increased seats in PGIMS,**

			Medical College / Medical Institution		of College	(Seats)	Recognition	LOP
1	M.B.B.S.	Haryana	Pt. B.D Sharma Postgraduate Institute of Medical Sciences, Rohtak (Haryana)	Pt. B.D. Sharma University of Health Sciences, Rohtak	Govt.	1960	250	Recognized for 150 seats on or after November, 2012. Recognized for increase of seats from 150 to 200. (Previously under Maharshi Dayanand University, Rohtak) Permitted for increase of seats from 200 to 250 under EWS quota (103rd constitution amendment) for 2019-20.

Reflection of Increased 50 EWS seats in 2019-20 session in PGIMS Rohtak

MOM BOG dated 13<sup>th</sup> June 2019 \*

**BOARD OF GOVERNORS**  
IN SUPERSESSION OF MEDICAL COUNCIL OF INDIA  
SECTOR-8, POCKET-14, DWARKA PHASE-I, NEW DELHI-110077

**MINUTES OF 19<sup>th</sup> MEETING OF BOARD OF GOVERNORS**

Nineteenth meeting of the Board of Governors was held on 13<sup>th</sup> June, 2019 (Thursday) from 12.30 P.M. onwards at Committee Room, AIIMS, New Delhi.

The following members of the Board of Governors were present:

Dr. V.K. Paul	-	Chairman
Dr. Randeep Galleria	-	Member
Dr. Balram Bhargava	-	Member
Dr. Jagat Ram	-	Member
Dr. S. Venkatesh	-	Member
Dr. B.N. Gangadhar	-	Member

Leave of absence was received from Dr. Nikhil Tandon, Member, BoG.

Dr. R.K. Vats, Secretary General, BoG, MCI alongwith Prof. (Dr.) Siddarth Ramji, OSD/Sr. Adviser to BoG also attended the meeting.

The Chair welcomed the members.

The draft minutes of the 18<sup>th</sup> meeting of the Board of Governors had been circulated to all the members of the BoG in advance and the minutes were confirmed in the 19<sup>th</sup> meeting of the BoG. Thereafter agenda was discussed item wise.

Following is the summary of proceedings and decisions of the meeting.

1. Consideration of proposals of States/UTs for increase of seats UG under EWS quota.

Read: Agenda Note

**Decision:**

The Board of Governors considered and discussed in detail increase of Undergraduate (UG) seats in medical colleges for implementing 10% EWS quota. During the discussion it was clarified to all the BoG members that the current proposal for increase of seats under EWS category is meant only for those who are economically weak and are not eligible under any other quota i.e. SC/ST & OBC, etc. This vertical

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reservation is to be applied to the seats under the State Quota only. In pursuance of letter of Ministry of Health & Family Welfare, Govt. of India dt. 29.01.2019, the increase of seats is to be given to Government Medical Colleges for the academic session 2019-20. For implementing EWS quota, it is proposed not to consider (a) the colleges with intake capacity of 250, (b) those colleges which were given Letter of Permission under Section 10(A) of the MCI Act for the academic session 2019-20, (c) colleges denied permission for renewal of seats, and (d) colleges/institutions with very high percentage of reservation. The increase of seats under the EWS quota will only be considered for colleges duly recommended and forwarded by the State Governments/UTs.

The issue of extending EWS quota to institution other than State Government Colleges was discussed and it was decided to await and implement Central Government instructions on the subject.

The Board of Governors recommended the above proposal for increase of Undergraduate seats for implementation of 10% EWS Quota for consideration of Central Government.

2. Grant of temporary permission in respect of foreign doctors u/s 14(1) of the IMC Act, 1956, for the purposes of training/procedures/live surgery during the workshops etc. in the field of Aesthetics Cosmetology.

Read: Agenda Note

**Decision:**

The Board of Governors considered and decided not to grant temporary registration/permission in respect of foreign national doctors for the purposes of doing medical courses/practice/research/teaching/charitable work, for a limited period in Aesthetics Cosmetology or any discipline not recognized by Medical Council of India.

3. Consideration of the minutes of the PG Expert Group with regard to starting/increase of seats/Recognition/Renewal of recognition of Postgraduate courses.

Read: Agenda Note

**Decision:**

The Board of Governors considered the minutes of the PG Expert Group and ratified the decision taken by Members BoG (Incharge PC) along with Chairman, BOG in respect of PG (Super-Speciality) courses and permission for starting/increase of seats- PG super-speciality courses cases (14 cases) & recognition/renewal of recognition courses cases (82 cases).

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A case in point was the increase in MBBS seats in PGIMS Rohtak. MoHFW's request dated 29<sup>th</sup> January 2019 for increase in seats under the Economically Weaker Section (EWS) category for all government colleges from the academic session 2019-20. The 13th Board of Governor (BoG) meeting held on the 13th June 2019 approved the MoHFW request dated 29/01/2019 to increase seats under EWS category for all govt colleges from the academic session 2019-20. The NMC approval was subsequently reflected as increased seats from 200 to 250 with immediate effect for PGI, Rohtak, Haryana (refer figure 3) for the same 2019-20 session.<sup>19</sup>

## 2.6. Barriers to Recruitment & Onboarding

In order to understand the barriers to recruitment and on-boarding, it's critical that the current recruitment process for faculty at the state level is understood:

### 2.6.1. The Current Recruitment Process

At the Central level, the Union Public Services Commission (UPSC) conducts examination for all regular central government recruitments, including that for medical colleges under its ambit, except that for INIs. The fresh medical officers and specialities appear for an annual combined medical services examination for requisite positions.<sup>20</sup> The eligibility requirement for applying for faculty position is,

<sup>19</sup>[https://www.nmc.org.in/MCIRest/open/getDocument?path=%2FDocuments%2FPublic%2FPortal%2FMeetings%2FBoard%20of%20Governors\(2018\)%2F2019%2F06%2F13%2F19th%20meeting%20of%20BoG%20dt.%202013.6.2019.pdf](https://www.nmc.org.in/MCIRest/open/getDocument?path=%2FDocuments%2FPublic%2FPortal%2FMeetings%2FBoard%20of%20Governors(2018)%2F2019%2F06%2F13%2F19th%20meeting%20of%20BoG%20dt.%202013.6.2019.pdf)

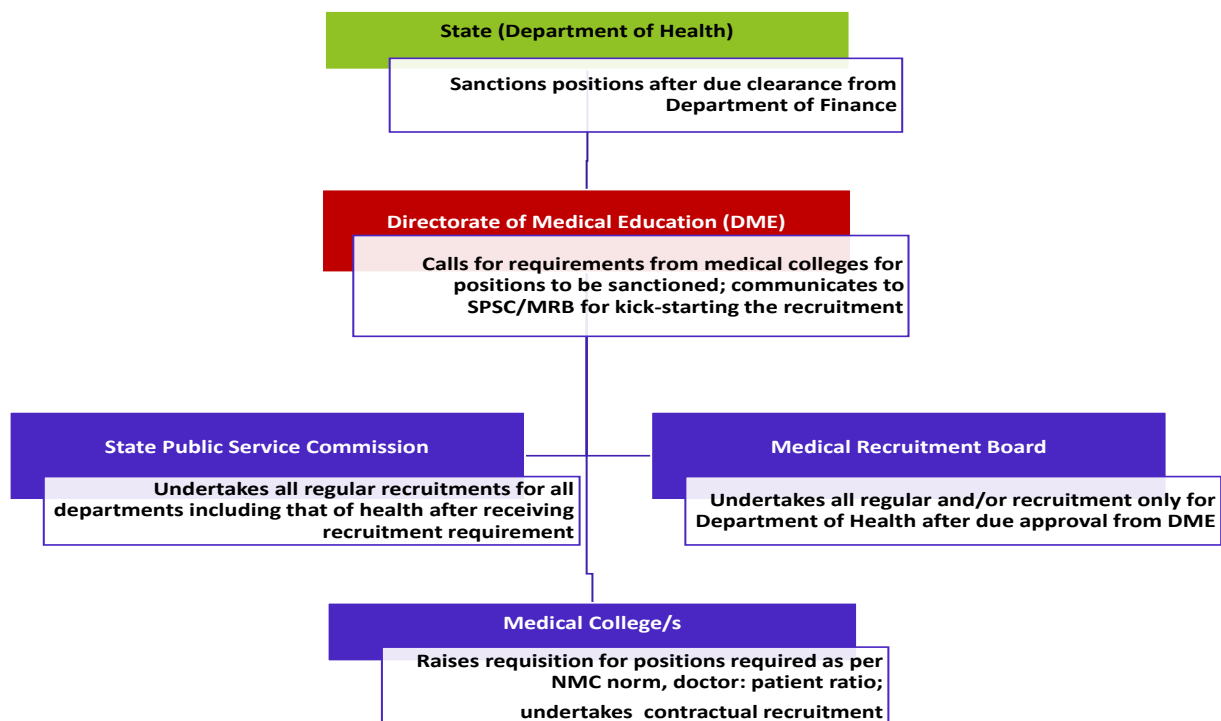
<sup>20</sup> For instance, please see notification for the 2020 faculty examination here <https://www.upsc.gov.in/sites/default/files/Notice-CMSE-20-English.pdf>, accessed on 27 June, 2021

completion of MBBS degree or respective post-graduate degrees as per the NMC norm. The test includes objective and subjective type questions. Candidates who clear the first test are subsequently subjected to a *personality test*. The personality test assesses the candidate's intellectual curiosity, critical powers of assimilation, balance of judgement and alertness of mind, ability for social cohesion, integrity of character, initiative and capability for leadership by UPSC.

The State Public Service Commission (SPSC) is the state level counterpart of UPSC for all state level regular government recruitments undertaken in the similar pattern following the Government Financial Rules (GFR). Some states have created a separate board, the Medical Recruitment Board (MRB) to facilitate recruitment of essential services, such as the medical services to save on recruitment process time.

A typical process of recruiting medical faculty in States, is presented in figure 4, below.

**Figure 4 - Typical Recruitment Process in States**



- The State Department of Health sanctions positions put forth by the Directorate of Medical Education (DME) after due scrutiny and seeking clearance from the Department of Finance on availability of funds to service such a request and/or make provisions for such a requirement.
- The DME calls for requirements from the medical colleges for the positions to be sanctioned and communicates with the SPSC or corresponding MRBs for initiating the recruitment process.
- The colleges raise requisition to the DME for the requisite positions as per NMC norms for the approved seats, doctor: patient ratio.
- The colleges have been also authorised to undertake contractual recruitments as against the sanctioned positions to tide over the process delays.

**While State Public Service Commission conducts recruitment for all kinds of officers in a particular state, the job of MRB is to manage the recruitment specifically for medical faculty.**

However, there are some state level variations in this process of recruitment adopted by the states:

- Delhi is an outlier to this process. It has an additional layer of sanction required from the centre for select colleges, such as that for Maulana Azad Medical College (MAMC); for sanction of positions, approval of shortlisted candidates and roll out of appointment letter.
- While universities primarily act as an overseeing body to review if the colleges follow the proposed and agreed policies; Rohtak Medical College and its affiliated University being autonomous bodies, also participate in the recruitment process.
- ***Uttarakhand, Andhra, Assam and TN have created a MRB (referred to as Chayan Aayog in Uttarakhand) to facilitate recruitment only for medical colleges.***
- Rajasthan has adopted a hybrid model, where different channels have been opened to facilitate recruitment – (a) for the erstwhile government medical colleges through SPSC and (b) for Society Medical Colleges through Rajasthan Medical Education Society (Raj-MES). For District Hospitals that are being converted as medical colleges (recruitment through Raj-MES), transfers are applicable across the state.<sup>21</sup>
- ***TN's MRB, uniquely has a separate continuous recruitment and retention system, the Counselling for Transfer and Promotion Policy managed by the Tamil Nadu Medical Services Corporation, (TNMSC-CTP).***

#### TNMSC - CTP Model

Tamil Nadu has Tamil Nādu Medical Services Corporation - Counselling for Transfer and Promotion (TNMSC-CTP) model, has a separate board to undertake recruitment and retention as a complete end-to-end Human Resource Management Solution for the essential services, i.e., the medical services at the state level.

- a. An integrated institutional structure for campus recruitment and career path was created for the entire medical workforce in the public healthcare delivery system, not just medical colleges. So, state level recruitment decisions are made based on not just students in their final year undergrad courses, but also existing pool of faculty and practitioners across the state public health system.
  - b. The state incentivises specialization in scarce specialities: additional allowance is granted for PGs in scarce specialities, such as- Anaesthesia, Forensic medicine, Radiodiagnosis, Orthopaedics etc.. An allowance is also granted to medical officers working in difficult areas.
  - c. Private practice is allowed only within the medical college and only after college hours with the understanding that it not only enhances their income but also enables cross learning and exchange of ideas between the public and private healthcare systems.
  - d. A sharing pattern has been devised - 15% of the share is given as incentive to the medical team, encouraging faculty undertaking private practice, to admit patients (especially from BPL category) to government hospitals for specialised surgeries.
  - e. Continual restructuring and sanctioning the teachers' posts, ensuring that the "post- matrix" follows the norms in pre-clinical/ para-clinical and clinical departments and for broad specialities and super specialities; weightage to deal with increased load of patients; considers the existing or proposed infrastructure availability, so as to ensure comprehensive patient care.
- Assistant Professor appointment, is the entry level for all regular recruitments across country

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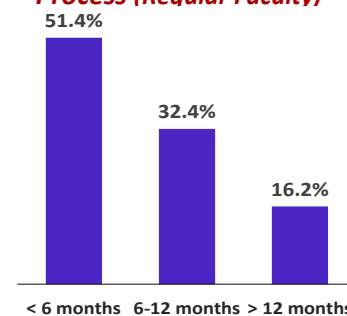
<sup>21</sup> Society medical colleges are eight medical colleges, set up as a 'Society'. The list of the colleges can be found here: <https://education.rajasthan.gov.in/content/raj/education/medical-education-department/en/Society-Medical-Colleges-Including-Raj-MES.html#>

- Medical colleges have authorization only for recruitment of contractual staff.
- The Assam Directorate of Medical Education has 19 institutes under it. Of which, 8 are medical colleges (others include dental, pharmacy, paramedical courses). One of the aims of the Directorate is to develop and sustain medical education through proper planning. Medical colleges are authorised to recruit contractual faculty on their own. For instance, examples of recruitment notices of GMC Raipur, GMC Mandi and Chikaballapur Institute of Medical Sciences show that medical colleges do initiate walk-in interviews for selecting contractual medical faculty for their colleges. However, MRBs/ SPSCs may also hold walk-in interviews, typically, for contractual positions.

### 2.6.2. Time Taken for Recruitment & Onboarding of Regular Faculty

Over 70% of the faculty responded that there is no fixed annual hiring cycle for faculty recruitment, rather it is a continual process. This is particularly relevant in the context of contractual faculty hiring, which happens on a need-basis and hence the cycle of recruitment is continual. However, for the regular faculty requirement, the hiring cycle is a periodic annual exercise in most states.

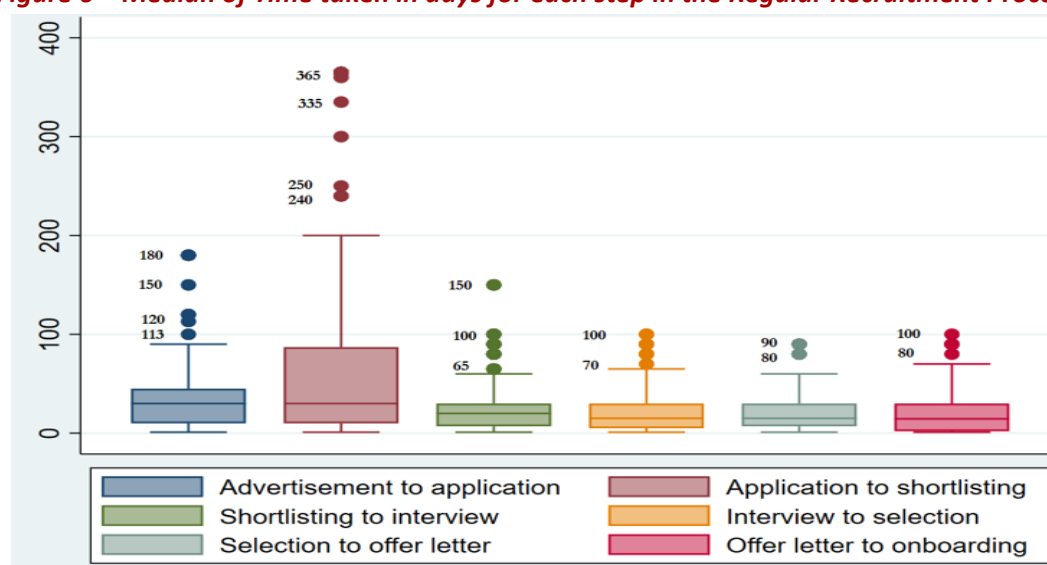
**Figure 5 – Overall Time Taken for Recruitment Process (Regular Faculty)**



Only 16.2% (n=179) of the participants responded that the process-time for regular recruitment is more than one year (figure 5). On an average 51.4% faculty informed that it took about 6 months for one regular faculty recruitment cycle to be completed. Delhi, however took greater than 1.5 years for regular recruitment, because of the additional level of approval required from the centre for its state colleges, such as for MAMC and GTB, Medical College, Delhi.

Post approval/sanction at the Directorate, the average time taken in days for the regular recruitment process is detailed in figure 6.

**Figure 6 – Median of Time taken in days for each step in the Regular Recruitment Process**



Note: Majority of response lies within the box refers to a range of 20-40 days as time taken for each of the step in regular recruitment process. The dots refer to outliers of time taken for each step.

Feedback from respondents indicates that, once a position was sanctioned, recruitment was easy.

- The average time taken for recruitment, from vacancy advertisement to final letter of offer to selected candidate, was about 203 days for regular positions, and 94 days for contractual positions.
- However, the sanctioning of a position at the health directorate itself, typically takes 2-3 months (based on management respondent interviews)
- The sanction to advertisement has been a bottleneck, taking over 2 years in Delhi & UP and nearly 4 years in Haryana & Chhattisgarh (based on faculty interview and secondary research).
- The desktop research in the state medical colleges reflected that of 'Application to Shortlisting' by far takes the longest time, median being 67.8 days. Rolling out offer letter, takes the shortest time, with a median of 21.7 days.

The hiring time varies substantially across recruitment steps and across states, because of various reasons (refer Table 15). Management interviews indicate that recruitment through the SPSCs is often delayed because of the inability to convene the selection boards on schedule and/or regular intervals, which is the first step in approval for sanctioned positions. The challenge here is that there is no fixed timeline attached to this leg of the process – approval and constitution of the Board.

- **The States have responded to such delays by:**
  - Constituting a separate MRB (Uttarakhand, Assam and Tamil Nadu) and/ or giving autonomy to the colleges or hiving off select activities of SPSC (Karnataka, Andhra Pradesh, Odisha KBK districts<sup>22</sup>, PGIMS Rohtak) to the colleges; to hasten the process of regular recruitments & roll out appointments.
  - The MRB in Uttarakhand is only for clinical and nursing hiring; Tamil Nadu has TNMSC, with a separate board that operates under CTP (Counselling for Transfer and Promotion) policy.
  - PGIMS, Rohtak being a university does its own recruitment, hence shortens recruitment time.
  - Autonomy to southern states and Odisha (KBK districts) is only for hiring contractual staff or rolling out letters for onboarding (for both contractual and regular).

**Table 15 - State-wise variation in recruitment timelines**

State and Process wise mean time taken for regular recruitment process	AP (n=32)	Assam (n=15)	Gujarat (n=14)	Haryana (n=9)	Chhattisgarh (n=29)	Karnataka (n=9)	Odisha (n=2)	Rajasthan (n=9)	TN (n=22)	UP (n=53)	UKD (n=19)	Delhi (n=25)	Total (n=251)
Advertisement to application	29.2	30.9	16.7	37.1	27.4	39.4	60.0	47.8	15.5	28.4	17.8	69.9	34.7
Submission of application to shortlisting	83.9	40.5	97.8	41.3	70.2	20.6	30.0	176.1	40.4	50.3	14.0	105.8	67.8

<sup>22</sup> The old districts of Koraput, Balangir and Kalahandi (popularly known as KBK districts) have since 1992-93 been divided into eight districts: Koraput, Malkangiri, Nabarangpur, Rayagada, Balangir, Subarnapur, Kalahandi and Nuapada. These districts account for 19.72% of the population and occupy over 30.59% geographical area of the State. Around 90% of the people of this region still live in villages. As per the 1997 census of BPL families, about 72% families are below poverty line among those who live in this region which was 82% during 1992 census. More specifically, 49 CD Blocks of KBK districts are regarded as "very backward" and 28 CD blocks are considered as "backward".



Shortlisting to interview	25.4	27.7	7.0	24.0	22.7	20.3	30.0	55.6	12.4	46.0	10.1	46.3	30.0
Interview to selection	11.3	35.9	43.3	14.6	21.1	20.7	30.0	15.6	13.9	37.8	13.3	31.1	24.0
Selection to offer letter	8.0	27.0	10.0	10.0	14.7	24.6	30.0	45.0	21.6	32.9	8.7	48.4	25.3
Offer letter to onboarding	4.8	25.0	7.0	9.4	22.1	18.4	20.0	18.6	17.3	28.6	4.1	46.3	21.7
<b>Total</b>	<b>162.7</b>	<b>187.0</b>	<b>181.8</b>	<b>136.4</b>	<b>178.1</b>	<b>144.0</b>	<b>200.0</b>	<b>358.6</b>	<b>121.2</b>	<b>223.9</b>	<b>68.0</b>	<b>347.9</b>	<b>203.5</b>

Source: Primary Survey

- Gujarat, Haryana, UP, and Delhi undertake recruitment through State Public Service Commission (SPSC).
- Feedback from respondents' and grievances has been more around the uncertainty of timeline per se, rather than the delayed process timelines itself.
  - These uncertainties in timelines and the fear of losing their license for the approved seats, have made contractual hiring a norm in faculty recruitment. This contractual hiring seems a standard practice not only for new medical colleges to fulfil its requirement before NMC inspection; but also, to some extent, for the older medical colleges to fill the senior residents and associate professor vacancies/ shortages.
- While medical colleges circumvent the process and end up recruiting contractual staff; it is a temporary solution to the true challenge around recruitment process.
  - **One of the solutions to the recruitment process challenge is the TNMSC-CTP model, which identifies a potential candidate from the campus itself up to post-graduation and then stages a career progression path (detailed in section of recommendation).**
  - **One of the recommendations from PGIMS Rohtak, was to absorb Senior Residents as Assistant Professors if eligible, to save time around recruitment process delays.**
- States with an independent system of recruitment (MRB), the recruitment cycle of medical faculty has a more effective and predictable timeline, leading to fewer vacancies and more regular recruits. Constituting board and coordinating for regular commissioning of board of senior members at state level is difficult and usually leads to delays.

## 2.7. Barriers to Recruitment of Regular Faculty

The barriers to recruitment as informed by faculty across cadre and specialities was scored on a 10-point Likert scale. The most challenging barriers to recruitment as expressed by the faculty and management are (refer Table-16):

- Lack of 24X7 support to facilitate form-filling (74.8%). The Army Medical Core provides support and responds to queries of people who try to apply for faculty positions, especially at night, because generally doctors do the form filling etc. only at night after completing day's work.
- Lack of Facilities to participate in the interview, such as boarding and lodging (68.6%) serves as a disincentive.
- Lack of Access to Information on Vacancy Status (61%). There is no central database on national vacancies/ filling status, to facilitate conscious applying and avoiding resignations and

re-applying elsewhere. For instance, for recruitment in KBK districts of Odisha, it is clearly mentioned by the state that the positions in these districts are non-transferable.

- Non-responsive staff or no central point of contact in college or DME for clarification (61.5%).
- Lack of information around terms and conditions of employment, such as transfers, difficult area postings, state level recruitment & promotion rules

**Table 16 – Faculty feedback on barriers to smooth recruitment experience**

Challenges	Number / % Of respondents who found it
	Most challenging
Lack of 24X7 Support to Facilitate Form Filling (n=214)	160 (74.8%)
Lack of Facilities to participate in the interview, such as boarding lodging. (n=207)	142 (68.6%)
Lack of Access to Information on Vacancy Status (n=213)	130 (61.0%)
Non-responsive staff or No contact point in college or DME for clarification (n=208)	128 (61.5%)
Lack of information around terms and conditions of employment (transfer, difficult area postings, state level recruitment & promotion rules) (n=207)	122 (58.9%)
Delay in time taken to receive offer letter after confirmed selection (n=207)	112 (54.1%)
Lack of information around Roles & Responsibility (n=208)	111 (53.4%)
Cumbersome and Lengthy Form (n=204)	96 (47.1%)
Lack of Access to Application Form (n=208)	88 (42.7%)

Source: Primary Survey of faculty

Other barriers cited by management respondents as barriers to faculty recruitment were –

- Non-cancellation of an unfilled vacancy for 5 years,
- Process delays for complaint resolution within the government setup,
- 70% of management respondents shared that court cases (annexure-2) pertaining to lack of transparency in recruitment and retention (DPCs) is usual in all states, numbering at least 20-25 cases each year;
- For instance, in Uttarakhand out of the 312 recruitments done in the last 2 years, only 70-80 joined. 128 cases are pending since 2018 on recruitment, common reasons being:
  - hiring of contractual positions happens on upper age limit of a post- 70 years for Professor and 50 years for Assistant Professor; but regular hiring happens on the basis of eligibility and bars entry of candidates over 65 years and 45 years respectively.
  - regularization of contractual positions/ change in policy.

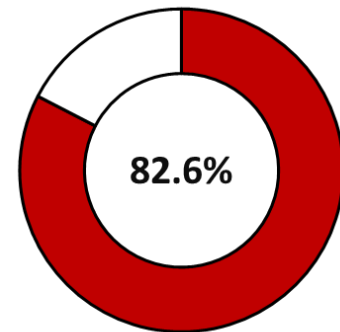
On the need for information/ transparency around terms and conditions (Table 16), a deep dive of select court (listed in Annexure 4) cases shows that some of the key processes that were challenged in the court of law were related to –

- Transparency on the requisite qualification,
- Non-adherence to selection process,
- Eligibility criteria having been overlooked,
- Reservation criteria creates problem in case of unfilled positions.

## 2.8. Onboarding Challenges of Faculty

The issue of process delays for onboarding, and lack of transparency in processes remains after recruitment as well. For instance,

- About 32% of respondents did not come to know about their job responsibilities and duties until after the recruitment process was complete,
  - i. and of the ones that received their “job descriptions”, 41% respondents believed that the documents received by them were unclear about the onboarding process.<sup>23</sup>
- Only 17.4% faculty respondents reported that, they had some induction during their *onboarding* in the form of 2hr introduction to respective departments.
- 82.6% of the faculty respondents (n=202) asserted that there was no formal induction into the college, which should have helped for their initiation into the faculty network, roles and responsibilities, and smoothening the onboarding process.



Faculty Say They Received No Formal Induction  
n=202

## 2.9. Retention Challenges

The retention challenges are more of a factor of aspirations of students or faculty joining medical colleges and the extent to which they have been met. Career aspiration is the inherent personal goal of an individual with respect to their professional life and the better it is aligned to the organizational goals, the better is the retention and may be responsible for life-satisfaction in general.<sup>24</sup>

### 2.9.1. Reasons for Leaving

Overall attrition across states is less than 5%. It has been attributed in the College Management level interviews commonly to staff leaving for better opportunities or contractual staff converting into-regular appointments; especially with upcoming AIIMS in each state the exodus has increased. Based on feedback from faculty respondents, the topmost reasons for leaving are – “salary disparity between contractual and regular staff”, “career progression with movement to better-known colleges”, “academic and research environment” in the college, “non-transparent promotion and tenure policy” related to an almost non-existent performance management system.

#### QUICK FACT

Overall attrition across states is less than 5%, attributed amongst other variables, to contractual staff leaving or for better opportunities.

*Source: Primary Survey*

<sup>23</sup> A “job description” is a **formal written statement** of what the faculty actually does, how he or she does it, and what the job’s working conditions are. Sections of a typical job description include - Job title & identification, job summary, responsibilities and duties, authority of incumbent, standards of performance, working conditions, and job specifications. Source: <https://www.iedunote.com/job-description>. Also refer <https://www.randstad.in/hr-news/hr-trends/five-essential-elements-an-effective-job-description/>.

<sup>24</sup> Zahid, 2017 Career Aspiration and Life Satisfaction of Final Year Medical School Students at <http://dx.doi.org/10.21649/journal.akemu/2017/23.4.487.491>

There is a *perception* of salary disparity between regular and contractual faculty, especially for clinical specialties. For instance in LLRM (Meerut), a regular Asst. Prof. joins at an average take-home salary of ₹45,000/month, while a contract staff for same position, on an average, gets a fixed emolument of about ₹85,000-125,000/month. Prima facie, they are not strictly comparable; since a regular faculty has salary emoluments (including superannuation benefits, perquisites, leave, among others), which is not available to contract faculty, along with the important consideration of job security compared to fixed term of a contractual faculty.

**Table 17 - Reasons for Faculty Attrition\***

Components of Work Environment/Culture affecting Attrition	Most Important
Salary disparity between contractual and regular staff (clinical specialties) (n=206)	153 (74.3%)
Career progression with movement to better-known colleges (n=203)	142 (70.0%)
Better academic and research environment (n=204)	128 (62.7%)
Other non-technical government hospitals (n=201)	120 (59.7%)
Private practice (n=208)	112 (53.8%)
Non-transparent promotion or tenure Policy (n=203)	103 (50.7%)
Lack of leadership and mentoring (n=190)	99 (52.1%)
Compromised living conditions and quality of life (n=200)	91 (45.5%)
Deranged Work-life balance (n=199)	85 (42.7%)
Social and family commitments (n=194)	83 (42.8%)
Isolation of under-represented groups (n=193)	59 (30.6%)
Lack of ambient and clean environment (n=191)	58 (30.4%)
Job security – tenure of contract (n=186)	50 (26.9%)

*Note: Source: Primary survey of college faculty. Attrition is defined as faculty leaving their jobs within one year of joining.*

Least important reason for leaving job was – “lack of ambient and clean environment”. Interestingly, “job-security” or “living conditions of self” and “family support systems” didn’t feature as critical reasons for faculty attrition. In fact, management respondents concurred that while these could be reasons for dissatisfaction amongst staff but does not lead to attrition.

### 2.9.2. The Aspirations of Medical Faculty

Given the lack of high attrition rates, it is pertinent to understand the motivation of existing faculties to engage in an academic career. The factors that motivated faculty across cadre and specialties to join a medical college was scored on a 10-point Likert scale. The survey included 234 medical faculty across different stages (Senior Residents, Assistant Professors, Associate Professors, Professors) of their career, to understand their aspirations. The survey indicated that the faculty were inherently motivated in the beginning of their teaching career. However, commercial considerations and desire to have a better quality of life, make them change the course of their career, primarily towards private practice in a clinic or hospital.

Over 89% of the surveyed faculty had aspirations of becoming a teacher in a medical college. Most faculty respondents stated that they are motivated to work as faculty because of their inherent passion for their profession (94%) and motivation to serve the needy (80.4%), prestige associated with being a professor (87.5%), academic and research to deep dive into clinical challenges (86.4%) and

exposure in a public health system (table-17). The usual motivation of job security, social status, financial considerations were secondary.

**Table 18 - Factors influencing Faculty to join Medical College**

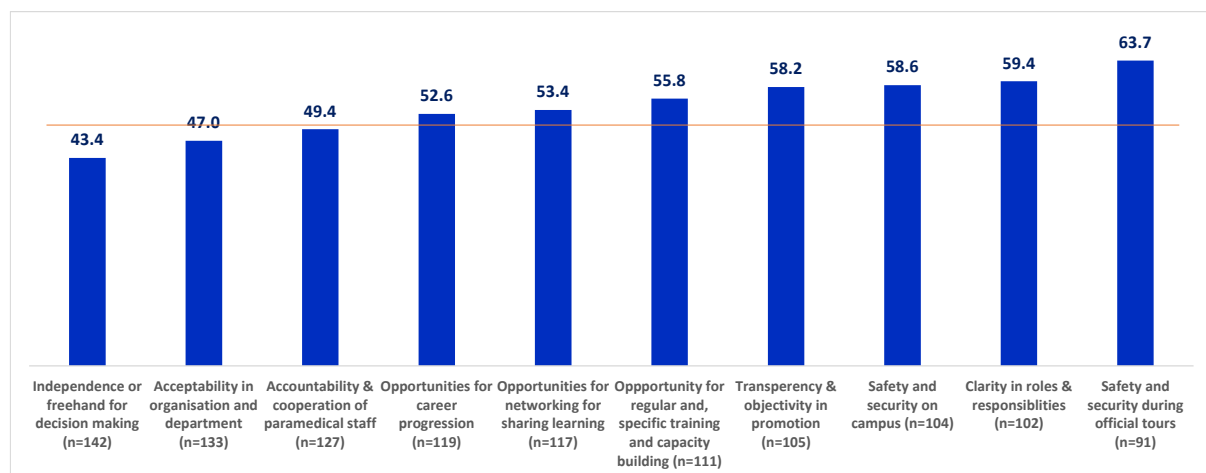
Motivating factors for faculty to have joined medical college in % (n=234)	% Respondents who found it Most Important
Passion for the profession	94.0
Prestige to associate with the profession / Social Status	87.5
Career progression/ Greater work exposure and challenging opportunities	86.4
Service to the needy	80.4
Academic and research environment	79.0
Stable Income / Financial Security	78.6
Job security	76.7
Brand of the college and work culture	76.6
Social Pressure / Family and children's considerations	67.5
Influence of a role model	57.1
Peer group and network	55.3
Convenience of location—proximity to hometown	54.7
Opportunity to work in a tier-I city or well-established township	52.3
Shortage of faculty in medical education	39.2

Note: Source: Primary survey of college faculty.

### 2.9.3. The Unmet Aspirations and Barriers to Faculty Retention

Since academic and research culture in a college is a major variable, we explored the extent to which the aspirations of faculty were met after joining the medical college. The faculty in their response have not been overly enthusiastic on realisation of their aspirations. **More than half of the respondents have shared that their expectations have not been met for most components of their work environment** (refer fig-7).

**Figure 7 - % Faculty NOT satisfied with following components of work environment in medical college**

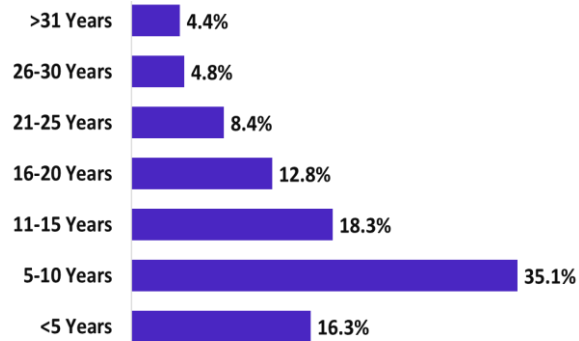


However, **the unmet aspirations have not resulted in an unmanageable faculty attrition**. The analysis of overall tenure served by the respondents as faculty reflects that **while the challenges were many;**

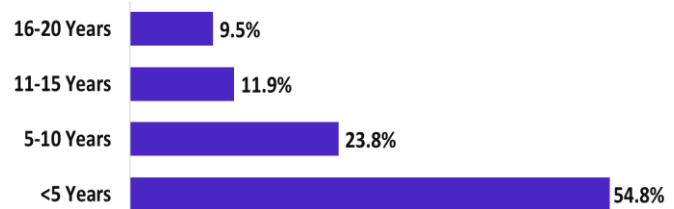
such as dilapidated houses, low salary, no pension for all recruits after 2007, unhygienic environment, etc. but none of it were reasons critical enough for faculty leaving a government job.

The feedback from most faculty respondents' points, not to the salary levels per se, but broader issues related to the **lack of performance-based incentive within the defined role (87.6%), or mentoring into a new role, especially managerial (68.4%), as a primary grievance**; and lack of transparency in tenures/ promotions and transfers (62.2%) although regular annual increments was always available (refer Table-18). Feedback from respondents indicated that in the mix of contractual and regular staff in a typical medical college, *there are no incentives/disincentives to promote a specific and/or desirable performance; resulting in lack of accountability.* In the absence of a robust system to appraise performance, there are no quality indicators which can measure what a good performance should look like.

**Figure 9 - Faculty retention and years of service of regular faculty in medical college in %**



**Figure 9 - Faculty retention and years of service of contractual faculty in medical college in %**



Source: Primary Survey

**Table 19- Lack of Performance based Financial Incentives**

Variables incentivising good performance	% Respondents
Lack of Performance Based Incentives and Accountability	87.6%
No system for structured mentoring, transition to managerial role	68.4%
Only Annual Increment is Available (no academic leave etc. is available)	66.3%
No transparency in Tenures/Promotions/Transfers	62.2%

Note: These Percentages were derived from number of respondents with qualitative responses to the question regarding challenges and barriers.

The survey confirmed an almost non-existent research ecosystem – both hard and soft infrastructure.<sup>25</sup> And there is almost a consensus regarding this amongst the management and faculty.

**Table 20 - Lack of Incentives for Research & Other Academic Activities**

Variables affecting research activities	% Respondents
Research efforts not appreciated	95.8%
Lack of avenues for research grants	93.7%

<sup>25</sup> A thriving university research ecosystem is defined as one that lends to consistency, efficiency and sufficiency in research output, to achieve sustainability. Source: [https://www.researchgate.net/publication/307678952\\_University\\_Research\\_Ecosystem\\_A\\_Conceptual\\_Understanding](https://www.researchgate.net/publication/307678952_University_Research_Ecosystem_A_Conceptual_Understanding)

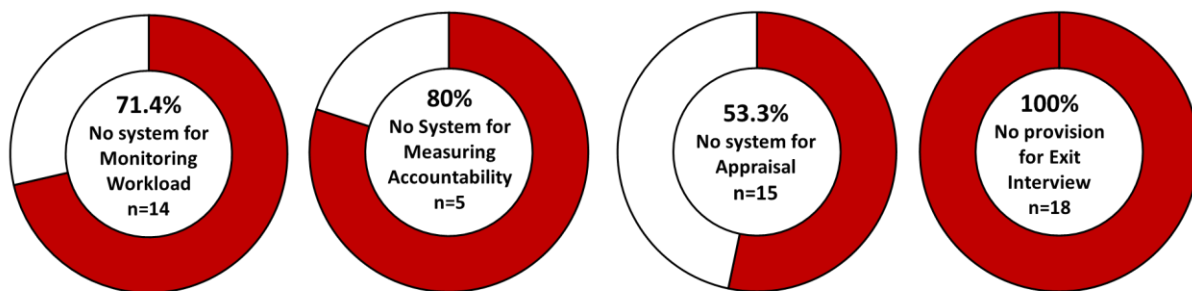
Lack of adequate resources for research (Research Assistant/IT Support in form of PC, software)	91.7%
Lack of support to pursue research	70.8%
Approval to participate in conferences/workshops for personal growth (but not funded)	69.9%
Non-conducive work environment for peer networking	54.9%

Note: These Percentages were derived from number of respondents (management and faculty) with qualitative responses to the question regarding challenges and barriers.

## 2.10. Management Perspective on Faculty Retention

The salaries of medical faculty vary state-wise and depends on the overall budget of the state. At the union level, the income received by medical faculty at autonomous institutions is regulated by the pay commission, which is usually adopted by the states through their State Finance Commissions.<sup>26</sup> **The management across colleges pointed out that as there's no system of monitoring workload (71.4%) of faculty or measuring their accountability (80%); and therefore, no rational system for regular review and enhancement of 'total emoluments' drawn by a faculty.**

Figure 10 - Management feedback on faculty retention in %



The 6<sup>th</sup> pay commission had decided that the Non-Practising Allowance (“NPA”) of doctors would be capped at 25% of basic pay and the total salary, including Dearness Allowance; subjected to a maximum value. The Sixth Pay Commission clarified that, doctors should be provided with the NPA, not only to compensate for the loss of privilege of private practice, but also to compensate for the fact that, the basic medical course is of a longer duration (4 ½ + 1 year internship), and consequently doctors have a shorter effective service period, and that the promotion prospects for doctors are lesser since entry level posts in the cadre of doctors have to be filled by direct recruitment.<sup>27</sup> The Seventh Pay Commission, in 2017, however, revised the NPA to 20% of the basic pay while increasing the threshold of total payable amount to about four times the earlier rate.<sup>28</sup> In 2008, the DA (dearness allowance) component was removed from the equation, but the NPA was brought back to 25% of the basic salary and the maximum value of such salary provided to doctors was almost doubled.<sup>29</sup>

<sup>26</sup> See, DoE order dated 6 Oct, 2004 at <https://doe.gov.in/sites/default/files/06-10-2004.pdf>

<sup>27</sup> See, Report of the Sixth Pay Commission, March 2008 at <https://pensionersportal.gov.in/sixthcpc/paycommissionreport.pdf>

<sup>28</sup> See, DoE notice dated 7 July, 2017 at [https://doe.gov.in/sites/default/files/NPA\\_Medical%20Posts\\_other%20than%20CHS\\_%20Eng.pdf](https://doe.gov.in/sites/default/files/NPA_Medical%20Posts_other%20than%20CHS_%20Eng.pdf)

<sup>29</sup> See, DoE notice dated 30 August, 2008 at <https://doe.gov.in/sites/default/files/30-08-2008.pdf>

***The Management and Faculty interviews revealed that the faculty are not dissatisfied with their overall salary structure per se, but have grievances against select components of overall emolument – (i) NPA, (ii) benefits to foster academics and research.*** There is also a resentment because of mismatch between salaries and benefits of contractual versus regular staff. While regular staff get lesser salary, the other benefits accrued in terms of leave, pension, NPA etc. are higher. However, salary for contractual staff is higher with no benefits, not even casual leaves. The Management Survey further revealed dissatisfaction amongst faculty:

- Lack of parity in total remuneration across specialities of the same cadre, across colleges at inter and intra state levels,
- Lack of parity between contractual and regular staff across cadres, commensurate with responsibility and accountability for each cadre.
- Contractual faculty feel they are exploited and have to work more compared to their regular counterpart in the same position. Regular faculty feel they share greater responsibility and accountability and hence should be remunerated suitably.

### **2.10.1. Absence of Formal Capacity Building Activities**

Secondary research revealed that the ‘Faculty Development Programs’ (FDP) in India have been organized by medical colleges and universities for training the medical teachers, through ‘Basic Courses’ and ‘Advanced Courses’, on pedagogy envisaged to improve the quality of medical education. Globally, researchers believe that curriculum change, emphasizing competencies, lies at the forefront of twenty-first century medical education.

NFDP (National Faculty Development Program) was Initially introduced in 2009 for conducting basic workshops in ‘Medical Education Technologies’ through selected Regional and Nodal Centres located at medical colleges with required infrastructural and trained manpower, so that faculty members can avail modern education technology for teaching. Overtime, the NDFP expanded to include ‘Revised Basic Course Workshop’ in Medical Education Technologies (“**BCW**”) introduced in 2009, training in Attitude, Ethics Communication (“**AETCOM**”) module introduced in 2015, and Curriculum Implementation Support Program (“**CISP**”) introduced in 2018.<sup>30</sup>

However, the movement to competency-based framework is a slow process and requires a qualitative understanding of the aspirations and incentives of the medical faculty throughout their career. For instance, the NMC counterpart in the UK, the General Medical Council (“**GMC**”) recognises medical faculty and GP trainers only after they satisfy seven-point criteria on quality of training, which includes, assessment of whether teachers create a competency-based learning environment for students as described below:<sup>31</sup>

- a. Ensuring safe and effective patient care through training
- b. Establishing and maintaining an environment for learning
- c. Teaching and facilitating learning
- d. Enhancing learning through assessment

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<sup>30</sup> See, AETCOM - NMC, 2018 at [https://www.nmc.org.in/wp-content/uploads/2020/01/AETCOM\\_book.pdf](https://www.nmc.org.in/wp-content/uploads/2020/01/AETCOM_book.pdf), accessed on 27 June, 2021.

<sup>31</sup> For a comprehensive list, please refer to GMC Recognition and approval of trainers at <https://www.gmc-uk.org/education/how-we-quality-assure/medical-schools/recognition-and-approval-of-trainers>, accessed on 23 June, 2021.



- e. Supporting and monitoring educational progress
- f. Guiding personal and professional development
- g. Continuing professional development as an educator

Training of faculty is restricted to NMC mandate on the following topics:

- a. Teaching Techniques
- b. How to better engage students
- c. Teaching Aids and Technology
- d. Writing Research Papers
- e. Patenting

While one of the significant grievances expressed by senior faculty respondents has been on increased administrative burden, without specific training for transitioning into management roles; they have a larger grievance of lack of personal growth opportunity in their respective specialties. **68.4% of faculty at Associate Professor and Professor level reported non-availability of a structured mentoring to an administrative/ managerial role.** Nor are there any structured mentoring program within the college with senior faculty administrators. This creates a self-propagating cycle of disenchantment of faculty in a non-academic role.

### 2.11. Lack of Facility for Academics and Research in Medical Colleges

In terms of availability of infrastructure, primary survey indicates that, while the college has adequate and appropriate infrastructure for academics; the infrastructure and support available for research and stay of faculties is inadequate and inappropriate (Table A1.3).

Secondary research revealed that only 25 (4.3%) medical institutions produced more than 100 papers a year but their contribution was 40.3% of the country's total research output. In comparison, the annual research output of the Massachusetts General Hospital was 4,600 and the Mayo Clinic 3,700. About 57% of Indian medical institution do not have single publication in last 10 years. Most of the publication in India pertains to three medical institutions i.e., AIIMS, PGI Chandigarh and CMC Vellore. Number of papers indexed in PubMed in 5 years block period reveals that India contributes only 3-5% of overall global research (Table 21).<sup>32</sup>

**Table 21 - Research out of India as % of medical research**

Period	World	India (% of World)
1991 – 1995	392354	12079 (3.07%)
1996 – 2000	442000	13282 (3.00%)
2001 – 2005	606000	26016 (4.29%)
2006 – 2010	699420	51815 (7.40%)
2011 - 2015	806326	49219 (5.49%)

Source: Deswal BS, Singhal VK. Problems of medical education in India. *Int J Community Med Public Health* 2016; 3:1905-9.

### 2.12. Quality and Effectiveness of the Current Medical Education System

<sup>32</sup> Source: Deswal BS, Singhal VK. Problems of medical education in India. *Int J Community Med Public Health* 2016; 3:1905-9.

This section has tried to understand the impact of barriers to recruitment and retention on overall quality of medical education and research.

### 2.12.1. The Aspirations of Medical Students

The study revealed that over 88% students prefer studying in a government medical college, for an opportunity to learn (85%) and see more patients (82.3%). Overall institute ranking (76.7%), and one's own ranking in competitive exams are additional considerations for choosing a medical college (refer Table A1.4). Significant number of students do not accord huge importance to teacher-student ratio (54%), proximity to home (54%), quality of research (59%) while choosing a medical college. While students prefer government medical institutions, in terms of career aspiration after studying medicine, the preference to become a professor (40.3%) follows closely next to providing patient care (54.7%) for the students, similar to their faculty (Table 22). Another 35% that are interested in Hospital Management & Research; and are therefore potential candidates for seeking job in medical colleges, given an opportunity.

**Table 22: First preference (career) of medical students in %**

Job Seeking Preferences (n=315)	% Student Respondents Most Inclined to
Join in a Private Clinic/Hospital	169 (53.7%)
Join as a medical teacher	127 (40.3%)
Healthcare Consultant	102 (32.4%)
Managing a hospital	71 (22.5%)
Basic Research in a lab	40 (12.7%)
Pharmaceutical Industry	16 (5.8%)

In terms of preference around job location, most student respondents (77.4%) preferred Metro and Tier-1 cities. And on expected lines almost 39% respondents preferred a work location near their home (Table-23).

**Table 23: First preference (job location) of medical students in %**

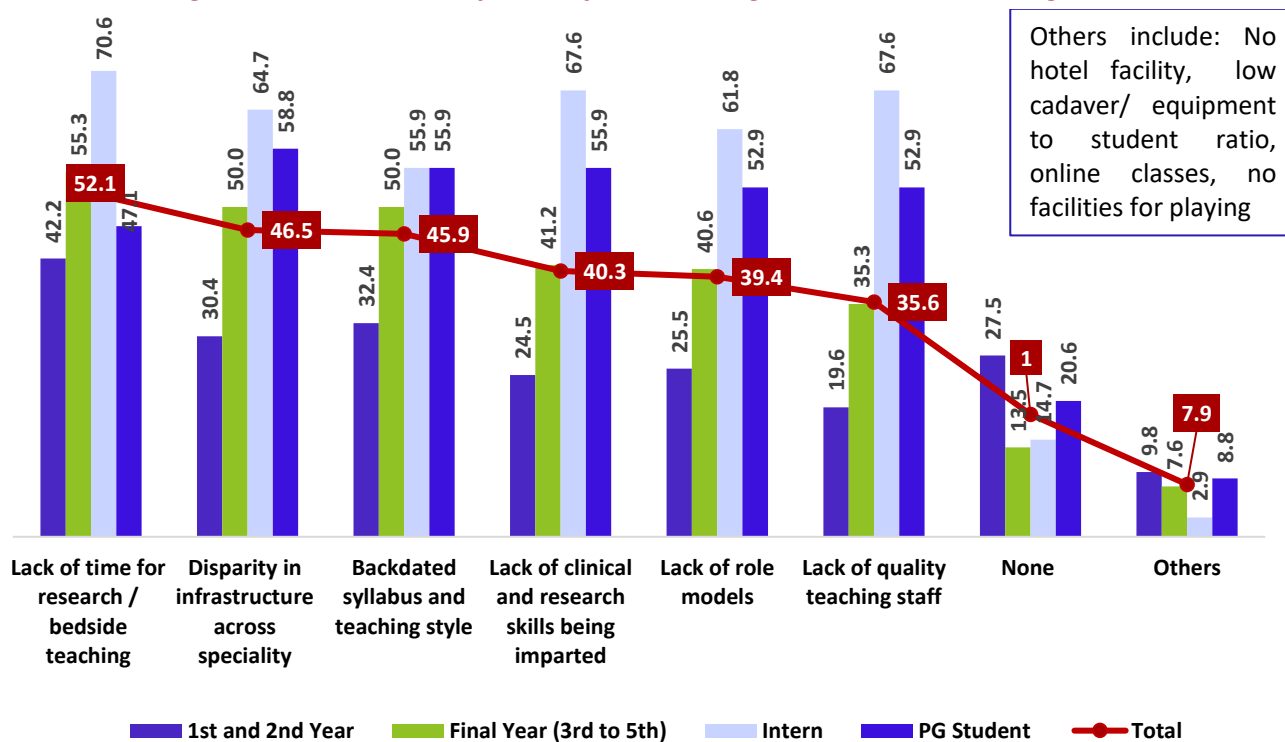
Job Location Preferences (n=318)	In %
Metropolitan City	159 (50.0%)
Near Home	124 (39.0 %)
Non-metropolitan Tier 1 City	87 (27.4%)
State Capital	63 (20.0%)
Tier 2 City	56 (17.6%)
Birthplace	53 (16.7%)
Rural Area	48 (15.1%)
Tier 3 City	34 (10.7%)

Further, on the issue of the extent to which aspiration of students were met after joining the medical college, it was seen that expectations varied as the students matured into the system based on experiences on ground; especially with respect to quality of education. We clubbed the responses of students in pre-clinical years, clinical years and internship and post-graduation years based on growing breadth and depth of their involvement in clinical practice, academics and research. The dissatisfaction levels have grown progressively into internship (65-70%) from clinical years of studentship (40-50%) and somewhat settles mid-way at 55% during post-graduation, as students realise the need to take personal initiative in academics and research, if they seek excellence (refer figure 12).

The topmost reason for dissatisfaction amongst students were:

- (i) lack of time for research or bedside teaching (70.6%),
- (ii) disparity in infrastructure across speciality (64.7%),
- (iii) backdated syllabus & teaching style (55.9%),
- (iv) lack of clinical or research skills being imparted (67.6%),
- (v) lack of role models (61.8%),
- (vi) lack of quality teaching staff (67.6%), and
- (vii) others including, lack of hotel facility, low cadaver/ equipment to student ratio, online classes in these covid times, no facilities for extra-curricular activities within the campus.

**Figure 11 - Current level of dissatisfaction among students with the college in %**



The students informed that:

- 91.3% of the scheduled classes are conducted (n=303), of which
  - 39.9% classes are taken by Senior Residents (n=264), while
  - 48.4% classes are allocated to tutor/assistant professor (n=263), and
  - 44.9% classes are allocated to associate/ professors (n=256)
- 37.8% informed that clinical rounds were not held every day (n=312)






















- 56.9% informed that evening rounds were not held every day (n=209)
- 41.7% informed that bedside teaching is not held every day (n=218)
- 57.3% informed that no system was available to provide feedback on quality of teaching by the concerned faculty (n=314)

While exploring the reasons for dissatisfaction, we deep-dived into adequacy and appropriateness of the infrastructure, which was one of the reasons expressed by the students. The findings from student feedback, was similar to the feedback from the faculty. Students reported inadequacy and inappropriateness primarily around state of art medical equipment, IT facility for academics and research, availability of research assistants and hygienic and ambient amenities at workplace (refer Table A1.6).

- **Student Perception of Contractual versus Regular Faculty**

The *analysis of student satisfaction regarding academics (clinical bedside teaching, evening rounds, clinical grand rounds) against availability of regular and contractual faculty, revealed that student satisfaction levels are higher in colleges with higher percentage of regular faculty @85-100% as against 35-50% in colleges with over 50% of contractual staff (table 24). This can be attributed probably to the increased belongingness of regular faculty for the institute compared to contractual faculty.*

**Table 24 - Student Satisfaction with respect to type of faculty (regular vs contractual)**

S. No.	State	Percentage of Regular/Contractual Faculty	Student Satisfaction Level
1.	Andhra Pradesh	Regular  99% Contractual  1%	 84%
2.	Gujarat	Regular  60% Contractual  40%	 60%
3.	Haryana	Regular  70% Contractual  30%	 85%
4.	Odisha	Regular  80% Contractual  20%	 35%
5.	Rajasthan	Regular  90% Contractual  10%	 100%
6.	Uttarakhand	Regular  10% Contractual  90%	 53%
7.	Chhattisgarh*	Regular  50% Contractual  50%	 40%

Note: Faculty % as per management questionnaire estimates, \*Data from desktop review

- **Student Perception of Private Practice versus No-private Practice:**

Study by Ryan et al revealed that career choices are influenced by role models and informal career advice.<sup>33</sup> Our student survey also reflected strong linkage between private practice and compromised medical education that is statistically significant (Table-25).<sup>34</sup> **The Chi-square test administered to**

<sup>33</sup> Ryan C, Ward E, Jones M. Recruitment and retention of trainee physicians: a retrospective analysis of the motivations and influences on career choice of trainee physicians. QJM. 2018 May 1;111(5):313-318. doi: 10.1093/qjmed/hcy032. PMID: 29452409.

<sup>34</sup> The Chi-square test of independence or association determines whether there is a statistically significant relationship between the categorical variables. It is a hypothesis test that answers the question - do the values of one categorical

**establish the depth of relationship between private practice and medical education reveals strong relationship between private practice and compromised medical education with p-value less than 0.05.** ; Private practice compromises all aspects of medical training; in terms of

- **faculty taking all scheduled classes,**
- **clinical bedside teaching,**
- **evening teaching rounds,**
- **clinical grand rounds.**

**Table 25 - Establishing relationship between private practice and compromised medical education**

<b>Do clinical grand rounds happen daily?</b>	<b>Is Private Practice allowed?</b>		From the data it was evident that there is a relationship between private practice and clinical ground round. It is seen that where the doctors are allowed private practice the <b>proportion of clinical grand round</b> is less compared to where private practice is not allowed.
	Not allowed	Allowed	
Yes	75%	56%	
Pearson Chi2(1) = 9.7632, Pr=0.002; n=303			
<b>Does clinical bedside teaching happen daily?</b>	<b>Is Private Practice allowed?</b>		From the data it was evident that there is a relationship between private practice and bedside teaching. It is seen that where the doctors are allowed private practice the <b>proportion of bedside teaching</b> is less compared to where private practice is not allowed.
	Not allowed	Allowed	
Yes	79%	49%	
Pearson Chi2(1) = 18.0950, Pr=0.000; n=214			
<b>Does evening teaching rounds happen daily?</b>	<b>Is Private Practice allowed?</b>		From the data it was evident that there is a relationship between private practice and evening round teaching. It is seen that where the doctors are allowed private practice the <b>proportion of evening round teaching</b> is less compared to where private practice is not allowed.
	Not allowed	Allowed	
Yes	59%	35%	
Pearson Chi2(1) = 11.0488, Pr=0.001; n=205			
<b>Does all faculty take classes as per schedule?</b>	<b>Is Private Practice allowed?</b>		From the data it was evident that there is a relationship between private practice and taking classes as per the schedule. It is seen that where the doctors are allowed private practice the <b>proportion of scheduled classes</b> is less happening as compared to where private practice is not allowed.
	Not allowed	Allowed	
Yes	96%	87%	
Pearson Chi2(1) = 5.6269, Pr=0.018; n=303			

Source: SahaManthran analysis based on primary survey data

However, the management response to the perceived dissatisfaction of students was varied across colleges and State DMETs. Study state medical colleges and DMET at TN and Rajasthan supported the merit of permitting private practice, in terms of increasing access to specialised care to all at affordable cost. They further elaborated that, such practice allowed the interns and PG students to see more patients, and provided them opportunity of greater hands-on learning, and to earn some extra income while studying.

However, management in Delhi study college was against private practice and believed that it has a potential to modify the young minds around what is ethics, ethical practice, time spent around academic excellence, which in turn could potentially impact the brand of the institute, its culture; creating a vicious downward spiral for medical education at large and the Medical College in specific.

Odisha college management had a neutral take and accepted that private practice is here to stay at least for the clinicians whether NPA is given or not; and therefore, has accepted it as it is.

### 2.13. Role of institutions in regulation and governance of medical education

In order to have a streamlined recruitment and retention of faculty, effective functioning of the medical education ecosystem is critical. Therefore, we undertook secondary research of the

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variable depend on the value of other categorical variables: The Null Hypothesis presumes that there's no relationships between private practice and clinical teachings. The Alternative hypothesis: establishes that there's a relationship between private practice and clinical teachings

governance and management system of 12 states and compared it with international best practices (US, UK, Canada, Korea, Brazil). One of the reasons for the existing challenges to recruitment and retention, as assessed from secondary research, was the lack of role clarity between the agencies for regulating, governing, and managing the medical education in the states. Our secondary research revealed that:

- **Role of NMC is clearly regulatory** - to lay down policies for maintaining a high quality and high standards in medical education and make necessary regulations in this behalf, amongst many other functions. **Role of DMET, however, is not clear.** Going through the objectives/ roles and responsibilities of the DMET of various states, it was observed that the DMET may also have a regulatory role rather than an executive function. So there seems to be an **overlap between DMET and NMC.** Ideally the regulatory roles are shared by the federal and state/provincial councils; the state/provincial medical education department shares an administrative and management role for all colleges; and the medical colleges implements the decisions taken therein (*refer section 3.5-3.7 for details*).
- Further, a study of objectives, roles and responsibilities of the departments of medical education of the sample states, shows that **only a few have shared their intent (through citizen's charter) on imparting quality medical education** (AP, Assam, & TN) – and guidance in terms of “*service standards*” expected for medical education and related aspects like<sup>35</sup>
  - Classes as per regulations or guidance, conducting regular theory and practical classes ICMR Projects, seminars and Integrated teaching,
  - Conduction of tests, internal assessments and university examinations as per guidance,
  - Faculty development , conducting workshops for training medical teachers, CME's seminars, Research Methodology,
  - Post Graduate Teaching- Clinical Postings and Training , Dissertation work ,Theory and Practical's, Seminars and Journal Clubs,
  - Conducting regular CME for the Post Graduates and Faculty as per guidance.

For rest of the states, medical education, though is the thrust of their work, the roles and responsibilities differ in terms of their focus on transactional matters such as:

- development of specialties and super specialties at government institutes,
- state of art technology and procurement of latest equipment,
- rights to cancel letter of intent (LoI), no-objection certificate (NoC) or essential certifications of colleges,
- creation of educational institutes and infrastructures,
- admissions of students and functions related to admissions.

As per the response from interviews with DME officials, all strategize to increase the number of medical colleges to three times the current numbers, though there isn't much thought given to planning of faculty recruitment and development, and other aspects of medical education.

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<sup>35</sup> [https://dme.ap.nic.in/DME\\_Citizen\\_%20Charter1.pdf](https://dme.ap.nic.in/DME_Citizen_%20Charter1.pdf); <https://dme.assam.gov.in/resource/citizens-charter-1>; accessed on 15 Apr. 22.



- Furthermore, ***there is no Human Resource (HR) department in any college/state***, with the same objective of capacity building of faculty in the college, ***similar to the separate administrative cadre in Armed Forces Medical Core (AFMC)***.
- Rajasthan and Gujarat have created separate structure under Society's Act for creation of Medical Colleges that are attached to District Hospitals. These operate primarily as National Health Mission, with great flexibility, autonomy and facilitate hiring of staff primarily as contractual hires at rates higher/ different than the regular packages.
  - The societies are also headed by Administrative Officers and Technical experts from the state services.
  - The Gujarat Medical and Education Research Society (GMERS), is farther from the Rajasthan model, with its charter ensuring self-sustainability by fixing fees at market rates and paying its faculty at market rates.
- The Medical Recruitment Board (MRB) created in UKD and TN operates as an extension of State Public Service Commission to facilitate direct recruitment, in a speedy manner, keeping in view the nature, importance and essentiality of the faculty positions.
  - ***The MRB was constituted by the Government of Tamil Nadu in G.O. (Ms) No.1, Health and Family Welfare (C2) Department dated 02.01.2012, headed by a State Administrative Officer with all clearances under one roof. Prior to the formation of MRB, the authority for the direct recruitment was vested with different officials of the various directorates, and hence process delays in various levels of approval.***



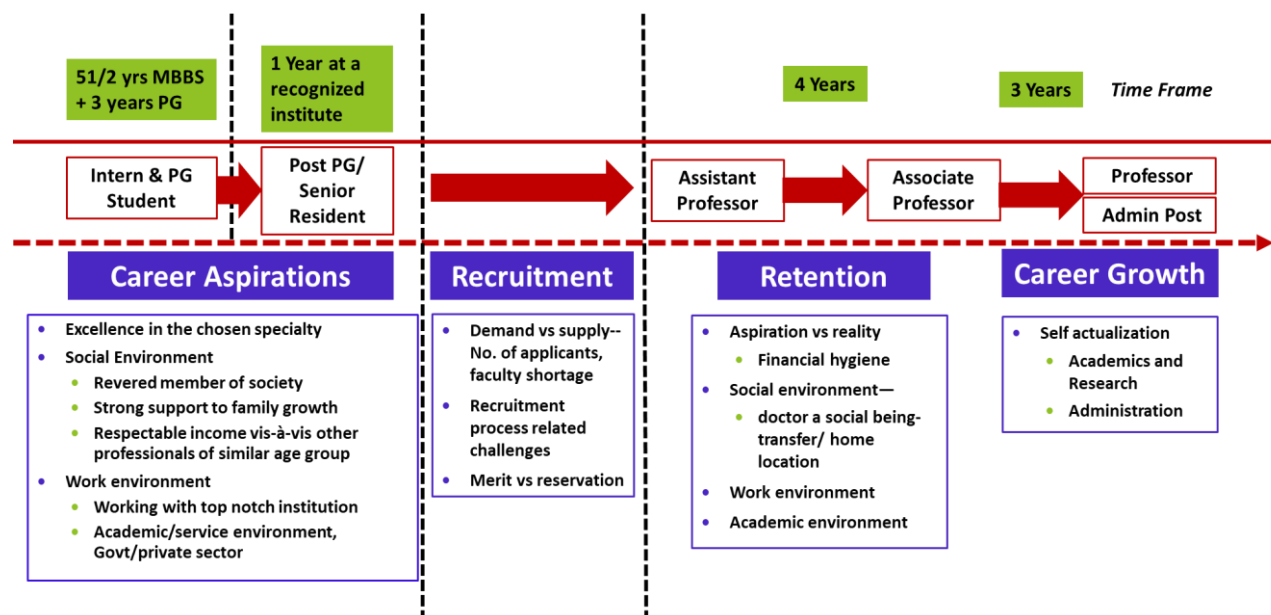
# Chapter 3 – Analysis & Recommendation



### 3.1. Key Recommendation Emerging from a Lifecycle Approach to Medical Education

The lifecycle of a medical student choosing a career in medicine spans over 12-15 years, traversing through three stages as shown in the figure 13 below. The career aspirations of a medical graduate develops primarily from the past experiences of their seniors/ parents, which gets corrected and/or rationalised when the aspiring student faces the job market challenges. The aspirations finally gets aligned with the organization that matches closest to their expectations in terms of socio-economic gains, resulting in retention of the individual within the select organization or medical college. Secondary literature suggests that the greater the alignment between personal goals of individuals with that of the organization, the better is the ability of the organization to retain talent.<sup>36</sup>

**Figure 12 - Lifecycle of a Medical Faculty Professional**



Therefore, we used a systems framework (Figure 13) to analyse our findings, its interlinkages across the variables and their impact. This **Talent Management Framework is a demystified representation of the complexity in the HR value chain interlinking the intrinsic motivation/ aspirations of the medical faculty with recruitment, onboarding and retention.**

The **'Talent Planning'** in the case of medical education draws its guidelines from the NMC requirements that is primarily based on the levels of annual intake of students, to operationalise a medical college. The **'Talent Acquisition'** is a factor of intrinsic and extrinsic elements that motivates an individual to choose career in a medical college. Intrinsic elements are demand side elements that are aspirational in nature for an individual; recruitment and on-boarding process are supply side elements of talent acquisition. Extrinsic elements are all other supply side variables/ influencers such as - the institution's brand, culture around medical education, and research that attracts people to choose the teaching profession; and overall vacancies arising out of an increasing intake of medical students into the system. The **'Talent Retention'** refers to building capacity and developing the faculty,

<sup>36</sup> Lowenstein SR, Fernandez G, Crane LA. Medical school faculty discontent: prevalence and predictors of intent to leave academic careers. BMC Med Educ 2007; 7:37

engaging with faculty, and strategizing for career growth and development of faculty, to retain the talent within the medical education system in spite of attractive career alternatives.

## 3.2. Talent Planning

The biggest challenge to planning for recruitment as evidenced in the study is the lack of reliable data on exact number of faculty, the vacancies, or even practicing doctors in each state and in each medical college across the country.

### 3.2.1. Information Asymmetry

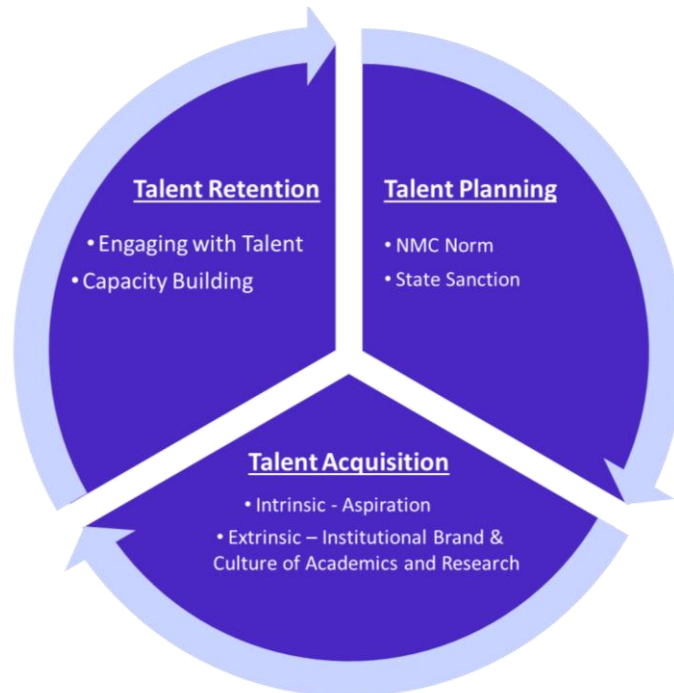
Primary reason for this challenge is the duplication of registration of doctors. The law permits a doctor to register in more than one state; i.e., in the state of graduation, post-graduation, and the state/s s/he practices; with all registration/s remaining live perennially. It gets further complicated due to the transfer of faculty to colleges within the state during NMC inspections/audits; to manage compliance to the NMC requirements. Mismatch between the rate of faculty recruitment and movement/ exit of existing faculty leads to piling up of avoidable vacancies over time.

This not only defeats the purpose of the NMC guidelines, but also adds to the lack of visibility on faculty vacancies at a macro level to support planning. Thus, each college makes its own faculty acquisition plan, without much visibility into the actual vacancy levels across the state. In fact, such ad hoc transfers create a mirage of faculty shortage (inclusive of regular and contractual faculty) for state planning. Further, the state-level variation in recruitment timelines and its uncertainties, distorts the demand side information for the prospective medical faculty about vacancies, at state and national levels.

Therefore, based on the study findings, it is recommended that:

- a. Each student (potential faculty) entering medical education be provided with a **unique pan-India ID number, to track a medical professional through their entire career**. This should be legally mandated for medical professionals similar to ITR filing to ensure accountability. This will avoid duplication and ensure availability of a reliable macro level data on pool of doctors across various career streams, specialties and sub-specialties.
- b. To begin with, a **nation-wide database only for the medical college faculty— ‘Centralized Registry’** could be maintained by NMC and made publicly available, just like UGC portal (see box below). This will:
  - prevent medical colleges to resort to ad hoc appointment of faculty for NMC inspection.

**Figure 13 - Framework for Talent Management**





- Line list medical faculty qualified to teach throughout India, which can be used to hire even the retired faculty as teachers for specific periods
- A reliable information on faculty pool on a digitized platform for recruitment, and regular cycle of faculty planning and recruitment will also ensure visibility to the faculty promotions and retirements.

This recommendation is in line with the **academic job portal maintained by the University Grant Commission (UGC) for NET/SET/Ph.D.** qualified candidates to bring their academic profile to the attention of universities/colleges and other employers with the ultimate aim to bridge the gap between demand and supply with adequate and appropriate position every time, and also generate visibility around additional job opportunities across the country. All vacancies anywhere in India, is compulsorily advertised on this portal, so that all interested candidates can get to know about vacancies through this platform, thus streamlines the information flow.

#### **UGC Recruitment Process for Higher Education Institutes (HEIs)**

- Non-prescriptive:** Institutes are asked to follow the selection process as per their Acts, Statutes or constituent documents and, in accordance with the UGC (*Minimum Qualifications for Appointment of Teachers and other Academic Staff in Universities and Colleges and other Measures for the Maintenance of Standards in Higher Education*) Regulations, 2018.
- Online, centralized portal for candidates:** HEIs should, however, ensure that all the vacant posts, along with the details of reservations, are uploaded on the online portal <<https://ugc.ac.in/uamp/>>. The monitoring of the filling up of the vacancies would be done by the MHRD and UGC through this portal.
- Time period for selection prescribed:** HEIs should initiate and complete the selection process within a period of 6 months.

In the United Kingdom, all doctors, including medical faculty are registered with the General Medical Council (GMC), that maintains a medical register.<sup>37</sup> The GMC Medical Register boasts of having signed entry of Dr Alexander Fleming, Professor of Bacteriology at St. Mary's Hospital in London in its register, the discoverer of penicillin, in 1928. The USA, on the other hand generates the data base of US medical doctors and faculty at the state levels (there are about 70 state medical boards), and presents it to centralized level through a Federation of State Medical Boards (FSMB) for compilation.<sup>38</sup>

Recruitment planning apart, the lack of visibility on the faculty pool available at the state as well as country level, makes it difficult to take proactive and informed decisions on (i) increasing the medical student intake; (ii) opening new medical colleges; (iii) additional resource planning to cater to the needs corresponding to increased seats (in terms of teaching facilities, experimental lab facilities, residential and hostel, among others). For instance, opening of eleven new AIIMS in various states, without commensurate focus on increasing faculty pool over time, has encouraged movement of senior faculty from existing medical colleges in those states, thus adding to the burden of vacancy in

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<sup>37</sup> <https://www.gmc-uk.org/registration-and-licensing/the-medical-register/a-guide-to-the-medical-register>

<sup>38</sup> <https://www.fsmb.org/education/>



the existing medical colleges. The ensuing faculty shortage because of vacancy gets translated into poor student/ teacher ratio, and adversely impacts teaching outcome.

### 3.2.2. Recruitment process barriers

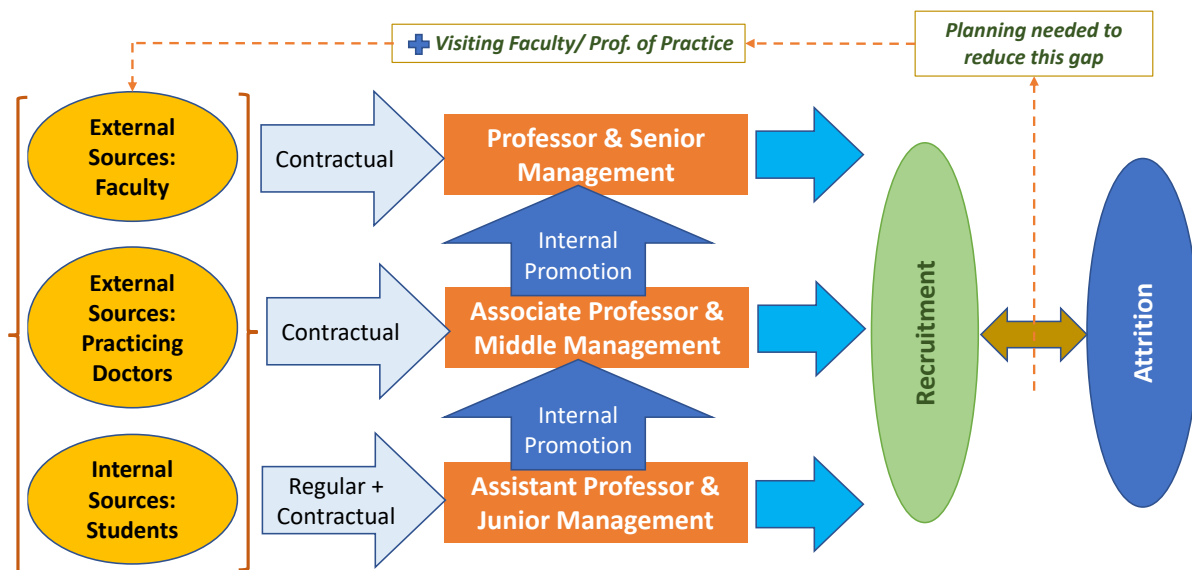
Sanctioning new regular positions through the layers of government approval process is a significant reason of delay as well as *uncertainty* around timelines (there is no fixed time that could be associated with this approval process). Although, once the position is sanctioned, the recruitment process is fairly time-bound.

- The approval process could very well be managed if selection committee could be mandated to sit regularly with a clear visibility on the overall faculty positions and potential applicants at the state level. Typically, states that depend on SPSC have such delays because of the burden on SPSC to process recruitments across all departments in the state, not just medical colleges. **States therefore can constitute MRBs (Medical Recruitment Board) to convene regular selection committee meetings to streamline medical faculty planning and recruitment.**
- **If this regular planning and recruitment cycle, were to be achieved, then the need for ad hoc or contract faculty will be limited to bridging the gap for the interim period in a regular recruitment cycle.** While the feedback from management of many colleges was for more autonomy to recruit faculty, **study reveals that a centralised faculty recruitment process successfully implemented through MRB could eliminate the need for contractual appointments.**
- **The colleges can be given autonomy for (i) contractual hires to the extent of delay in recruitment cycle, which some of them currently already have; (ii) and roll out of appointment letters for faculty getting posted in their college;** thus, saving energy and time of MRB only for planning, advertisement and selection of appropriate candidate for each medical college at the state level.
- The contractual faculty interested in continuing in academics can be considered for regularisation over a considered period of time and based on minimum performance criteria (to be set for such regularization), similar to a **blended Contractual-Regularization model adopted by ILBS.** This should act as an incentive to contract faculty for giving commitment for their academic responsibilities. **Longer duration of regularised contract, like Liver and Biliary Sciences (ILBS) and Rajiv Gandhi Cancer Institute, on regular contract of 4 year period each, with appraisal by an institute committee and external subject matter experts to decide on extension for next 4 year period.**
- The current SPSC/MRB composition doesn't include representation of key stakeholders like public health, medical education, family welfare, women and child, finance, establishment etc. under one committee, similar to that in TN model. The TN model with 9 directorates participating together in talent recruitment from medical colleges at the stage of internship, similar to campus recruitment in MBA and Engineering programs offers one stop solution, to discuss and advice the candidates on the best option for career progression within the system. **Using a committee composition that is more inclusive of various domain experts critical to medical education ecosystem not only helps taking informed decisions impacting various components of the ecosystem, but also hastens the decision making and approval process.**

### 3.2.3. Capturing the Student Pool at the Graduation Level

In the planning process, understanding the talent pool from where faculty can be sourced, is critical to assure excellence in the apex institutes (medical colleges) of public healthcare delivery system. The input to the funnel for a career in academics, stems from the universal set of students enrolling for medical education. As can be seen (figure 15), the major input to the faculty pool are the students who pursue medical education, and the existing faculty in the medical education system. External lateral hires (practicing doctors or even adjunct faculty) currently are not a significant practice across the country. From the demand side, the determinants are the NMC norms and positions sanctioned by the state.

**Figure 14 - End-to-end Talent Sourcing**



The total talent pool is a factor determined by the demand and supply of candidates for the given faculty positions. The survey indicates that nearly 40.3% of the respondents, at various levels of their student life, do prefer to join a career in medical teaching (Table 22). Add to that about 12.9% of the student respondents who have shown preference for a career in “Hospital Management”, and 7.3% for a career in “Basic Research”. Both of these career aspirations can very well be utilised in career streams related to medical education ecosystem.

One of the ways other industry professions take care of the talent pool is to catch them early – essentially go in for campus selection in undergraduate colleges and recruit the students before they start exploring alternate career streams post-graduation. One of the constant refrains from the faculty and management respondents, has been that for each vacancy they get a deluge of applications, hence there was no need for an IIT/IIM kind of a campus recruitment system. **Facts around shortage of faculty, however, point towards the need for a proactive approach, as against the current passive advertise-to-recruit strategy:**

- A faculty position is competing against a private sector job as medical practitioner or researcher, with a relatively higher financial remuneration.
- Capturing the aspirations of a medical undergraduate through campus selection, from a larger and better talent pool, helps the student/s to remove uncertainty from his/her career and showcases a clearer time-bound path to an academic career; and



- c. Planning for faculty vacancies becomes more streamlined.

***The TNMSC CTP Policy will go well with this end-to-end HR thinking, by considering participants at each stage in the lifecycle of a medical student, as potential candidates for medical faculty.*** TN under its CTP policy provides the students pre-placement offers during their final year (campus hires), are assisted in selection of their choice of post-graduation, and post a mandatory one-year probation, are automatically regularised at an Assistant Professor level. ***The decadal learning and success of TNMSC CTP in Tamil Nadu medical education system, is worth emulating in other states.***

#### **3.2.4. Lateral Entry into Faculty Pool – Professor of Practice**

The study revealed that while Visiting Consultant hiring has been permitted by NMC for lateral entry of faculty at a professor level in medical colleges, deans were not comfortable using that option, because of lack of accountability on the part of these senior professors. In fact a petition was filed by faculty in Punjab to disallow the lateral entrants, as they cannot be considered as equivalent to other regular appointees within the system.<sup>39</sup> While instances of lateral entry in select specialities have been reported in some states, such as in Andhra Pradesh at the Assistant Professor level, and at Professor level in all specialities in Odisha; it is merely akin to well-defined regular or contractual recruitment of faculty.<sup>40</sup> It is nowhere similar to the mid-career entry of distinguished professionals and industry practitioners into teaching as “**Professor of Practice (PoP)**” in IITs and IIMs.<sup>41</sup>

The premise here is that a mid-career doctor, just like their counterpart in engineering and management profession, irrespective of their affiliation to private sector and commensurate financial remuneration, may like to come back to teaching and contribute to medical education and research and share unique industry experience with the students. However, there’s currently no established practice of lateral recruitment of “Professor of Practice”, to cater to the growing requirements of trained faculty. The system in IITs can be explored by the government and standardized to support hiring of PoP in the country, in line with lateral entry of ad hoc or permanent faculty, of industry practitioners into engineering colleges and management institutes as shown in (box below). The UGC, the regulator of higher education in India, has acknowledged the requirement of augmenting faculty resources by utilizing the services of superannuated academics, reputed scientists, engineers, physicians, both serving and retired. The guidelines could include:

- a. **Continuous Professional Development:** Mandatory participation in teacher training programs, prior to joining as a faculty, similar to the practice in NHS UK – General Medical Council (“GMC”) recognizing medical faculty and GP trainers only after they satisfy seven-point criteria on quality of training and Continuing Professional Development (CPD).
- b. **Separate Clinical and Academic Career Paths:** That cut off for such lateral entry as a teacher can be 15 years as in IITs to ensure that they have adequate industry knowledge to share with the students. Sahai (2016) suggests introduction of the ***concept of clinical teachers for clinical work, and academic teachers for teaching, projects and research work*** and make allowance

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<sup>39</sup> <https://www.tribuneindia.com/news/archive/punjab/50-interview-marks-for-medical-faculty-stir-row-762783>

<sup>40</sup> [https://dme.ap.nic.in/E11/2021/NOTIFICATION\\_Jul2021\\_270721.pdf](https://dme.ap.nic.in/E11/2021/NOTIFICATION_Jul2021_270721.pdf)

<sup>41</sup> <https://www.iiitd.ac.in/careers/pop>

for floating posts to attract the best adjunct faculty, visiting faculty, distinguished professor, etc.<sup>42</sup>.

- c. **Define Standards for Recruitment of PoP:** That such faculty are hired with the same degree of rigor as adopted for full-time faculty so that the right type of candidate is identified for such assignments. It is also necessary to have uniformity and transparency in the process of hiring PoP in institutions of higher education.

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<sup>42</sup> [https://asiindia.in/Previous-Issues/2016%20dec%20issue/Medical-Education-in-India--Introspection--Cha\\_2016\\_Journal-of-the-Anatomica.pdf](https://asiindia.in/Previous-Issues/2016%20dec%20issue/Medical-Education-in-India--Introspection--Cha_2016_Journal-of-the-Anatomica.pdf) accessed on 4 July, 2021



- d. **Objective & Transparent Process for Recruitment of PoP:** That the process be objective and transparent, by making the qualification criteria fair and transparent, and cadre entry, promotion, and salary levels be in line with system for existing faculty.

#### **Professor of Practice Appointment in Indraprastha Institute of Information Technology, Delhi (IIITD)**

Appointees in the Professor of Practice category are distinguished professionals, either practicing or retired. A few may have traditional academic backgrounds, but most do not. The working title of Professor of Practice helps promote the integration of academic scholarship with practical experience. PoP Appointees provide an understanding of the practical applications of a particular field of medical study to faculty, undergraduate students, and graduate students. These positions will be limited-term contractual positions, and will be for the purpose of teaching courses, advising students, and setting up research collaborations in areas related to their expertise and experience.

**1. Responsibilities/Expectations:** They may be involved in designing and teaching courses, research and development activities, setting up research collaborations, promoting industry-institute linkages, consulting assignments, entrepreneurship-related activities, contribute in placement-related activities and other institutional initiatives.

**2. Appointment Method:** These positions will be offered on a consolidated basis for a limited period of up to 3 years. The appointment may be on full-time or part-time basis. Appointment is done through a Faculty Selection Committee with at least two industry experts.

#### **3. Terms of Appointment and Compensation:**

**(a) Appointment duration:** Typical appointment will be up to three years. Full Time/ Part Time appointment is given based on the tasks identified and responsibilities assigned.

**(b) Profile:** Selected candidates will be persons of repute/eminence (typically be or have been senior managers) with a strong track record with substantial contributions to their fields and currently have extensive networks of contacts in the field. They will be people who have the potential to contribute uniquely and substantially to the Institute and in the field of engineering.

**(c) Eligibility Criteria:** The eligibility criteria and the necessary qualifications will be based on the courses and/or research activities for which such faculty are being hired. The candidates must preferably hold a PhD, but it is not an essential criterion. However, this requirement will be waived if she/he is a graduate in any discipline from a reputed educational institute with over 15 years of industry experience for Professor of Practice. The applicant will have specialist knowledge in the domain, expertise that will complement the available expertise within IIIT-Delhi and be able to bring practice-oriented teaching frameworks into the classroom.

**(d) Compensation:** The overall compensation will be equivalent to that of a professor in the visiting faculty consolidated scale, which is defined from time to time by the Board. The compensation of a part-time faculty is proportionate to the number of days expected in the appointment (e.g., a half-time appointment will be offered half of the full-time consolidated). The part-time faculty member is paid proportionate remuneration to the weekly workload of the full-time faculty member. Additional allowances may be permitted by the Director on a case-by-case basis.

**(e) Housing:** These faculty members will not be eligible for campus housing.

**5. Terms of service:** This category does not convey membership in the Academic Senate. Appointees in this category are not eligible for sabbatical leave, but are eligible for other types of leave with pay in accordance with the institute's policies.

**6. General Information and Conditions:** Since it is a rolling advertisement, positions will remain open until filled. Applications received will be reviewed once a semester against positions not filled.

### **3.3. Talent Retention: Creating an Ecosystem**



### 3.3.1. Creating an Objective Performance Appraisal System

In terms of type of medical colleges, and their response to aspirations of medical faculty, the survey indicated that the autonomous medical colleges such as AIIMS, Delhi and PGI Chandigarh are able to foster an overall engaging and thriving environment for their faculty because of their ability to attract talented individuals by recognising and rewarding merit. However almost all management respondents gave feedback that either the colleges didn't have a comprehensive performance management system, and whatever appraisal system they had, was hardly used to assess and reward good performance. Annual Confidential Reports (ACRs) were never reliable, since colleagues generally didn't write adverse or objective comments for two primary reasons –

- (a) to maintain the congenial atmosphere through their tenure within and outside the department/institute, and
- (b) to continue that relationship so that post retirement contractual positions could be bagged by senior faculty.

There are two workarounds to this cultural aspect around an objective performance appraisal system, both of which segregate the annual performance appraisal system from the promotion appraisal system:

#### a. Best Practice at All India Institute of Medical Sciences (AIIMS)

In institutes like AIIMS, annual appraisal system is a reasonably filial system of giving feedback and standard ratings commensurate with annual increment. There is hardly any differentiation reflected in the appraisal ratings (i.e., no bell curve assessment is used).

- However, the appraisal for promotions is far more rigorous and is carried out by a committee constituted by not only faculty from the same college, but also **experts from outside** the college system.
- **All the positions are open positions**, which essentially means that the inhouse prospective faculty competes with other potential faculty from all over the country. In this assessment, all possible inputs including academic performance, research output, clinical performance, annual appraisal ratings, personality assessment, are taken into consideration during the interviews.
- The signalling effect of this process is that **promotions to the next level are not automatic** and is eventually dependent on the merit of the candidate, irrespective of their performance assessment in annual appraisal cycles.

#### b. Best Practice at Institute of Liver and Biliary Sciences (ILBS) & Rajiv Gandhi Cancer Institute (RGCI)

In institutes like ILBS and RGCI, **each faculty is contracted for a period of 4 years**, at the end of which they are appraised by a committee of institute's internal faculty and **subject matter experts from outside**.

- All inputs including academic, research and clinical performance, annual ratings are taken into considerations for movement to the next level at ILBS. While the idea has never been to remove faculty for bad performance, there have been instances of non-renewal of contracts post this appraisal, for non-performing outliers. This has acted as a strong signal to the faculty on significance of merit.



- **Those whose contracts are renewed, progress on the same pay scale** (salary and emoluments continue as if that faculty has never left his/her job).

An objective appraisal system has to have key performance indicators (KPI) at its core, in line with a set of outcomes desired by the medical college, or aligned to the state's broader healthcare education goals. This could include, at the least, indicators for (a) teaching and learning outcomes, (b) research outcomes, and (c) healthcare delivery outcomes. KPIs for similar outcomes can be found in National Institutional Ranking Framework (NIRF), which is used for ranking institutions of higher education in India (Refer Annexuree-3).

**c. Incentivizing to retain talent – “Pay-for-Performance”**

- Incentivising performance in ILBS happens by allowing **Pay-4-Performance, with** faculty receiving additional allowance (**approx. 10- 25%**) of the **OPD/ IPD fees for patients** they handle; over and above their salary.
- Under the Chief Minister's comprehensive Health Insurance Scheme in Tamil Nadu, a sharing pattern has been devised for fees accruing to Government Hospitals-- 15% of the share is given as incentive to the medical team, encouraging faculty undertaking private practice, to admit patients (especially from BPL category) to government hospitals for specialised surgeries (GO (Ms) No. 22, 21 January 2016).
- Allowance and Sabbatical for research and academics as in AIIMS.

### 3.4. Creating a Career Path for Faculty

In their career path, medical faculty have to often take up administrative roles of managing the departments, college and the accompanying hospital operations. The survey shows that most clinicians are not inclined to, nor are they temperamentally suited for such roles. They felt that such roles imposed huge workload equivalent to the existing clinical and academic workload; implying handling two full-time roles within one position, for which they are neither inclined nor trained for; nor are suitably compensated for. Also, the study revealed a set of students aspiring for administrative jobs. Therefore, the study recommends that:

- Create a separate professionally trained administrative cadre for managing the hospital operations and college administration of the institute from the junior faculty pool or create separate 'Hospital Administration' cadre like in INIs. Professionally trained hospital administration team will ensure implementation of administrative decisions taken by the technical heads of the institution (dean and medical director) – 'Medical Superintendent' of the hospital functions of medical college, or 'Registrar' of the college, as in AIIMS or other INIs.***
  - The feedback from most management respondents to this suggestion was positive and they felt that this specialised hospital administration team would be a great value-add in execution of administrative and academic decisions, compared to clinicians, who are usually not knowledgeable about regulations and quality practices in managing a medical college; and also, are unable to spare time because of increased patient loads in medical college OPDs.
  - In medical colleges clinicians who are academicians are best positioned to take decisions with a techno-managerial professional from hospital management to support execution of decisions.



- Also, this team being from medical background, understand the nuances of a hospital and medical college, and thus can ensure seamless implementation of administrative decisions, which takes away a lot of the time of the clinicians from the academic and patient care work.

b. For an organization like Medical College, not all faculty, at a certain seniority, will/can be automatically promoted to an administrative position. And a suggested solution, in line with similar practice in private sector organizations, would be to **“plan the career path” of a faculty getting promoted to an administrative position.**

- Shortlisting such pool of faculty for a planned career path, calls for

- i. use of their inherent interest to get into a responsible leadership position in stream of:
  - a) academics & research,
  - b) patient care provision as a clinician,
  - c) patient care provision as a hospital administrator;as each of these is an executive position and requires full time dedication for the particular role,
- ii. having a structure to manage the academic activities of such faculty moving away to admin roles:
  - a) offer a lighter teaching load;
  - b) consider an exemption from teaching duties for that faculty member;
  - c) provide more flexibility with time commitments.

- All those faculty candidates in contention for administrative positions could be trained through structured courses and experiential journeys early on in their career during graduation so that, as and when they get promoted to these responsible administrative positions, they are ready for it.
- The other option could be rotational headship of departments for all potential senior faculty members, to reduce burden on one/select clinicians in the department. Rotation every two years is a common duration among senior most faculty in most engineering colleges.
- Mentoring role by senior faculty will be a great way of preparing the individual to take up a leadership role in the institute. This could either be for an administrative position or in academic and/or research field. Learning from a peer has been proven to be far more effective than a formal training process. However, a proper system for mentoring needs to be set up rather than an ad hoc practice of advice from seniors and peers.

c. **A dedicated HR team within each medical college** would go a long way to address this creation of admin cadre and career pathways for individual faculty members. And individual hospital HR would be able to take care of the individual peculiarities in the college ecosystem to make a workable plan. A centralized ACR-related performance management system is not a robust or comprehensive HR management system.

#### QUICK FACTS

Columbia University Irving Medical Centre offers faculty who currently have leadership/management responsibilities, or who wish to include these in their career goals, an annual Leadership and Management Course. The four-day program helps participants develop knowledge and skills necessary for current and future leadership positions in the academic health sciences.

### 3.5. Creating an Ecosystem for Medical Research

As noted in earlier section on research output, a lot is left desired in Indian medical education ecosystem. Two of the key reasons for such poor results in research world are:

- a. **Lack of a culture of research activities and industry academia collaboration:** The current mechanism to motivate faculty to publish research is linked to their promotions. However, the pathway for medical college institutes to foster an environment that encourages faculty to seek research grants and incentivize research and publications is absent in the current policy framework. While there is a general lack of research productivity in India, premier autonomous institutes such as the Indian Institutes of Management (IIMs), the Indian Institutes of Technology (IITs), and the Central Universities (CUs) established by the central government fare better in research output in India in comparison.
  - *While research culture is ingrained in institutes like IITs, feedback seems to indicate that, contrary to perception, research work and output is limited to a low percentage of the faculty. Moreover, by linking published papers with promotion, applied research activities with an industry-academia flavour is almost discouraged, because such applied research usually doesn't result in published papers.*
  - Invariably the feedback has been that much of the culture setting is dependent on institutes' leadership. In fact, a lot of improvement in IIT research rankings recently have happened because of publication of papers in international journals, thanks to the push of Human Resource Ministry (HRM) to benchmark IITs to international peers.
  - **Even in AIIMS, New Delhi that has a better leadership and culture of research, there is almost a discouragement on applied research with industry-academia partnership.** Engineering or Medical education are applied sciences and institutes of excellence therefore should be expected to prioritize *applied research* - research that can have a direct bearing on a product and/or process of a commercial nature. So, it makes sense that current line of thinking of (basic sciences) research resulting in publishing papers, is shifted towards a better industry-academia induced applied research. This is also an area which most faculty or prospective faculty would be excited about, given the massive investment on health technology ventures worldwide.
- b. **Lack of hard research infrastructure** Clearly there is lack of state-of-art hard infrastructure in terms of lab facilities, research labs, IT & Computing infrastructure, libraries, which affects the ability to carry out high end medical research. At the beginning of a medical student career, this may dampen the enthusiasm for research-led career path. At the senior faculty level, this will dampen their enthusiasm to explore new areas of research or even deep dive on their existing areas of research, the likely outcome being either stopping any meaningful research or look for better research opportunities in private research labs offering better alternatives (primary reference here is to pharma research labs, but over the last decade other center of excellence has also taken shape in India.

*Industry sponsored applied research, noted above, will also take care of this critical aspect of research - need of funding for setting up research center of excellence. And this will include*



enhanced use of support staff and research assistants, which is also a dampener in current research ecosystem in most colleges.

### c. Lack of soft research infrastructure

Interventions on softer aspects of research infrastructure include enhanced engagement within the academic ecosystem –

- faculty exchange program with international universities,
- research conferences in chosen area of specialization,
- proctorship with reputed medical equipment/ devices companies,
- co-development of clinical procedures, developing optimized utilization techniques on equipment, training on new equipment modalities, etc.

Some aspects like conferences etc., are supported liberally in Institutes like AIIMS and PGI Chandigarh. While it would be desirable to have such engagement activities implemented across all medical colleges across the country, creation of a **critical number of Medical Institutes of Excellence (beyond the known INIs) by designating and developing one Medical College in each state as a Center of Excellence**. This COE would act as a pivot for seeking excellence in medical education among the network of hospitals within the state.

## 3.6. Creating an Ecosystem – Strengthening Governance

In NSU Florida, the Key Functions of the Department of Medical education includes- (i) Patient centred education and Assessment of Clinical Skills; (ii) Data Analysis; (iii) Faculty Development; (iv) Curriculum Review, Assessment and Development; (v) For each of the above functions, the details of the person responsible for the function, along with contact details is provided, for easy access.<sup>43</sup>

**Brazil adopts a “Student Centric Medical Education” system**, which clearly defines the roles and responsibilities of stakeholders in medical education.

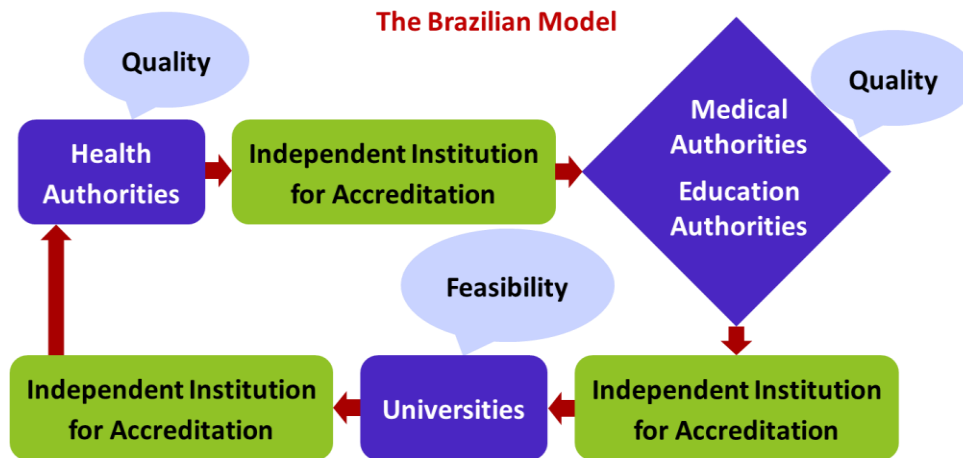
In any country, there is an optimum point between quantity and quality. Usually, the health authorities (as the ministry and secretaries), responsible for delivering health, have their focus in quantity, often pressurizing for more physicians. While education authorities (as specialists in health and education) and medical authorities (as federal boards and councils) have their focus in quality, calling attention to improve graduation process.

**Brazil has recognized the risk of operating so many schools without adequate time to prepare teachers, clinician-educators, curricula, and sufficient pedagogical structure to ensure quality medical education. To get the balance, Brazil has defined the role of each stakeholder clearly and shifted from a teacher-centred and hospital-based approach to student-centred and community-based education** as shown in the Figure 16.

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<sup>43</sup> <https://osteopathic.nova.edu/education/key-functions>

**Figure 15 - Defining Roles of Stakeholders - Brazilian Best Practice**



*Note: Health Authorities--Health Ministry, HR Managers*

*Medical Authorities--Federal or State Medical Council Board*

*Education Authorities—Specialists in Medical Education, Professors, Consultants and Researchers*

*Independent institutions for accreditation—e.g., Recognized by World Federation for Medical Education*

*Source: Antunes Dos Santos R, Nunes MDPT. Medical education in Brazil. Med Teach. 2019 Oct;41(10):1106-1111.*

*doi: 10.1080/0142159X.2019.1636955. Epub 2019 Jul 8. PMID: 31282823 duties of medical*



### 3.7. Summary of Recommendation

A lifecycle approach should be adopted to offer end to end solution to address the barriers to recruitment and retention of medical faculty, using the Talent Management Framework interlinking the intrinsic motivation/ aspirations of the medical faculty with recruitment, onboarding and retention.

#### A. Talent Planning and Recruitment

1. To address the lack of reliable data for Talent Planning, there is a need to provide unique pan India-ID to track the lifecycle of a medical professional. It is to be legally mandated for medical professionals similar to ITR filing.
2. Use the above data to create a nation wide Centralized Registry, readily available to all colleges and faculty, to address the information asymmetry to manage the demand-supply gap.
3. Creation of MRB for planning, advertisement and selection of appropriate candidate for each medical college at the state level.
4. The colleges can be given autonomy for (i) contractual hires to tide over delay in recruitment cycle process time; (ii) and roll out of appointment letters for faculty getting posted in their college; thus, saving energy and time of MRB.
5. The intent in the long term should be to reduce contractual faculty hiring and move towards a system for more regular and seamless appointments, gradually over time, as states mature in their HR management system.
6. Recruit students early through campus selection, before they start exploring alternate career streams/ post-graduation. ***The TNMSC CTP Policy with an end-to-end HR thinking, will be a good model to adopt, with its focus on creating career paths at each stage in the lifecycle of a medical student.*** Tamil Nadu under its CTP policy provides the students pre-placement during their final year (campus hires), are assisted in selection of their choice of post-graduation, and post a mandatory one-year probation, are hired at an Assistant Professor level. ***The decadal learning and success of TNMSC CTP in Tamil Nadu medical education system, is worth emulating in other states.***
7. Creating and institutionalising a model (currently non-existent) for mid-career entry of distinguished professionals and industry practitioners into medical teaching, as ***“Professor of Practice (PoP)”***.

#### B. Talent Retention

1. Creating an **objective Performance Appraisal System** with key performance indicators (KPI) at its core. This could include indicators for (a) teaching and learning outcomes, (b) research outcomes, and (c) healthcare delivery outcomes; aligned with the objectives of state’s broader healthcare education goals or the medical colleges’ goals.
2. Creating an **objective Promotions Appraisal System** with, (a) external members in selection committee, (b) **all the positions after Associate Professor level should be ‘open positions’**, forcing inhouse prospective faculty compete with other potential faculty from all over the country.
3. In this assessment, all possible inputs including academic performance, research output, clinical performance, annual appraisal ratings, personality assessment, are to be taken into consideration during the interviews. The signalling effect of this process is that **promotions to**



**the next level are not automatic** and is eventually dependent on the merit of the candidate, irrespective of annual appraisal cycles.

4. **Longer duration of regularised contract**, like that in Institute of Liver and Biliary Sciences (ILBS) and Rajiv Gandhi Cancer Institute - each faculty is contracted for a period of 4 years, at the end of which they are appraised by a committee of institute's internal faculty and **subject matter experts from outside**. It is always advisable to test a faculty's fitment in the organization, before regularising them.
5. Pay-for-Performance -- **Both TNMSC and ILBS allows to take in a portion (approx. 10- 25%) of the OPD/ IPD fees** they consult, over and above their salary. Provisional allowance and sabbatical for research and academics as in AIIMS has served well to incentivise faculty.

### C. Development of Career Path

1. Create a **separate professionally trained administrative cadre** for managing the hospital operations and college administration of the institute from the junior faculty pool or create separate '**Hospital Administration**' cadre like in INIs. Professionally trained hospital administration team will ensure implementation of administrative decisions taken by the technical heads of the institution (dean and medical director).
2. **Plan the career path of a faculty getting promoted to a leadership position** across streams of (a) academics & research, (b) patient care provision as a clinician, (c) patient care provision as a hospital administrator; recognizing that each of these is an executive position and requires full time dedication for the particular role. Have a structure to (a) manage the academic workload of such faculty moving away to admin roles, (b) train them through structured courses, and/or (c) experiential journeys early on through a proper system for 'mentoring'.
3. Rotational headship of departments for all potential senior faculty members to reduce administrative burden on one clinician.
4. **Dedicated HR team within each medical college** would address the creation of this admin cadre and also manage career pathways for individual faculty members.

### D. Creating an Ecosystem for Medical Research

1. Creation of state-of-art hard infrastructure in terms of lab facilities, research labs, IT & Computing infrastructure, libraries, which affects the ability to carry out high end medical research.
2. Explore and permit industry-academia partnership for *applied* research.
3. Dedicated institutional budget to stimulate and facilitate research activities similar to that in AIIMS/ PGIMER.
4. Creation of a **critical number of Medical Institutes of Excellence (beyond the known INIs) by designating and developing one Medical College in each state as a Center of Excellence (CoE)**. This COE would act as a pivot for the network of hospitals within the state.



### 3.8. Summary of Policy Interventions

From the discussion above, follows the recommendations on policy interventions:

1. The basic function of a Medical College must be reinforced by the policy makers. It has three core responsibilities – (a) Medical Education & Training, (b) Medical Research, and (c) Patient Care. It differs from that of a Hospital, which is envisaged to focus on only one element - Patient Care. So, a career as medical college faculty has to be looked at as a separate career stream, primarily focused on education, however related it may seem to a career in clinical practice.

The intent in the long term should be to reduce contractual faculty hiring and move towards a system for more regular faculty cadre, gradually over time, as states mature in their HR management system.

2. Focus on end-to-end HR thinking for alignment of policy initiatives – right from the stage of a final year medical graduate to a retired professor. This would call for following interventions:
  - a. Thrust on up to date information on medical graduate pool, and faculty pool across colleges, states, or country;
  - b. Create a dedicated medical recruitment board or any similar body which has a focus on planning, recruitment, and retention of faculty;
  - c. Create a stream of “professor of practice” so as to tap practicing clinicians inclined to academics, as well as pollination of industry best practices;
  - d. Each institute has to have a dedicated HR to manage the key HR functions, especially strategies around talent planning, career planing, performance assessment, and performance linked incentive systems.
3. Thrust has to be reinforced on “medical research” which is a healthy mix of basic and industry-relevant applied clinical research.



# Annexures

#### 4.1. Annexure 1 – Primary Data Collected from Colleges

**Table A1. 1 – Survey Coverage of Study Colleges**

State	Data Sheet		Management		Faculty		Student		
	Required	Collected	Required	Collected	Required	Collected	Required	Collected	
Assam	2		DGME	1	1	18	15	8	11
			Dean/ Principal	1					
			VP	1	1				
			Other	1	1				
Gujarat	2		DGME	1		18	14	8	10
			Dean/ Principal	1	1				
			MS	1					
			Other	1					
Delhi	2	1	DGME	1		18	27	8	79
			Dean/ Principal	1	1				
			MS	1					
			Other	1	1				
Haryana	2		DGME	1		18	9	8	21
			Dean/ Principal	1	1				
			MS	1	1				
			Other	1					
Assam	2		DGME	1	1	18	15	8	11
			Dean/ Principal	1					
			VP	1	1				
			Other	1	1				
Gujarat	2		DGME	1		18	14	8	10
			Dean/ Principal	1	1				
			MS	1					
			Other	1					
Delhi	2	1	DGME	1		18	27	8	79
			Dean/ Principal	1	1				
			MS	1					
			Other	1	1				
Haryana	2		DGME	1		18	9	8	21
			Dean/ Principal	1	1				
			MS	1	1				
			Other	1					
Odisha	2		DGME	1		18	2	8	21
			Dean/ Principal	1	1				
			MS	1					
			Other	1					
Himachal Pradesh	2		DGME	1	1	18		8	
			Dean/ Principal	1	1				
			MS	1					
			Other	1					
Rajasthan	2	1	DGME	1		18	9	8	5
			Dean/ Principal	1	1				
			MS	1	1				
			Other	1					

**Table A1. 2 - Medical Faculty and PG Students in India**

State	No. of Faculty	No of PG Students (Broad Speciality)	No. of PG Students (Super Speciality)	No. of Non-PG JR	No. of SR
Andaman Nicobar Islands	102	0	0	37	17
Andhra Pradesh	6317	4483	313	991	1136
Arunachal Pradesh	75	0	0	37	17
Assam	1128	998	33	364	604
Bihar	2818	1759	42	826	1136
Chandigarh	772	1314	297	19	424
Chattisgarh	1393	484	3	569	385
Dadra and Nagar Haveli	87	0	0	28	17
Delhi	2620	5183	1909	1638	3091
Goa	238	249	6	37	80
Orissa	2487	2100	212	336	592
Haryana	1775	1205	38	537	407
Himachal Pradesh	804	649	6	78	291
Jammu & Kashmir	1210	1423	179	405	890
Jharkhand	705	569	8	253	250
Karnataka	11432	8586	535	1740	2545
Kerala	6252	3407	617	1204	1297
Madhya Pradesh	3696	2533	71	636	922
Maharashtra	10241	8556	572	1714	2489
Manipur	341	516	11	130	166
Meghalaya	93	38	6	72	70
Mizoram	84	0	0	26	16
Pondicherry	1711	1440	156	281	439

**Table A1. 3 – Faculty Perception on Adequacy and Appropriateness of Infrastructure and Facilities**

Infrastructure and Facilities	Adequacy		Appropriate	
	n	% Respondents for whom Most Important	n	% Respondents for whom most important
<b>Teaching Infrastructure</b>				
Well-lit Classrooms	217	63.1%	204	56.9%
Online Aid	216	50.0%	198	48.5%
Bedside Teaching	192	69.3%	175	62.3%
Library and Journals	219	62.1%	197	63.5%
<b>Academic and Research Infrastructure</b>				
Requisite Labs & Special Clinics	212	45.8%	194	43.8%

IT Facilities (Hardware, Software) for Academics	213	32.4%	193	36.8%
Research Assistant's Provision	200	24.0%	181	26.5%
<b>Hospital Infrastructure</b>				
State of the art medical equipment to provide services	203	39.9%	187	42.2%
Facility for Relaxation and Discussion	206	28.6%	191	29.3%
Hygienic and ambient amenities for physical convenience of faculty to work comfortably	204	37.7%	186	35.5%
Facility for faculty and residents to stay during night duties, inside the college premises	141	40.4%	119	35.3%
<b>Living Facilities</b>	<b>n</b>	<b>% Respondents for whom Most Important</b>	<b>n</b>	<b>% Respondents for whom Most Important</b>
Family related assistance	188	27.1%	175	24.0%
Housing and messing arrangements	194	28.4%	180	26.7%
Facilities, such as schools, employment opportunities for spouse	183	16.9%	169	19.5%
<b>Facilities for Handling Public Health Disasters/Pandemics</b>				
Availability of PPE Kits	152	69.7%	143	62.9%
Provision of proper alternative arrangements for faculty to stay, during pandemic/disasters	148	38.5%	136	36.9%
Secure and safe transport facilities for faculty to perform their duties	137	41.6%	126	35.7%

**Table A1. 4 - Factors Considered by Students for Selecting a Medical College - in %**

Factors considered	% Respondents who found it Most Important
Government Medical College (n=344)	303 (88.1%)
Opportunity to see more patients (n=342)	290 (84.8%)
Opportunity to Learn (n=344)	283 (82.3%)
Ranking of the Institute (n=344)	264 (76.7%)
Rank in the competitive exams (n=336)	258 (76.8%)
Opportunity to serve the community (n=304)	229 (75.3%)
Quality of Teachers/Role Models (n=344)	248 (72.0%)
Teaching Environment (n=344)	245 (71.2%)
Fee structure of the college (n=344)	235 (68.3%)
The Core Faculty (n=344)	234 (68.0%)
Peer Group (n=343)	225 (65.6%)
Quality of Research Activity (n=344)	204 (59.3%)
Student-teacher Ratio (n=344)	186 (54.1%)
Close to Home (n=343)	185 (53.9%)
Time for preparation to study abroad (n=295)	114 (38.6%)

**Table A1. 5 - Student Perception on infrastructure adequacy and appropriateness**

Infrastructure and Facilities	Adequate		Appropriateness	
	n	% Respondents for whom Most Important	n	% Respondents for whom Most Important
<b>Teaching Infrastructure</b>				
Well-lit Classrooms	329	75.4%	292	74.3%
Online Aid	322	65.2%	284	64.1%
Beside Teaching	311	64.3%	278	62.6%
Library and Journals	322	66.5%	285	64.9%
<b>Academic and Research Infrastructure</b>				
Requisite Labs & Special Clinics	319	63.3%	283	56.5%
IT Facilities Hardware, Software) for Academics	315	51.4%	276	46.4%
Research Assistant's Provision	313	50.8%	279	49.1%
<b>Hospital Infrastructure</b>				
State of the art medical equipment to provide services	203	39.9%	278	55.0%
Facility for Relaxation and Discussion	206	28.6%	284	52.8%
Hygienic and ambient amenities for physical convenience of faculty to work comfortably	204	37.7%	281	53.4%

\*Note: Likert 10-point scale was used to score each of the parameter being assessed.

## 4.2. Annexure 2 – Questionnaires

### 4.2.1. Intro Note

Thank you for taking out time to participate in this survey. This survey is being conducted by SahaManthran Pvt Ltd, at the behest of NITI Aayog, the central think tank and advisory body of Government of India. This survey is a part of NITI Aayog's strategy to understand the barriers to recruitment and growth of faculty in medical colleges across the states in the country. The intent is not to judge the performance of the institute/organization but to understand the bottlenecks creating medical faculty shortage so as to address the growing requirement of faculty in medical colleges over time and incentivize medical professionals to seek medical education as a career option. This is a unique opportunity to contribute to a study, being undertaken at a national level, across government medical colleges to understand and inform policy for sharing best practices across board. Your inputs will go a long way in representing your suggestions and novel ideas as a part of the solution to this challenge.

Your responses will help us to understand the processes and suggest ways to improve the recruitment and onboarding processes for faculty in medical colleges. It will also help us in understanding the incentives and dis-incentives for a professional to choose serving as a faculty in a medical college. We shall be undertaking this survey across departments and cadres in the state medical colleges, and its management to get a 360-degree view of the issues.

This survey will take approximately 30 minutes to complete. You can complete the entire survey in one go or in parts. If you plan to do the survey in parts, just save your responses before exiting. You are requested to complete the survey in next 5 days of receipt of this link.

We would like to submit here that the study is design and the method of data collection assures complete anonymity of the information provider. Therefore, while SahaManthran will have access to your personally identifiable details for the purpose of collating and analysing the data, no personally identifiable details will be shared in the public domain. Thank you once again, for putting in your responses and adding value to the study.

By participating in this survey, you agree and consent to SahaManthran's Pvt. Ltd.'s use of the data provided by you as described above.

### 4.2.2. Student Questionnaire

#### Module A: Basic Profile and Demographic Particulars of the Respondent

1. State
2. Age of the respondent
3. Sex of the respondent
4. Marital Status of the respondent: Unmarried/ Married/ Widow/ Judicially Separated/ Divorced/ Other (Specify)
5. Current Position
  - UG Student
  - PG Student
  - Others
6. Which year are you studying in?
  - Year 1
  - Year 2

- Year 3
- Year 4
- Year 5

### Module B: Student Aspirations

7. Did you have the choice to choose this medical college?
8. What did you consider while choosing the medical college? (Kindly rank as per priority)

(Score 1-10. 10 being the score for the highest priority and 1 being the lowest)

Factors considered for Joining the Medical College	Score
a. The core faculty	
b. Student-teacher ratio	
c. Rating of the institute	
d. Quality of research activity	
e. Teaching environment	
f. Quality and brand of teachers/ role models	
g. Government Medical College	
h. Close to home	
i. Opportunity to learn	
j. Opportunity to see more patients	
k. Fee structure of the college	
l. Peer group	

9. As a student, did you find what you expected from the college? (Yes/No)
10. If yes, what expectations were met in the college?
11. If not, which expectations were not met?
12. Do all the faculty take the classes as per the schedule?
  - What is the % of classes out of the total scheduled classes that were finally conducted?
  - What are the % of classes scheduled for Senior Resident/ Demonstrator, Tutor/ Asst Prof, Associate Prof/ Professor
13. What are the % of classes taken by Senior Resident/ Demonstrator, Tutor/ Asst Prof, Asso. Prof, Professor
14. Which are the classes that are not held regularly? Do you know of any reason why they are not held?
15. Is there a system to provide feedback on teachers' effectiveness in teaching? (Yes/No)
16. If yes, how many times has feedback been actioned? Give some instances.
17. Are you satisfied with the teaching and academic environment of your college? (Yes/No)
18. What facilities are you very satisfied with or not satisfied with?

(Score 1-10. 10 being most adequate / Appropriate and 0 being least appropriate/ adequate)

**Definition of Adequacy:** As in numbers as per the specifications in terms of student ratio

**Appropriate:** Quality as per requirement and specifications

Infrastructure and Facilities	Adequate (score)	Appropriate (score)
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<b>Teaching infrastructure</b>		
• well-lit classrooms,		
• online aid,		
• bedside teaching,		
• library and journals		
<b>Academic and research infrastructure</b>		
• requisite labs and special clinics,		
• IT facilities (hardware, software) for academics and high end/ specialized research		
• research assistants' provision		
<b>Hospital infrastructure</b>		
• state of the art medical equipment to provide services,		
• facility for relaxation and discussion,		
• hygienic and ambient amenities for physical convenience of faculty to work comfortably		

19. If there are any other infrastructure, not listed above, please mention and elaborate below

20. Do clinical grand rounds/ Bedside teaching happen daily? (Yes/No)

21. Does the evening round of teaching happen daily? (Yes/No)

22. What are the basic problems you face at present in your college? (You can tick more than one)

- Backdated syllabus and teaching style
- Disparity in infrastructure across speciality
- Quality of teaching staff
- Lack of academic and research skills
- Lack of role models
- Absence of time with teachers to clarify doubts
- Others, please elaborate

23. When you would seek a job, what will be your job preference?

- Join as a faculty
- Join in a private Clinic/ Hospital
- Basic research in a lab
- Pharmaceutical Industry
- Consulting
- Managing a hospital

24. If you choose to join as a faculty, what are the motivating factors in becoming a faculty member?

25. When you seek a job, what will be your preferred location?

- Metropolitan City
- Non- metropolitan Tier 1 City (Example: Bangalore, Chennai, Delhi, Hyderabad, Kolkata, Mumbai, Ahmedabad, Pune)
- Tier 2 City (Example: Agra, Ajmer, Aligarh, Amravati, Amritsar, Asansol etc.)
- Tier 3 City (Example: Salem, Jhansi, Gwalior, Vijayawada, Rajahmundry, Meerut, Mathura, Bhatinda, Bikaner, Cuttack etc.)



- Rural Area
- Near Home
- Birthplace
- State Capital
- 

Others

26. Reasons for the above choice/ choices

27. Do you feel that before becoming a faculty one should have training in teaching skills and methods? (Yes/No)

28. In your opinion, what are the obstacles to becoming a faculty in a college?

29. What are your suggestions for improvement of the teaching environment in your medical college?

### 4.2.3. Faculty Questionnaire

#### Module A: Basic Profile and Demographic Particulars of the Respondent

1. State:
2. Age of respondent in yrs.:
3. Sex of the respondent:
4. Marital status—Unmarried/ Married/ Widow/ Judicially Separated/ Divorced/ Other (Specify):
5. Current position of the respondent:
  - Senior Resident/Demonstrator,
  - Tutor / Asst Prof
  - Associate Professor,
  - Professor
1. Department/Specialty:
2. Qualification:
  - Graduate (Medical)
  - Graduate (non-Medical)
  - Postgraduate (Medical)
  - Postgraduate (Non-Medical)
  - DM/ MCh
3. Have you done PhD- Yes/ No
4. Type of Post: Regular/Contractual/Adjunct/Visiting faculty:
5. What's your current pay scale?
6. Please provide the break-up of your emoluments, including allowances with take home?

#### Module B: Aspiration of Faculty

6. Which medical college did you study in?
7. Was it your aspiration to join the medical college as a faculty? Yes /no
8. What is your total years of experience as a faculty?
9. When did you join this medical college? (Month/Year)
10. Is this your first appointment? Yes/no
11. Kindly elaborate on your journey as a faculty/clinician/as a professional in various medical colleges/ institutions to date (in 80-100 words)
12. What motivated you to join as a faculty? Score each item on a scale of 10, where 10 is the highest motivating factor, and 1 is the lowest motivating factor.

Motivating Factors	Score
a. Self-interest/ passion for the profession	
b. Stable Income / Financial Security	
c. Parents wish / Social Pressure	
d. Prestige to associate with the profession	
e. Influence of a role model	
f. Service to the needy	
g. Shortage of faculty in medical education	
h. Convenience of location—proximity to hometown	

i. Opportunity to work in a tier-I city or well-established township	
j. Family and children's considerations	
k. Opportunity/ time for private practice	
l. Academic and research environment	
m. Brand of the college and work culture	
n. Financial considerations	
o. Career progression and growth possibilities	
p. Peer group and network	
q. Greater work exposure and challenging opportunities	
r. Job security	
s. Social Status	
t. Power and prestige of the profession	

13. If there are any other motivating factors not listed above, please elaborate below

**Module C: Recruitment and Onboarding of Faculty**

14. What is the system for recruitment in your medical college, to fill the requisite positions as and when they arise? - annual/ biannual/continual Please tick

15. How much time did the recruitment process overall take from application to your onboarding? (Give response in days):

16. Which step in the recruitment process took the longest time (in number of days)

Recruitment Process	Time Taken in days
a. Advertisement to application	
b. Submission of application to shortlisting	
c. Shortlisting to interview	
d. Interview to selection	
e. Selection to offer letter/ government order	
f. Offer letter / Government order to onboarding	

17. What were some of the challenges that you faced in the recruitment and onboarding process? Score each item on a 10-point scale, where 10 is the most challenging factor, and 1 is the least challenging factor

Challenges	Score
a. Lack of Access to information on vacancy status	
b. Lack of 24X7 call centre, especially operating at night to facilitate the ease of filling form (like that in armed forces)	
c. Lack of Access to the application form for submission	
d. Lack of Information around the roles and responsibilities of the job (job description)	
e. Lack of Information around terms and conditions of the job, such as leave policy, allowances, facilities, working hours, etc.	
f. Cumbersome (unnecessary questions) and lengthy form	
g. Lack of Facilities provided to participate in the interview, such as boarding lodging, TA/DA like in Armed forces or Railways	
h. Non- responsive staff or no contact point in the college or DME to seek clarification	
i. Lack of time taken to receive offer letter	

18. If there are any other challenging factors not listed above, kindly elaborate below:

19. Kindly elaborate on the interview process and who constituted the selection board

20. Was there any formal induction program to onboard you as a faculty?

- Yes, (If yes go to q no. 27)
- No, (If No. go to q no. 29)

21. If yes, what were the components of the induction program? (You can select more than one option)

Components of Induction Programme	Tick
a. Introduction to Dean, Medical Director, Staff and Department	
b. Sharing of mission and vision of the college	
c. Tour of the medical college and campus	
d. Information of facilities and amenities available	
e. Details around Job description (JD) and its terms of reference (TOR)	
f. Terms and conditions (TOC) of appointment	
g. Point person for seeking clarification as regards JD/TOR/TOC	
h. Details regarding TOC of service, service rules, emoluments, relevant regulations	
i. Work culture and code of ethics, disciplinary processes	
j. Others – Please elaborate	

22. Did the induction program help in smooth onboarding and settling in the organization? Yes/No:

23. What are your suggestions for streamlining the recruitment and onboarding of faculty? Are there some examples that you could share which can be emulated?

#### Module D: Retention and Growth of Faculty

24. Are you aware of your job description? Yes/No

25. When did you get to know about your job description?

26. How clear was the JD in terms of your ability to carry out your current roles and responsibilities?

27. What challenges do you face to fulfil your stated responsibilities on a day-to-day basis?

28. Would you please describe a typical day in the life of a medical faculty? (Respond within 80-100 words) Please describe in terms of your time spent on teaching UG students; teaching PG

students; patient care in OPD, IPD, and OT; bedside teaching in morning and evening; research and publication; and administrative activities

29. What is your opinion on a faculty shouldering both administrative and patient care responsibilities along with academics and research?
30. Are the infrastructure and other facilities available to fulfil your responsibilities adequate and appropriate?

**(Score each point on a scale of 1-10, where 10 is the most Adequate/Appropriate and 0 is the least Adequate/Appropriate)**

**Definition of:**

**Adequacy:** Numbers or quantities required to meet student load

**Appropriate:** Quality as per requirement and specifications

Infrastructure and Facilities	Adequate (score)	Appropriate (score)
<b>Teaching infrastructure</b>		
• well-lit classrooms,		
• online aid,		
• bedside teaching,		
• library and journals		
<b>Academic and research infrastructure</b>		
• requisite labs and special clinics,		
• IT facilities (hardware, software) for academics & specialized research		
• research assistants' provision		
<b>Hospital infrastructure</b>		
• state of the art medical equipment to provide services,		
• facility for relaxation and discussion,		
• hygienic and ambient amenities for physical convenience of faculty to work comfortably		
• Facility for faculty and residents to stay during night duties, inside the college premises (comfortable duty rooms)		
<b>Living facilities</b>		
• Family-related assistance,		
• housing and messing arrangements,		
• facilities, such as schools, employment opportunities for spouse		
<b>Facilities for handling public health disaster/ pandemics</b>		
• Availability of PPE kits		
• Provision of proper alternative arrangement for faculty to stay, when they are not able to go home during pandemic / disasters		
• Secure and safe transport facilities for faculty to perform their duties		

31. If there are any other infrastructures or other facilities, not listed above, please mention and elaborate below:
32. What are the financial and non-financial incentives available to the faculty in your college at your level?

<b>Systems and Provisions</b>	<b>Tick Whichever is applicable</b>
a. Review of Salary structures and Emoluments; including incentives or bonus, including non-practising allowance	
b. Provision for inclusion of incentives for performers/non-performers in salary	
c. Ease of undertaking research and support for publishing nationally and internationally	
d. Facilitation & creation of conducive environment to encourage peer networking,	
e. Ease of participating in CMEs	
f. Ease of getting in-service training on department-specific or relevant issues	
g. Approval for participating in conferences/workshop to share knowledge	
Leadership & professional development	
h. Policy around choice of career progression (clinical/administrative)	
i. Structured mentoring programmes for technical/ techno-managerial/ managerial roles and their career growth path	
Culture and climate	
j. transparency in tenure/ promotions/ transfers,	
k. encouraging belongingness through involvement in decision making;	
l. Policy and flexibility to maintain work-life balance—in terms of annual leaves, day-offs, Night and day duties, academic leave	
Disasters and Pandemic	
m. Provision of support to family members of faculty during public health disasters, to take care of the family's basic needs	
n. Provision for time off, to offer respite due to extended working hours	
o. Provision of flexibility in working hours during disasters / pandemics	
p. Any other (please specify)	

33. How does the administration support you in carrying forward your daily routine activities? Give some instances.
34. How does the administration support you in carrying forward your activities during public health disasters? Give some instances.
35. What can be the areas of improvement for support from administration?
36. Have you ever received training on teaching and research methodology? Yes/no
37. If yes, from where did you receive the training?
38. What was the duration of the training? (In days)
39. Do you think training on teaching methods and research methodology is of value? Yes/No:
40. What is the incentive or support you get from the college for undertaking value added outstation trainings?
41. How many research projects have you undertaken in the last 5 years?
42. Give titles of few projects undertaken
43. How many papers have you published?
44. Give titles of few with name of journal

45. What is the incentive or support you get from the college for undertaking research, publishing original work in high impact index journals?
46. Is there a system for monitoring the workload of faculty in the medical college? Yes/No:
47. If yes, what is the process for appraisals of staff in this medical college?
48. How would you describe the work environment/culture in your college?

Components of Work Environment/Culture	Available (Yes/No)	Comments
a. Independence or freehand for decision making		
b. Absence of prejudice in promotion		
c. Opportunities for career progression		
d. Opportunity for regular, specific training and capacity building		
e. No compulsion on the conversion of cases for financial gains		
f. Accountable and Cooperative paramedical staff to assist in patient care and academics		
g. Opportunities for networking for seeking excellence and sharing learning		
h. Welcoming organization and department		
i. Growth Opportunities		
j. Organized and systematic workflow with well-defined roles and responsibility		
k. Safety and security during official visits		
l. Safety and Security on Campus		
k. Others (if any)		

49. In your opinion, what are the reasons for the medical faculty to leave their position? Score each item on a scale of 10, where 10 is the top-most reason, and 1 is the least reason for leaving the position

Reasons for Leaving	Score
a. Career progression with movement to better-known colleges	
b. Better salary—the gap between contractual vs regular staff	
c. Academic and research environment	
d. Other non-teaching government hospitals	
e. Private practice	
f. Non-transparent promotion and tenure policy	
g. Lack of leadership and mentoring for growth and development	
h. Living conditions, quality of life at par with peers/ professionals living and serving in higher education institutions across other sectors	
i. Work-life balance	
j. Social and family commitments for education and medical requirements	
k. Isolation of under-represented groups	
l. Lack of ambient and clean environment	
m. Job security-Tenure of contract	



50. Is there a system of exit interviews when a faculty leaves? Yes/No:  
 51. If yes, can you recollect and share any improvements made post feedback from the exit interviews?  
 52. What are your suggestions for the improvement of retention of faculty in this medical college?

	Areas	Your views
a. Adequacy of salary to support a decent living for the family		
b. If inadequate, what would you benchmark it against with		
c. Views on carrying out administrative tasks along with teaching, research and patient care		
d. NPA and other incentives are miniscule		
e. Difficult Posting or hardship allowance		
f. Salary gaps between contractual and regular workforce is appropriate or not		
g. Postretirement benefits		
h. Should transfers be allowed to enhance career growth opportunities?		
i. Administrative responsibilities come as default, as you rise in hierarchy in medical college. How do you propose to ensure effectiveness of patient care and teaching along with administrative activities?		
j. Do you think a separate techno managerial cadre is an answer to reduce workload of teaching faculty?		
k. Do you think additional incentives for administrative activities in same line as NPA, will help faculty to justify both their administrative and technical (teaching and research and patient care) responsibilities		
l. Growth Opportunities for MC faculties similar to nationalised services (e.g.- IPS, IAS,)		
m. Social affiliation vs positional affiliation of MC faculty vis-a vis transferrable jobs		
n. Recruitment of, Sr. Resident as faculty in terms of numbers of years of teaching experience and numbers of publications		

#### 4.2.4. Management Questionnaire

##### Module A: Basic Profile and Demographic Particulars of the Respondent

1. State:
2. Current position of the respondent:
3. Qualification
4. Experience in this position or medical education per se (In Years):

##### Module B: Status of medical faculty positions in the medical college

5. What is the % vacancy of faculty in your college, in each cadre, across each department?
6. Has the faculty shortage situation improved in the last 3 years? Yes/No:
7. If no, what are the reasons for no improvement?
8. In which cadre are there more vacancies? Clinical / super specialities or Pre/ Paraclinical
9. What is the reason for this Variation?
10. What is the system of planning for faculty requirements and onboarding in your college? Kindly elaborate
11. Is there a provision to recruit faculty on a temporary or contractual basis? Yes/No:
12. In which departments are contractual positions allowed/recruited? (Multiple choice question)
  - Clinical
  - Paraclinical
  - Basic Science
  - All of the above
13. What is the duration of contract generally given for a faculty on a contractual basis? (No of Months)
14. Is there a separate recruitment process for faculty positions in tribal and non-tribal areas? If yes, how are they different?
15. Is there a possibility of shifting a reserved post to a general post, in case the reserved position does not get filled up in the recruitment process?

##### Module C: Recruitment and onboarding of faculty

16. Which bodies are responsible for recruitment and for which positions?

Boards/Bodies	Designation	Position (regular/contractual/visiting faculty)
State Public Services Commission (SPSC)		
Similar commissions for medical services (Give names)		
An Autonomous Body (Give name)		
Others (Give name)		

17. Is the system for recruitment an annual/ biannual/continual process to fill the requisite positions? (Please tick whichever is applicable, you can tick more than one)
18. NMC has made a provision for the recruitment of visiting faculty from the private sector for teaching. Are you aware of any provision made by NMC for the recruitment of Visiting Faculty? Yes/No:
19. If yes, do you recruit Visiting faculty?
20. If no, why not?
21. If yes, what are the benefits of recruiting a Visiting faculty?

22. NMC expects a regular update on sanctioned, vacant, filled positions. How often does this is updated currently? Respond with a numeric value (in days).
23. What, in your opinion, are the barriers to updating the NMC site with such data regularly?
24. How does the NMC intervene if there are unfilled positions?
25. What are the barriers to the faculty recruitment process? Score each item on a scale of 10, where 10 is the top-most barrier, and 1 is the least barrier.

Process	Score
a. The process of approving a position	
b. Modes of advertising a position.	
c. The process of filling up the application form is cumbersome for a candidate in terms of its format, method and mode of application	
d. Constitution of the selection board. Considering that the board consists typically of high-level officials, there are delays due to time constraints of board members.	
e. Coordination of the selection board schedule for taking interviews.	
f. Time taken to get approval after selection of candidates, at the level of DoHFW/DGME	
g. Delays in rolling out the order	

26. If there are any other barriers not listed above, please elaborate below.
27. Is the mode of advertising appropriate and adequate?
28. One of the IIMs advertises in the leading newspapers and writes letters to the top institutes. In addition, they also write individually to people who have made inquiries in the past for a position. Do you think this IIM's mode of advertisement is worth emulating for faculty recruitment in medical colleges?
29. Are there any practical solutions for simplifying the process of filling up an application form?
30. For any given vacancy for a medical faculty, what is the ratio of MBBS and non MBBS applicant?
31. Once the selection process is completed, is a separate waiting list being prepared? Yes/No:
32. If yes, what is the validity of such a waitlist?
33. What is the mechanism to inform the candidates that they are selected or waitlisted?
34. Do all the candidates who are issued the letter join? Yes/No
35. If no, what is the average percentage gap between the numbers of candidates selected and joined? (In % <= 100%)
36. Does the medical college have a budget for the recruitment of faculty? Yes/No:
37. If yes, what is the percentage utilisation of the budget on the recruitment process over the last three years, 2018-2021? (In % <= 100%)
38. Does the medical college have the autonomy to use their budget, especially on recruitment and growth of faculty? Yes/No:
39. Is the budget being allocated on a timely basis? Yes/No:
40. Is there a provision to get an extra budget in a financial year, if required? Yes/No:
41. If yes, do you have the budget to appoint a faculty temporarily? Yes/No:
42. Have there been cases wherein a candidate has challenged the recruitment in the court of law? Yes/No:
43. If yes, what were the key learnings?
44. Kindly provide a split of lawsuits filed by - Senior Resident/Demonstrator, Assistant Professor/Tutor, Associate Professor, Professor, from April 2018-March 2021, if any.
45. What are your suggestions to improve and streamline the recruitment and onboarding of faculty in the medical colleges? (Respond with short term and long-term strategies)

**Module D: Retention/Growth of Faculty**

46. What is the infrastructure or other facilities provided in the medical colleges to support medical education?

(Score 1-10 where 10 is the most Adequate/Appropriate and 0 being the least Adequate/Appropriate)

Definition of

**Adequacy:** As in numbers as per the specifications in terms of student ratio

**Appropriate:** Quality as per requirement and specifications of what you have/bought/received from the concerned department or vendor

Infrastructure and Facilities	Adequate (score)	Appropriate (score)
<b>Teaching infrastructure</b>		
● well-lit classrooms,		
● online aid,		
● bedside teaching,		
● library and journals		
<b>Academic and research infrastructure</b>		
● requisite labs and special clinics,		
● IT facilities (hardware, software) for academics and high end/specialised research		
● research assistants' provision		
<b>Hospital infrastructure</b>		
● state of the art medical equipment to provide services,		
● facility for relaxation and discussion,		
● hygienic and ambient amenities for physical convenience of faculty to work comfortably		
<b>Living facilities</b>		
● Family relocation-related assistance—house hunting, furnishing		
● Housing and mess arrangements for bachelors, recreation		
● facilities, such as schools, employment opportunities for spouse		
<b>Facilities for handling public health disaster/ pandemics</b>		
● Availability of PPE kits and vaccines		
● Provision of proper alternative arrangement for faculty to stay, when they are not able to go home during pandemic / disasters space for faculty to take rest during extended duty hours		
● Secure and safe transport facilities for faculty to perform their duties		

47. If there are any other infrastructures or other facilities not listed above, please mention and elaborate below:

48. How often do you review or audit the provisions made to create the ecosystems and examine the quality of teaching? Can you share some audit reports/findings?

49. Do you have any formal induction program to onboard a faculty? Yes/No:
50. Is there a job description for every post? Yes/No:
51. When do you share the job description with the faculty?
52. Do you have training programmes for the faculty?
- Teaching methods
  - Upgradation of personal knowledge
  - Both
  - None
53. Who conducts these trainings?
54. Content of such training?
55. What are the systems provided to incentivise the retention of faculty? (The respondent can select multiple options)

<b>Systems and Provisions</b>	<b>Tick Whichever is applicable</b>
a. Review of Salary structures and Emoluments; including incentives or bonus, including non-practising allowance	
b. Provision for inclusion of incentives for performers/non-performers in salary	
c. Ease of undertaking research and support for publishing nationally and internationally	
d. Facilitation & creation of conducive environment to encourage peer networking,	
e. Ease of participating in CMEs	
f. Ease of getting in-service training on department-specific or relevant issues	
g. Approval for participating in conferences/workshop to share knowledge	
<b>Leadership &amp; professional development</b>	
h. Policy around choice of career progression (clinical/administrative)	
i. Structured mentoring programmes for technical/ techno-managerial/ managerial roles and their career growth path	
<b>Culture and climate</b>	
j. transparency in tenure/ promotions/ transfers,	
k. encouraging belongingness through involvement in decision making;	
l. Policy and flexibility to maintain work-life balance—in terms of annual leaves, day-offs, Night and day duties, academic leave	
<b>Disasters and Pandemic</b>	
m. Provision of support to family members of faculty during public health disasters, to take care of the family's basic needs	
n. Provision for time off, to offer respite due to extended working hours	
o. Provision of flexibility in working hours during disasters / pandemics	
p. Any other (please specify)	

56. Is there a system for monitoring the workload of faculty in your medical college? Yes/No
57. Is there a system for appraisal of faculty in your medical college? Yes/No:
58. If no, what is the system for ensuring accountability of the faculty and their performance?
59. What is the average turnover of a faculty in the college in the last three years (April 2018 to March 2021) across clinical/para-clinical/basic sciences specialities? Please share cadre and department wise split.

60. How many or what % of these faculty left within six months to 1 year of joining?
61. Is the turnover across cadres (regular/contractual) and departments (clinical/ paraclinical/basic sciences) different? If yes, how?
62. Is there a system of exit interviews? Yes/No
63. If yes, do you take any actions based on the feedback received from candidates? Give some examples of activities taken?
64. In your opinion, what are the reasons for the medical faculty to leave the position?  
Score each of the items out of 10, where 10 is the top-most reason for leaving, and 1 is the lowest.

Reasons for Leaving	Score
a. Career progression with movement to better-known colleges	
b. Lack of normalization of salary across cadre irrespective of type of employment (contractual vs regular staff)	
c. Appointment as regular faculty instead of contractual	
d. Lack of incentives (financial/ non-financial) to undertake and publish research	
e. Jobs in another non-teaching government hospitals	
f. Convenience and independence in private practice	
g. Non-transparent promotion and tenure policy	
h. Lack of leadership and mentoring for growth and development	
i. Living conditions, quality of life not at par with peers/ professionals living and serving in other higher education institutions across other sectors	
j. Distorted work-life balance	
k. Social and family commitments for children's education and family's medical requirements	
l. Isolation of under-represented groups within the college	
m. Lack of ambient and clean environment	
n. Lack of Job Security-Tenure of contract	
o. No additional financial incentive for performing against a non-performing faculty	

65. What are your suggestions for improvement to ensure retention and growth of faculty? (Give your thoughts on short term and long-term strategies)



#### 4.2.5. DGME Questionnaire

##### Module A: Basic Profile and Demographic Particulars of the Respondent

1. State :
2. Qualification of respondent
3. Position
4. Experience in this position or medical education per se?

##### Module B: Status of medical education in the state

5. One of the strategies in health system strengthening as per NHP 2017 is to increase the healthcare infrastructure and human resources. To achieve this, what are the strategies of the Department of Medical Education in increasing the production of doctors:
  - graduates
  - post-graduates
6. How many medical colleges are there in the state currently? (Please give the public and private split-if possible)
  - Public Colleges:
  - Private Colleges:
7. How many more medical colleges are planned in the state in the coming years to meet the estimated requirement of doctors?
8. Does the state have enough Faculty to teach in these medical colleges? Respond with the current and future estimated number of the faculty.
9. Has the Faculty shortage in the medical colleges improved in the last 2-5 years, or has it deteriorated? [If it is improved, explain how it has been improved or if it has deteriorated, please mention the reasons]
10. In which cadre are there more vacancies? Clinical / super specialities or Pre/ Paraclinical
11. What is the reason for this variation?
12. How does the shortage and requirement of Faculty in medical colleges across the state get reported to the DGME?
13. NMC expects a regular update on sanctioned, vacant, and filled positions. How often this gets updated currently? Respond with a numeric value (in days).
14. What, in your opinion, are the barriers to updating the NMC site with such data regularly?
15. How does the NMC intervene if there are unfilled positions?
16. NMC has made a provision for the recruitment of Visiting Faculty from the private sector for teaching. Are you aware of any provision made by NMC for the recruitment of Visiting Faculty? (Yes/No)
17. If yes, do you recruit Visiting Faculty?
  - Yes (Go to Q20)
  - No (Go to Q19 and skip Q20 and Q21)
18. If no, why not?
19. What are the benefits of recruiting a Visiting Faculty?

##### Module C: Recruitment and onboarding of Faculty

20. Is the system for recruitment an annual/biannual/continual process to fill the requisite positions?
  - Annual
  - Biannual
  - Continual

21. What is the level of autonomy allowed for recruitment, at the local level and under what conditions (emergency recruitment) medical college can hire on its own?
22. Kindly elaborate on the steps/process of faculty recruitment and onboarding in your state? Please provide a copy of the advertisement/notification published in newspapers or on the web inviting applications.
23. Does the DGME recruit for regular/contractual positions or both?
  - Regular
  - Contractual
  - Both
24. How is the recruitment process different for contractual and regular positions? Please provide a copy of the *Terms & Conditions of Service* of all faculty posts for recruitment.
25. When do you inform of the Terms and Conditions of the employment?
26. Which bodies are responsible for recruitment and for which positions?

Boards/Bodies	Designation	Position (regular/contractual/ visiting faculty)
State Public Services Commission (SPSC)		
Similar commissions for medical services (Give names)		
An Autonomous Body (Give name)		
At the medical college level (Give name)		

27. For any given vacancy for a medical faculty, what is the ratio of MBBS and non MBBS applicant?
28. What are the criteria or situations for releasing a position for recruitment as regular or contractual?
29. In which departments are contractual positions allowed/recruited - clinical, paraclinical or basic sciences? (Respond with a tick mark)

Department	Contractual	Regular	Both
Clinical			
Paraclinical			
Basic Sciences			

30. What is the duration of contract generally given for a faculty hired on a contractual basis?
31. Do you consider the lead time for internal approvals and external factors when advertising for a contractual position? If yes, what is generally the internal and external lead time for hiring for various categories
32. How much or what is the salary gaps between regular and contractual medical faculty?
33. Is there a separate recruitment process for faculty positions in tribal and non-tribal areas? If yes, how are they different?
34. Is there a possibility of shifting a reserved post to a general post, in case the reserved position does not get filled up in the recruitment process?
35. Are there any norms on the duration in which a recruitment process for a medical faculty should be completed? Yes/No:
36. If yes, how many days are there for each step in the recruitment process approximately?

#### Module D – Barriers to recruitment and onboarding

37. What, in your opinion, are the barriers to the faculty recruitment process?

**Score each of the items out of 10, where 10 is the highest barrier, and 1 is the lowest barrier**



Process	Score
a. The process of approving a position	
b. Modes of advertising a position.	
c. The process of filling up the application form is cumbersome for a candidate in terms of its format, method and mode of application	
d. Constitution of the selection board. Considering that the board consists typically of high-level officials, there are delays due to time constraints of board members.	
e. Coordination of the selection board schedule for taking interviews.	
f. Time taken to get approval after selection of candidates, at the level of DoHFW/DGME	
g. Delays in rolling out the order	

38. If there are any other barriers, not listed above, please elaborate below
39. What are the eligibility criteria for recruitment of Senior Residents as faculty?
40. Is the mode of advertising appropriate and adequate? (Yes/No)
41. One of the IIMs advertises in the leading newspapers and writes letters to the top institutes. In addition, they also write individually to people who have made inquiries in the past for a position. Do you think this IIM's mode of advertisement is worth emulating for faculty recruitment in medical colleges?
42. Are there any practical solutions for simplifying the process of filling up an application form?
43. Once the selection process is completed, does the state prepare a separate waiting list? (Yes/No)
44. If yes, what is the validity of such a waitlist?
45. What is the mechanism to inform the candidates that they are selected or waitlisted?
46. Do all the candidates who are issued the letter join? (Yes/No)
47. If no, what is the percentage gap on an average between the numbers of candidates selected and joined?
48. What have been some of the innovative measures taken by the state to streamline the recruitment process and reduce the turnaround time required for hiring?
49. Is there a separate budget for managing the recruitment process? (Yes/No)
50. What is the overall budgetary layout for DME? How is it split for various activities of DME?
51. Have there been cases wherein a candidate has challenged the recruitment in the court of law? (Yes/No)
52. If yes, what were the key learnings?
53. How have they impacted the overall recruitment process, and what has changed?
54. Kindly provide a split of lawsuits filed by - Senior Resident/Demonstrator, Assistant Professor/Tutor, Associate Professor, Professor, from April 2018-March 2021.
55. What are your suggestions to improve and streamline the recruitment and onboarding of Faculty in the medical colleges? (Respond with short term and long-term strategies)

#### **Module D: Retention/Growth of Faculty**

56. What are the infrastructure facilities provided in the medical colleges to support medical education?

**(Score 1-10 where 10 is the most Adequate/Appropriate and 0 being the least Adequate /Appropriate)**

#### **Definition of**

**Adequacy:** As in numbers as per the specifications in terms of student ratio

**Appropriate:** Quality as per requirement and specifications of what you have/bought/received from the concerned department or vendor

<b>Infrastructure and Facilities</b>	<b>Adequate (score)</b>	<b>Appropriate (score)</b>
<b>Teaching infrastructure</b>		
● well-lit classrooms,		
● online aid,		
● bedside teaching,		
● library and journals		
<b>Academic and research infrastructure</b>		
● requisite labs and special clinics,		
● IT facilities (hardware, software) for academics and high end/ specialized research		
● research assistants' provision		
<b>Hospital infrastructure</b>		
● state of the art medical equipment to provide services,		
● facility for relaxation and discussion,		
● hygienic and ambient amenities for physical convenience of Faculty to work comfortably		
<b>Living facilities</b>		
● Family relocation-related assistance—house hunting, furnishing		
● Housing and mess arrangements for bachelors, recreation facilities, such as schools, employment opportunities for spouse		
<b>Facilities for handling public health disaster/ pandemics</b>		
● Availability of PPE kits and vaccines		
● Provision of proper alternative arrangement for faculty to stay, when they are not able to go home during pandemic / disasters space for faculty to take rest during extended duty hours		
● Secure and safe transport facilities for faculty to perform their duties		

57. If there are any other infrastructures not listed above, please mention and elaborate below:

58. What are the systems provided to incentivise the retention of faculty? (The respondent can select multiple options)

<b>Systems and Provisions</b>	<b>Tick Whichever is applicable</b>
a. Review of Salary structures and Emoluments; including incentives or bonus, including non-practising allowance	
b. Provision for inclusion of incentives for performers/non-performers in salary	
c. Ease of undertaking research and support for publishing nationally and internationally	
d. Facilitation & creation of conducive environment to encourage peer networking,	
e. Ease of participating in CMEs	
f. Ease of getting in-service training on department-specific or relevant issues	
g. Approval for participating in conferences/workshop to share knowledge	
<b>Leadership &amp; professional development</b>	
h. Policy around choice of career progression (clinical/administrative)	

<b>Systems and Provisions</b>	<b>Tick Whichever is applicable</b>
i. Structured mentoring programmes for technical/ techno-managerial/ managerial roles and their career growth path	
<b>Culture and climate</b>	
j. Transparency in tenure/ promotions/ transfers,	
k. Encouraging belongingness through involvement in decision making;	
l. Policy and flexibility to maintain work-life balance—in terms of annual leaves, day-offs, Night and day duties, academic leave	
<b>Disasters and Pandemic</b>	
m. Provision of support to family members of faculty during public health disasters, to take care of the family's basic needs	
n. Provision for time off, to offer respite due to extended working hours	
o. Provision of flexibility in working hours during disasters / pandemics	
p. Any other (please specify)	

59. How often do you visit a medical college to monitor the provisions made to create the ecosystems and review the quality of teaching?
60. What is the process for appraisals of staff in the medical colleges across the state or system for ensuring accountability of the faculty and their performance?
61. What is the average turnover of a faculty in the college in the last three years (April 2018 to March 2021) across clinical/para-clinical/basic sciences specialities? Please share cadre and department wise split.
62. How many of these Faculty left within six months to 1 year of joining?
63. Is the turnover across cadres (regular/contractual) and departments (clinical/paraclinical/ basic sciences) different? If yes, how?
64. In your opinion, what are the reasons for the medical faculty to leave the position? (Score each of the items out of 10, where 10 is the highest reason for leaving, and 1 is the lowest)

<b>Reasons for Leaving</b>	<b>Score</b>
a. Career progression with movement to better-known colleges	
b. Lack of normalization of salary across cadre irrespective of type of employment (contractual vs regular staff)	
c. Appointment as regular faculty instead of contractual	
d. Lack of incentives (financial/ non-financial) to undertake and publish research	
e. Jobs in another non-teaching government hospitals	
f. Convenience and independence in private practice	
g. Non-transparent promotion and tenure policy	
h. Lack of leadership and mentoring for growth and development	
i. Living conditions, quality of life not at par with peers/ professionals living and serving in other higher education institutions across other sectors	
j. Distorted work-life balance	
k. Social and family commitments for children's education and family's medical requirements	
l. Isolation of under-represented groups within the college	
m. Lack of ambient and clean environment	
n. Lack of Job Security-Tenure of contract	
o. No additional financial incentive for performing against a non-performing faculty	



### 4.3. Annexure 3 – Legal Cases

#### 4.3.1. Type of Legal Issues in Recruitment of Medical Faculty

##### **Issue 1: Should seniority of obtaining a qualifying degree/diploma play a role in recruitment?**

In the case of *Hari Om Singh and Anr. Vs State Of U.P.*, it was held that merely obtaining diploma in X-Ray from State Medical Faculty does not confer any right on petitioners to claim appointment in the State service on the post of X-Ray Technician.<sup>44</sup>

##### **Issue 2: Effect of change in minimum qualification of medical teachers**

Punjab regulations regarding medical faculty were introduced in 1998 to disqualify non-medical teachers who taught pre-clinical subjects such as anatomy, biochemistry etc. from being a regular medical faculty if they hadn't obtained their degrees at medical colleges. This was challenged before the Punjab and Haryana High Court in the case of *Medical Council of India vs Union of India*. The court refused to entertain the matter or to direct the MCI/Punjab Government to regularise posts of persons who were hired earlier but did not qualify for regularisation after the new notification.<sup>45</sup>

##### **Issue 3: Issue of transfer**

In the case of *Vijaykumar Chandulal Popat vs State*, the medical teacher approached the Gujarat High Court alleging that their transfer was illegal and arbitrary and on the basis of reports in a newspaper about the medical teacher practising outside of the college, despite getting a non-practising allowance. However, since the only reason given in the transfer order was that of a lack of faculty in the area of transfer, the high court dismissed the petition of the medical teacher.<sup>46</sup>

##### **Issue 4: Changes in rules/regulations to apply prospectively, unless otherwise provided for in the amendment itself**

In the case of *Dr B S Meena vs State Education Department*, it was held by the Rajasthan High Court that any regulation that is introduced by a state regarding age of superannuation will be applied prospectively, and the petitioner who had already retired when the new rules were notified, cannot claim advantage of the same.<sup>47</sup> Court Cases related to Recruitment & Regularisation of Contractual Staff

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<sup>44</sup> <https://indiankanoon.org/doc/28701891/>

<sup>45</sup> <https://indiankanoon.org/doc/679502/>

<sup>46</sup> <https://indiankanoon.org/doc/96445919/>

<sup>47</sup> <https://indiankanoon.org/doc/16849682/>

#### 4.3.2. Court cases related to recruitment & regularization of contractual staff

Case	Court	Issue	Judgement
<u>Aakash Srivastava vs State Of HP - 20 July, 2021</u>	HP High Court	<p>Petitioners were <b>contractual staff who wanted to be absorbed into permanent as per regularization policy</b>. Two policies of the state, were examined:</p> <ol style="list-style-type: none"> <li>1. Regularize services of contractual appointees in the government departments, who have <b>completed three years continuous service as on 30.9.2017 (and similar policies released in 2019)</b>.</li> <li>2. <b>Resident Doctor Policy of 2019</b> whose repeat tenure clause stated that no candidate can have a repeat tenure as a senior resident/tutor specialist in any specialty, particularly, in GMC. However, a senior resident, who has completed his/her tenure in one specialty will be entitled for Senior Residency in the concerned super specialty department, but s/he shall be placed below the fresh candidates while drawing up merit irrespective of the marks earned</li> </ol>	<p><b>The court asked the state to consider regularization of the contractual staff.</b></p> <p>Reading the two policies together, the court observed that the petitioners were not seeking their regularization against the post of Professor, rather against the posts of Tutors, Senior Residents and Junior Residents, respectively. The court also observed that doctors with same qualifications as petitioners in General Wing were regularized under the same policy</p>

### 4.3.3. Court cases related to recruitment & regularization of contractual staff

Case	Court	Issue	Judgement
<b><u>Medical Council of India vs Union Of India</u></b>	Punjab and Haryana High Court	<p><b>Medical council of India Regulations 1971 allowed persons with M. Sc. in relevant subject to teach as medical faculty, without additional requirements.</b></p> <p>However, the 1993 Regulations revised the criteria and stated that such persons who have done MSc from specific medical colleges can only be considered medical faculty. With this change, the persons who had been working for more than a decade were considered ineligible to compete for regularization.</p>	<p><b>The Court held that the respondents should be considered for HoD position and regularization basis the following:</b></p> <ol style="list-style-type: none"> <li>1. Respondents were appointed as per the advertisement of February, 1997 on contract basis. The qualifications for the post as prescribed and mentioned in the advertisement itself were keeping in view the qualification as available in Punjab Medical Education Clause (i) Rule 1971 and the respondent duly fulfilled this criterion. The appointment was in accordance with the rules by a duly constituted Selection Committee.</li> <li>2. Subsequently the post was re-advertised on regular basis vide Advertisement dated 26-04/02-05-1997. The appointment was as such proper and not a backdoor entry. The petitioners were all eligible under the 1971 rules.</li> <li>3. They have suddenly been made ineligible on the basis of 1998 rules. The very basic qualification of M.Sc. has been changed. A basic qualification cannot even be improved by the candidates even if they wish to do so at this later stage. It would amount to throwing them out from the field of their specialization forever and at a time when they are all overage.</li> </ol>

#### 4.3.4. Court case around transfer and super annexation age

Case	Court	Issue	Judgement
<u>Vijaykumar Chandulal Popat vs State</u>	Gujarat High Court	<b>The petitioner approached the Gujarat High Court alleging that his transfer was illegal and arbitrary and was made on the basis of reports in a newspaper about the medical teacher practicing outside of the college, despite getting a non-practicing allowance.</b>	Since the only reason given in the transfer order was that of a lack of faculty in the area of transfer, <b>the high court dismissed the petition</b> of the medical teacher.
<u>Chandra Mohan Varma vs State Of Uttar Pradesh</u>	Supreme Court of India	Whether the notification dated 6 February 2015 extending the age of superannuation will apply to the appellant who attained the age of retirement on 13 August 2014	It was held that the appellant will not be entitled to the benefit of the notification dated 6 Feb, 2015. This is because the appellant who attained the age of 60 years – the age of retirement which prevailed at the relevant time – was not entitled to the benefit of the later notification dated 6 February 2015. The appellant was continuing until the end of the session (30 June 2015) after retirement, in terms of the decision dated 19 November 2012. He was not entitled to the enhanced age of retirement of 65 years.

#### 4.3.5. Court case around transfer and superannuation age

Case	Court	Issue	Judgement
Dr B S Meena vs State Education Department Ors	Rajasthan High Court	<b>Whether the post of Principal should be encadared by the MCI Regulations and not in the Rajasthan Medical Services (Collegiate Branch) Rules, 1962 (for short, 'the Rules of 1962'), even though a mention of the post of Principal is made in Rule 3 (f) of the Rules of 1962.</b>	The court held that the <b>Principals/Deans will be encadared by Riles of 1962, and not MCI Regulations because the posts of Principal, Dean, etc. are the selection posts and such selections have to be made only from amongst the persons who are substantively holding the post of Professors.</b> The selection of the petitioners on the post of Principal or Deal, etc., does not in any manner result in discontinuation of their lien from the substantive post of Professor. In fact, they gave been appointed on these posts only because they were treated eligible for such appointment by virtue of their substantive appointment as Professors. Even after selection on these administrative posts, they continue to be the members of service under the Rules of 1962 on the posts of Professor encadared therein.

Case	Court	Type	Issue	Judgement
	Gujarat High Court	Superannuation and rehiring on contractual basis	Whether the reinstatement of petitioner on the post of Associate Professor of anasthesia inspite of his superannuation and the expiration of his contract as per the Employees' Service (general) Rules, 2014 is just and proper	The court reversed the decision of the lower court to reinstate the respondent as an Associate Professor. This is because the respondent herein pursuant to fresh advertisement was selected and appointed as a Professor of Anaesthesia at Himmatnagar College but he refused to join and insisted to be appointed at Sola. There is no right for the respondent to continue to claim the he be continued at Sola. His appointment was contractual and came to an end when as per Rulesin force he attained the age of 62. Once having appeared and accepted the



				contract and again on termination accepted a fresh appointment at Himmatnagar and then refusing to come to join shows the conduct of the respondent in blowing hot and cold. He had no vested right to post the therefore even the directions to create supernumerary post is uncalled for.
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#### 4.4. Annexure 4 – National Institutional Ranking Framework (NIRF)

##### 4.4.1. NIRF Detailed Scoring Table

S l.	Parameter	Marks	% Weight
<b>1</b>	<b>Teaching, Learning &amp; Resources</b>	<b>100</b>	<b>30.0</b>
<b>1 A</b>	<b>Student Strength</b> including Doctoral Students (SS) $SS = f(NT, NE) \times 15 + f(NP) \times 5$	20	6.0
	$N_T$ = Total sanctioned approved intake in the institution considering all UG and PG programs of the institution	15	4.5
	$N_E$ = Total number of students enrolled in the institution considering all UG and PG Programs of the institution		
	$N_P$ = Total number of students enrolled for the doctoral program (MS/MD/DNB/MCh/DM) till previous academic year	5	1.5
<b>1 B</b>	<b>Faculty-student ratio</b> with emphasis on permanent faculty (FSR) <sup>48</sup> $FSR = 30 \times [15 \times (F/N)]$ F: Full time regular faculty <sup>49</sup> in the institution in the previous year $N = N_T + N_P$	30	9.0
<b>1 C</b>	<b>Combined metric for Faculty with PhD (or equivalent) and Experience (FQE)</b> $F_{RA}$ is the percentage of Faculty with Ph.D. (or equivalent qualification) with respect to the total no. of faculty required or actual faculty whichever is higher, in the previous year. Here F is the percentage of Faculty with Ph.D. (or equivalent qualification), over the previous 3 years. Min #3, F1=Fraction with Experience up to 8 years; Min #3, F2= Fraction with Experience between 8+ to 15 years; Min #4, F3=Fraction with Experience > 15 years.	20	6.0
<b>1 D</b>	<b>Financial Resources and their Utilization (FRU)</b> $FRU = 7.5 \times f(BC) + 22.5 \times f(BO)$	30	9.0
	BC: Average Annual Capital Expenditure per student for previous three years pertaining medical discipline only. (Excluding expenditure on construction of new buildings)	7.5	2.25
	BO: Average Annual Operational (or Recurring) Expenditure per student for previous three years pertaining medical discipline only. (Excluding maintenance of hostels and allied services)	22.5	6.75
<b>2</b>	<b>Research and Professional Practice</b>	<b>100</b>	<b>30.0</b>
<b>2 A</b>	<b>Combined Metric for Publications (PU)</b> $PU = 40 \times f(P/FRQ)$ P is weighted number of publications as ascertained from suitable third-party sources FRQ is the maximum of nominal number of faculty members as calculated on the basis of a required FSR of 1:15 or the available faculty in the institution	40	12.0
<b>2 B</b>	<b>Combined metric for Quality of Publications (QP)</b> $QP = 20 \times f(CC/FRQ) + 20 \times f(TOP25P/P)$	40	12.0

<sup>48</sup> Expected ratio is 1:15 to score maximum marks. For  $F/N < 1:50$ , FSR will be set to zero.

<sup>49</sup> Regular appointment means Faculty on Full time basis. Faculty on contract basis/ad-hoc basis will be considered if the concerned faculty has taught in both the semesters of academic year 2019-20. Faculty members with Ph.D. and Master's degree will be considered and counted here. Faculty member with a Bachelor's degree will not be counted.

	CC is Total Citation Count over previous three years FRQ is the maximum of nominal number of faculty members as calculated on the basis of a required FSR of 1:15 or the available faculty in the institution	20	6.0
	TOP25P: Number of citations in top 25 percentile averaged over the previous three years P is as computed for PU.	20	6.0
<b>2</b>	<b>IPR and Patents: Published and Granted (IPR)</b>	10	3.0
<b>C</b>	$IPR = IPG + IPP$ IPG = 5 x f (PG) PG is the number of patents granted over the previous 3 yrs.	5	
	IPP = 5 x f (PP) PP: No. of patents published over the previous 3 yrs.	5	
<b>2</b>	<b>Footprint of Projects and Professional Practice (FPPP)</b>	10	3.0
<b>D</b>	$FPPP = FPR + FBD$ FPR = 5 x f (RF) RF is average annual research funding earnings (amount actually received in rupees) per faculty at institute level in previous 3 yrs.	5	1.5
	FBD = 5 x f (PBD) PBD is percentage of bed occupancy in a day.	5	1.5
<b>3</b>	<b>Graduation Outcomes</b>	<b>100</b>	<b>20.0</b>
<b>3</b>	<b>Combined metric for Placement and Higher Studies (GPH)</b>		
<b>A</b>	$GPH = 25 \times (N_p/100 + N_{hs}/100)$ $N_p$ = Percentage of graduating students (in UG/ PG programs) placed in the previous 3 yrs. $N_{hs}$ = Percentage of graduating students (in UG/ PG programs) who have been selected for higher studies in the previous 3 yrs.	25	5.0
<b>3</b>	<b>Metric for University Examinations (GUE)</b>		
<b>B</b>	$GUE = 25 \times \min [(N_g/80), 1]$ $N_g$ is the percentage of Students (as a fraction of the approved intake), averaged over previous three years, passing the respective university examinations in stipulated time for the program in which enrolled.	25	5.0
<b>3</b>	<b>Metric for Number of PG Students Graduated (GPG)</b>		
<b>C</b>	$GPG = 30 \times f(N_{pg})$ $N_{pg}$ = Average number of PG students (MD/MS/DNB) students graduated over the previous 3 yrs.	30	6.0
<b>3</b>	<b>Metric for Number of Super Specialty Student Graduated (GSS)</b>		
<b>D</b>	$GSS = 20 \times f(N_{ss})$ $N_{ss}$ = Average number of Super Specialty (MCh/DM) students graduated over the previous 3 yrs.	20	4.0
<b>4</b>	<b>Outreach and Inclusivity</b>	<b>100</b>	<b>10.0</b>
<b>4</b>	<b>Percentage Students from other States/Countries - Region Diversity (RD)</b>	30	3.0
	Fraction of total students enrolled from other states	25	2.5
	Fraction of students enrolled from other countries	5	0.5
<b>4</b>	<b>Percentage of Women/ Women Diversity (WD)<sup>50</sup></b>	30	3.0
<b>B</b>	$WD = 15 \times (NWS/50) + 15 \times (NWF/20)$ NWS = percentage of Women students.	15	1.5
	NWF = percentage of Women Faculty including the women members in senior administrative positions, such as Heads of Departments, Deans or Institute Heads.	15	1.5

<sup>50</sup> Expectation: 50% women students and 20% women faculty.

<b>4 C</b>	<b>Economically and Socially Challenged Students (ESCS)</b> ESCS = $20 \times f(N_{esc})$ $N_{esc}$ = percentage of UG students being provided full tuition fee reimbursement by the institution to pursue their degree programs.	20	2.0
<b>4 D</b>	<b>Facilities for Physically Challenged Students (PCS)</b> PCS = 20 marks, if the Institute provides full facilities for physically challenged students, as outlined. Else, in proportion to facilities.	20	2.0
<b>5</b>	<b>Perception</b>	<b>100</b>	<b>10.0</b>
	<b>Peer Perception: Employers &amp; Academic Peer (PR)</b> <ul style="list-style-type: none"> <li>This is to be done through a survey conducted over a large category of Employers, Professionals from Reputed Organizations and a large category of academics to ascertain their preference for graduates of different institutions.</li> <li>Comprehensive list will be prepared taking into account various sectors, regions, etc.</li> <li>Lists to be updated periodically.</li> </ul>	100	10.0

#### 4.4.2. Participation in NIRF Rankings 2018-2021

In order to encourage larger participation in India Rankings, all institutions that had applied in the previous year, were pre-registered for India Rankings 2021 and were invited to participate in the ranking exercise. In addition, other institutions desirous of participating in the India Rankings 2021 were invited to register on the NIRF Web portal through a public advertisement.

State	2021	2020	2019	2018
<b>CFTIs and CFUs</b>	2	2	2	2
<b>North</b>	24	27	28	30
<b>South</b>	56	62	51	43
<b>East</b>	7	6	4	4
<b>West</b>	24	23	30	24
<b>Total Number of Institutions</b>	<b>111</b>	<b>118</b>	<b>113</b>	<b>101</b>

Source: <https://www.nirfindia.org/Home>

CFTI: Centrally Funded Technical Institutes

CFU: Centrally Funded Universities