Human Resources for Health in India

Strategies For Increasing The Availability Of Qualified Health Workers In Underserved Areas

---

Janurary 2011

PUBLIC HEALTH FOUNDATION OF INDIA

Human Resources for Health in India

Strategies For Increasing the Availability Of Qualified Health Workers In Underserved Areas

Authors[1]

Public Health Foundation of India	National Health Systems Resource Center
Krishna D. Rao	Dr. Garima Gupta (Lead Researcher) Dr. T Sundararaman

The authors would like to thank the Alliance for Health Systems and Policy Research and the WHO for providing technical support, as well as the Global Health Workforce Alliance for their financial support. They would also like to thank the National Health Systems Resource Center and the State Health Resource Center (SHRC), Chhattisgarh for additional funding and technical support in the design and conduct of the study.

[1] Note that the authors of the case studies included in this report are listed in the relevant sections.

Table of Contents

Strategies For Recruitment and Retention of Health Workers In Underserved Areas

This report describes the human resource initiatives to recruit and retain health workers in rural areas adopted by various states in India. The information presented here is based on a systematic desk review of all the State Programme Implementation Plans (PIP) for the year 2008- 09 and 2009 - 2010. Under the National Rural Health Mission (NRHM) each state proposes a plan i.e. the PIP for funding in which existing and proposed schemes and initiatives are described. The strategies adopted by states have been classified into five broad categories –

1. Educational and regulatory measures
2. Monetary Compensation
3. Workforce management policies
4. Public private partnership
5. Multi-skilling & alternative service providers.

This desk review is followed by two case studies that examine some these strategies in-depth.

Educational and regulatory measures

It is generally accepted that the tertiary hospital- based model of medical education in an urban setting provides limited exposure to the future doctors about health needs and infrastructures of the rural areas. Medical graduates thus develop a preference to work in urban areas as compared to rural or remote areas. Based on the experiences of missing doctors from public health systems of rural areas, a strong need was felt to modify the educational and regulatory reforms at the national and state level. One such measure is mandatory rural service for the medical graduates. Other measures take advantage of the strong desire among medical graduates for post-graduate (PG) specialization by linking this with rural service. Three forms of this linkages exist: compulsory rural service for admission to PG programs ("Pre-PG Compulsion"), giving incentives to in-service public sector doctors in PG admission or towards the cost of a PG degree ("In-service PG incentive"), and compulsory rural service for all PG graduates ("Post-PG Compulsion"). Finally, some states have a policy of recruiting health workers from rural areas.

Compulsory rural service for medical graduates – Eleven states namely Assam, Arunanchal Pradesh, Chhattisgarh, Gujarat, Kerala, Manipur, Meghalaya, Nagaland, Orissa, Tamil Nadu and West Bengal have made it compulsory for all the medical graduates to serve in rural areas for a duration varying from 1 - 5 years. Usually a bond is signed and the doctor can opt out of the rural service by paying a penalty equivalent to the bond amount. The bond amount as found to be as low as Rs.1,00,000 in Chhattisgarh and

as high as Rs. 10 lakhs in the state of Meghalaya. For example, in the state of Assam a graduate MBBS doctor has to serve in rural areas for a minimum of Five years against a bond amount of R. 7, 00,000 while in state of Gujarat a doctor has to serve for a minimum of 3 years against a bond of Rs. 1, 50,000.

Pre-PG Compulsion – Eleven states have made it mandatory for all the graduates to complete two to three years of rural service for admission to the PG degree programs (Arunachal Pradesh, Haryana, Himachal Pradesh, Jammu and Kashmir, Maharashtra, Manipur, Nagaland, Orissa, Sikkim, Tamil Nadu and Tripura). States like Arunanchal Pradesh, Maharashtra and Tamil Nadu have had this policy in place for the past 15 years. 10% – 30 % of the PG seats are reserved for in-service candidates in Jammu and Kashmir, Nagaland, Orissa and Tamil Nadu.

In-service PG incentive: Several states give certain benefits to in-service doctors working in rural areas for pursuing PG studies. These benefits are independent of any kind of mandate or compulsion. Four states – Andhra Pradesh, Assam, Chhattisgarh and Gujarat reserve about 10% – 30 % of the total PG seats for in-service doctors completing two – three years of service. In-service doctors take the entrance exams but compete for the reserved seats which increases their changes of admission.

In several states – Kerala, Mizoram and Uttrakhand - preferences to in-service doctors are given in the forms of additional marks which can be added to the total attained by the candidate in the qualifying PG exam. The number of marks given is according to the tenure and the location of service. For example, in the state of Tamil Nadu three years of rural service is required to be eligible for the PG exams. For those serving in tribal areas extra marks are given and they are also allowed to appear for the PG exam after two years of service.

In the state of Arunanchal Pradesh Medical Officers on completion of two years of rural service are eligible to be sponsored by the State, which will cover all expenses of their PG training. Tripura also sponsors in-service doctors for PG courses after they complete five years (with 3 years rural service) of service. In 2008 the state of Nagaland has introduced DNBE (Course on Family Medicine) which is equivalent to PG for in service doctors.

Post-PG compulsion: In the states of Tamil Nadu and Kerala compulsory service is being implemented for students for students graduating from PG courses. In Tamil Nadu specialists graduating from Government PG Colleges have to sign a bond to serve in rural areas for five years while specialists from private colleges have to serve for three years against a bond of Rs.5, 00,000. Similar conditions exist in Kerala and Jharkhand (1 year rural service against a bond of Rs. 5, 00,000).

Rural recruitment: In several states preferential selection of health workers with rural backgrounds for medical education is carried out based on the belief that these health workers tend to serve and remain in their native areas. While almost all the states give

preferential admission to candidates from rural or tribal background for the Auxiliary Nurse Midwifery training program, only three states have adopted this measure for the nursing courses. One such model, the Swalamban Yojana has been started in the state of Madhya Pradesh in the year 2006-07 with the objective of reducing the lack of staff nurses in government health facilities. Candidates with rural background are preferably selected and sponsored for the nursing courses. These sponsored students are bonded to serve in the rural area of Madhya Pradesh for seven years after passing or otherwise they will have to pay Rs. 2,00,000 to the government. Nurses of private nursing colleges can only receive their registration certificate after completion of seven years of rural services.

Monetary compensation

The most common strategy used by states to attract and retain the skilled health personnel in rural areas is to provide financial incentives. In several states rural postings have been classified according to their degree of remoteness. In around 18 states (Andhra Pradesh, Andaman & Nicobar, Chhattisgarh, Haryana, Himachal Pradesh, J& K, Kerala, Lakshadweep, MP, Maharashtra, Manipur, Nagaland, Orissa, Punjab, Rajasthan, Tamil Nadu, Tripura and Uttrakhand) health workers, typically general and specialist doctors, serving in rural areas get 'difficult area allowance' in addition to their regular salaries. Only five of these states - Haryana, Maharashtra, Nagaland, Rajasthan and Tripura – also give similar incentives to ANMs, nurses and paramedics. Monetary incentive for rural service given to health workers range from Rs.500 per months in the state of Tamil Nadu to Rs. 25,000 per month in Haryana.

Workforce management policies

Poor workforce management policies have resulted in poor working environments for health workers and constrained their performance. One factor that contributed to the acute shortage of health manpower is the lengthy recruitment procedure followed to recruit regular staff; it can take between 12 to 18 months from the day the vacancy is advertised till someone joins service. Under the NRHM, the recruitment process has been cut sort by hiring health workers on contract, typically for one year, to fill vacancies. Over 75,000 employees have been added to the public health workforce in the last three years. Contractual health workers are hired through advertising of the post in newspapers followed by interviews of the shortlisted candidates. In some states walk-in interviews are used to speed up the recruitment process. In Orissa and Tamil Nadu contractual doctors and nurses can be automatically regularized after serving for two years in rural areas.

Other workforce management strategies include employing retired doctors and nurses to meet the existing human resource shortfalls like in the state of Gujarat, Manipur, Maharashtra, Nagaland, Orissa, Sikkim, Tamil Nadu and Tripura.

Several initiatives are also being implemented in the states to enrich the public service experience. These include in-service training for health workers to upgrade their skills and improve performance. Some states have also initiated continuing medical education for doctors and specialists. Other workforce management initiatives undertaken include group housing for health workers living in remote areas to enable them to live closer to their families and have basic amenities and security while working in isolation in far flung areas. States like West Bengal, Uttrakhand and Chhattisgarh have set up group housing colonies for the staff. Though it is well known that an absence of transparent promotion and transfer policies and non-availability of job descriptions are an important cause of low job satisfaction and workforce attrition, no state has attempted to address these issues.

Public private partnerships

Various types of 'Public private partnerships' have been employed by states to address the rural health worker shortages or to enable underserved people to receive health services from qualified health providers. All these models involve engaging with non-government providers to strengthen public services or to achieve health goals.

Contracting-in: Contracting contractual workers to provider health services is popular at the primary, secondary and the tertiary care level. Almost every state in India employs contractual doctors to fill vacancies at primary health care facilities. The contracting of specialist doctors in hospitals is also common practice. In 13 states (Bihar, Gujarat, Haryana, Himachal Pradesh, Jammu and Kashmir, Jharkhand, Madhya Pradesh, Manipur, Nagaland, Puducherry, Rajasthan, Tamil nadu and Uttar Pradesh) private specialists work in the public health facilities either on call basis or on a fixed day of the week. Specialists are paid on a per case basis or a monthly honorarium to compensate for the days they are present. Contracting-in of other hospital services like diagnostics, laundry etc. is also common practice in several states.

Contracting-out: Handing over management of government health facilities to private agencies is not common in India. However, in several states (Arunanchal Pradesh, Assam, Bihar, Meghalaya, Madhya Pradesh, Orissa, Karnataka and West Bengal) NGOs and charitable trusts have been given the responsibility of managing a small number of public health facilities, particularly at the primary care level.

Purchasing services form the private sector: Directly purchasing services from the private sector is also practiced in several states (Assam, Chhattisgarh, Delhi, Gujarat, Haryana, Jharkhand, Madhya Pradesh, Uttar Pradesh and West Bengal). Most of this has been in the area of maternal care (e.g. institutional deliveries). Under these schemes the cost of care is borne by the State. One of the most successful of these schemes is the Chiranjivi yojana which was launched in the five pilot districts of Gujarat in 2005. The scheme involves purchasing maternity services from private providers through a voucher system so that women below the poverty line can have

access to antenatal care, institutional delivery and post-natal care without paying anything out-of-pocket.

Multi-skilling and task shifting

Multi-skilling and task shifting is used is several states to over come shortages of health workers in rural and other underserved areas. 'Multi-skilling' or adding to the skill set of existing staff to take on additional roles is commonly used in overcoming shortages of specialist doctors and district and sub-district levels. Task shifting or the shifting of tasks to lesser trained health workers is less common but might be scaled-up substantially in India.

Multi-skilling: In 25 out of 35 states (Arunanchal Pradesh, Andhra Pradesh, Bihar, Chhattisgarh, Gujarat, Haryana, Himachal Pradesh, J&K, Krnataka, Madhya Pradesh, Maharashtra, Manipur, Meghalya, Mizoram, Nagaland, Orissa, Puducherry, Punjab, Rajasthan, Sikkim, Tamil Nadu, Tripura, Uttar Pradesh, Uttarakhand and West Bengal), many Medical Officers (i.e. general doctors) have been trained in basic emergency obstetric care (Bemoc), Emergency Obstetric care (Emoc) and life saving anesthesia skills (LSAS). These medical officers are permitted to perform many clinical functions that were earlier under the specialist's domain.

Task shifting: To address the problem of few qualified doctors in underserved areas some states have introduced, or are planning to, carders of non-physician clinicians who will serve in primary health care settings or below. Assam and Chhattisgarh are the only two states which have started this course. In Chhattisgarh, there a 31/2 year diploma course – Practitioner in Modern and Holistic Medicine – was started in the year 2001 but was discontinued in 2008. Around 394 graduates of this course have been employed under NRHM as Rural Medical Assistants (RMA) at PHCs. Assam has introduced a 3 ½ year diploma course in 2004 is called as - Diploma Holders in Medicine and Rural Health Care (DMRHC) in Assam. The first batch of 98 graduates would be available to serve in rural areas from 2009. These clinicians perform almost all the clinical functions expected of a Medical Officer in a PHC.

CASE STUDY - 1

Improving Work Force Management Practices in Haryana state to attract and retain medical professionals in public health service : A Case Study

Dr. T. Sundararaman[1], Dr. Garima Gupta[1], Shomikho Raha[1], Krishna D. Rao[2]

[1] National Health Systems Resource Center, New Delhi,
[2] Public Health Foundation of India, New Delhi.

Improving Work Force Management Practices in Haryana State to Attract and Retain Medical Professionals in Public Health Service

The public health sector in India has been criticized for inefficiency and ineffectiveness. The reasons for this are many. The majority of public health institutions have gaps related to availability of human resources, infrastructure, medicine, equipment and support services. Even where these were present, issues of governance, management and provider motivation constrained the delivery of services. This led in the nineties, in tune with the spirit of the times, to limit the government role to a small package of services and for the rest to rely on market based care supplemented by a range of public private partnerships. This policy saw a political reversal in the middle of this decade, in part due to dissatisfaction with the outcomes of the nineties. This political interest in turn led to a revival of interest in how to strengthen public health systems and central to this was addressing the issues related to human resources for health. Meanwhile the situation in human resources had slipped into a crisis and states had literally to pull themselves out of a pit into which neglect of health systems in the nineties had led them into. We give below the situation and response in one state- the state of Haryana.

The State of Haryana

The state of Haryana is located in north India and adjoining the capital city of New Delhi. It was considered to be one of the relatively under-developed states of India at the time of its creation in 1966. Through rapid agricultural and industrial sector growth it has since become one of the leading states in terms of agricultural growth and per capita income. However, according to the National Family Health Survey of 2005/6, Haryana stands at a dismal 18th position in comparison to other states in terms of institutional delivery and eleventh for infant mortality (IMR 42). The urban –rural divide is also sharp with the percentage of institutional deliveries in urban areas being more than twice (64%) those in rural (27%). Similarly the rural infant mortality (60) is much higher than the urban infant mortality (44).

The human resource for health situation in Haryana

Out of all the gaps in delivering quality health services, the most difficult to meet was the shortage of doctors. As per the state norms there should be at least two medical officers in all the primary health centers (PHCs), one of which should preferably be a Lady Medical Officer to provide quality health care services. However these sanctioned posts were less than the norms with the post of second Medical officer being sanctioned in only 216 PHCs out of 427 PHCs.

At the level of district and sub district hospitals there was an extreme shortage of specialists especially in relatively more difficult districts like Bhiwani, Jind, Mewat, Narnaul, Sirsa and Karnal. And this is despite the fact that most such hospitals are in fair sized towns. Of the total of 137 such hospitals that were earmarked for up gradation to become first referral units (known as FRUs) which could provide emergency obstetric care there were 91 thirty bedded peripheral rural hospitals called Comprehensive Health Centers (CHC) and 46 Sub district & District hospitals. These hospitals required a minimum of 411 specialists (1 Gynecologists, 1 Pediatricians & 1 Anesthetists at least in each of these hospitals) to provide round the clock Emoc services.[2]

Out of the total sanctioned 1712 posts of doctors about 502 posts were found to be lying vacant since a very long duration. About 100 PHCs were functioning without any doctor till September 2008.[3] A shortfall of 211 specialists existed at the level of CHCs with only 45 specialists being in position against the sanctioned posts of 256. While 350 MBBS doctors were in position against 580 sanctioned posts with a shortfall of 230 at PHC level[4]. If the Indian Public Health standard norms are applied to these existing facilities then the shortfall for specialists at CHC level would become 471 and 910 for medical officers at PHC level. These figures do not however reflect the shortage of the doctors at the level of Sub district and District hospital, which if added to these figures would increase the shortfall manifolds.

Added to this, was the problem of a high level of reported absenteeism among doctors posted at PHCs and CHCs in rural areas, more so in what was categorized as difficult areas. Even amongst those posted in rural areas, there was a pressure for transfer to urban areas, and considerable lack of morale if they could not achieve this. For all these reasons, health care services delivery at the level of primary health care was found to be inadequate and inefficient, leaving the rural population of the state largely underserved.

[2] State Programme Implementation Plan 2009-10

[3] Discussion with Principal Secretary and Finance commissioner Health and Family Welfare, Haryana

[4] Ministry of Health and Family Welfare , Government of India, Bulletin on Rural Health Statistics, 2008

These high level of vacancies – about 29% - were mainly attributed to both poorly designed work force management policies and the lengthy recruitment process under Haryana Public Service Commission (HPSC) which took unusually long time for recruitment. Absence of any formal transfer and promotion policy in the state further added to the problems of retention of critical human resources within the system. Irrational transfers and promotions contributed to the high degrees of job dissatisfaction. Job roles and responsibilities were also not clearly defined leading to a mismatch between the qualification/ skills and the job requirements. Full potential and skills of the specialists was not optimally utilized as it was observed that most of the specialists (67 Surgeons, 58 Gynecologists, 55 Physicians and 71 Orthopedic Surgeons) were either performing non clinical roles or working as general duty medical officers.

The situation of missing professional service providers- doctors, specialists, nurses and paramedics in difficult and rural areas, drew attention of policy makers to rethink the existing human resource policy of the state and formulate new policies specific to state's requirements.

The process of recruitment

One of the important factors that contributed to the high number of vacancies in the state was the long recruitment process of the HPSC. Since there is considerable demand for government jobs, given both its sense of security and sense of authority, most state governments and the central government have set in place an administrative body entirely dedicated to recruitments for government service. To ensure selection by merit with fairness and transparency an elaborate process of selection has been set in place. A number of vacancies had to cumulate and then be notified to the commission who would examine it and then advertise the posts, and then announce the examination and interview dates. The process of selection was such that it could take as much as two years to complete- which is too long for an applicant to wait. By the time appointments were made, new vacancies arise and existing vacancies are not filled up fully. Therefore, as summarized by a senior state official**, "**A situation of chasing vacancies always existed".

To overcome this gap the state first attempted the following two measures:

a. To start by providing contractual appointments, which meant a short term contract for one year, extended annually. This could be made by the state or district health department without going to the Public service commission. The selection was made by advertising the post along with the date of interview. Anyone interested in the job could "walk-in" to the interview and if found suitable could be immediately appointed. A number of vacancies were reduced by this measure.

b. Public Private Partnerships –Private specialists were contracted in on call basis to provide specialty health care services in the public health facility where regular government specialist posts were vacant. For example, specialists were paid Rs. 1500

per caesarean section or were paid on a part time basis for providing services in public health facilities for two hours each day.

Union and State Public Service Commissions in India

The Union Public Service Commission (UPSC) and its state level counterparts were established under Article 315 of the Constitution of India. The Commission consists of a Chairman and ten members. The major role played by the Commission is to select persons to man the various central civil services, posts and the services common to the Union and states. The terms and conditions of service of the Chairman and members of the Commission are governed by the Union Public Service Commission (Members) Regulations, 1969. The UPSC has been entrusted with the following duties and role under the Constitution:

1. Recruitment to services & posts under the Union through conduct of competitive examinations
2. Recruitment to services & posts under the Central Government by selection through interviews
3. Advising on the suitability of officers for appointment on promotion as well as transfer-on-deputation
4. Advising the government on all matters relating to methods of recruitment to various services and posts
5. Disciplinary cases relating to different civil services
6. Miscellaneous matters relating to grant of extra ordinary pensions, reimbursement of legal expenses

Exemptions: In order to exempt some posts which for reasons of national security or some other reasons may not be required to be referred to the Commission for their advice, the Union Public Service Commission (Exemption from Consultations) Regulations were issued on September 1, 1958, under Article 320(3)(a) and (b) of the Constitution. These Regulations are amended or revised as and when the need arises.

However, both these strategies could not meet the requirements. Retention was a problem with contractual appointment. Unsure of their annual extensions, staff would leave the moment they got alternative employment. When contracting in specialists, the desired combination of three specialists – pediatrician, obstetrician and anesthetists was never available at one time thereby undermining the functionality of providing referral and

emergency care for maternal and child health. Therefore the focus shifted to finding a way of being able to give permanent appointments to professionals without going through the long recruitment process of HPSC.

Changing recruitment policies

At the meeting of State Health Mission, held on 7th Aug 08 under the Chairmanship of Chief Minister of Haryana, facts depicting large number of vacancies and the routine lengthy recruitment process through HPSC were shared by the Health department. A quick decision then followed for recruiting to regular posts of doctors and specialists out of the purview of HPSC. An immediate formal approval for the same was granted by the state Assembly on 8th August, 2008. The anticipated resistance from the HPSC did not arise and consent was given on 25th August, 2008.

As per No. G.S.R. 7/ Const./ Art. 320/2009 – in exercise of the powers conferred by the provision to clause (3) of article 320 of the constitution of India that allows the state to take certain category of posts out of the purview of public service commission, the Governor of Haryana made the amendments in the HPSC (Limitations of Functions) Regulations, 1973. These regulations would be called as HPSC (Limitation of Functions) Amendment Regulations 2009. A clause (q) – Initial appointment to the post of Medical officer in the Haryana Civil Medical Services – II in the Health Department, was added after clause (p) of HPSC (Limitation of Functions) Regulations, 1973, in part – II Limitations, in regulations 3.

A mutual decision was then taken by the Directorate of Health Services to take 630 regular posts out of the purview of the HPSC. Recruitments for other regular posts which, like those of Senior Medical Officers and Dental surgeons, are still being done by the HPSC. Recruitment – into permanent government services, thus became an on-going process under which applications are entertained round the year for posts of generalists and specialists. As remarked by the senior state official, ***"****It was not the question of power for the State department of Health and HPSC, but of public interest"*.

The state has also sanctioned an increase number of specialist posts raising it from 8 to 26 at the level of the district hospital. The Indian Public Health Standards promoted by the National Rural Health Mission, helped to justify these norms to the finance ministry. Thus in total 424 additional posts of doctors were sanctioned out of which 359 posts were of specialists.

A Departmental High Powered Selection Committee of experts in the field of medicine and state health officials was formed for conducting the interviews and offering regular appointments to the selected candidates. The Health Directorate advertised the posts of doctors at the level of CHCs in September 2008. For the first round of interviews over 1750 applications were received for 620 posts at CHCs. First preference was given to

specialists with Post graduate degree followed by Post Graduate diploma doctors and then finally to MBBS doctors at the time of short listing and selecting the candidates.

Interviews were scheduled on 10th of every month and the results were declared on 11th of every month. To hasten the recruitment process ‘’character verification of the candidates by police, a process required for permanent appointments, was undertaken during the time that elapsed between selection and joining of the candidates. Appointment letters were generally issued within a week of the interviews and selection. The recruitment process is now fully web based thus the advertisement for the posts, applications, list of shortlisted applicants and finally the list of selected candidates is available on the website of the Haryana health department. *The time span between the advertisement of the post and joining of the selected candidate thus reduced from an average of 18 months to just one month*.

From attraction to retention

Though the above process proved of great use in attracting doctors to join the service, it was not as efficient in retaining the doctors, once they had joined. After completion of the first round of interviews and selection it was observed that very few of the selected specialists finally joined the postings at CHCs and of those who did, many left the services subsequently. Based on this experience, the Directorate of Health Services reviewed existing workforce management policies and introduced the revised policies needed to retain the doctors / specialists in the public system.

The system of direct recruitment by the department through monthly interviews however continues. Some of the major workforce management initiatives were: –

(i) Revised placement policy: Unlike in many other states of India, most primary health centres are well connected through roads and transport services with the district hospitals and district headquarters towns of Haryana. District hospitals are thus more often preferred by the patients as a wider range of services is available there. Also most referral work happens at the district hospitals. For specialists also District hospitals were a preferred location of work. Therefore a policy level decision was taken to strengthen the District hospitals on a priority basis and specialists are now posted only at district hospitals and at the few CHCs that are providing comprehensive emergency obstetric care. This step also assured that the skills of specialists are utilized mainly towards performing tasks related to their specialty and are not wasted for general duties meant to be performed by “general duty” MBBS doctors.

The Selection Committee was also instructed to follow a flexible approach to post the candidates at the preferred location whenever feasible. This flexibility has attracted

candidates from the neighboring states of Rajasthan, Punjab and Uttar Pradesh, and many such doctors opted to be posted as per their preference in the border districts.

In addition to recruitment and placement policies, the transfer policy has also been revised. As per the new policy doctors, including both specialists and MBBS doctors, have to complete a minimum tenure of three years at one location of posting. No transfers would be made until three years of term is completed at one centre of posting. No mandatory transfers would be made of doctors working in rural and remote areas.

(ii) Enabling work environment **-** A special measure was taken to empower doctors and create a suitable work environment for them to perform to their full potential. Specialists were given a greater role in decision making process as related to facility development, at the district head quarters, and where required even at the state head quarters level. In particular they were involved in the procurement of the drugs and equipments required to perform their duties adequately.

Specialists were encouraged to send a requisition for necessary equipments to the district head quarters, where it was verified by the chief medical officer of the district and if beyond his/her powers it would be forwarded to the state headquarters. Districts are then sanctioned funds and the equipment sought can be ordered and procured by the specialist in return of which an undertaking is signed as an assurance for better performance. Poor performance would result in transfers to another facility with a less level of development.

This enabling environment has also emphasized the need of a continuous monitoring system to track the performance outcomes of the specialists. As part of this close monitoring strategy, a monthly review meeting is held with all the specialists where issues related to requisitions and performance of the specialists are discussed at the state headquarter .The best performing doctors present their achievements and share their best practices. Non performing specialists are given an opportunity to seek guidance in order to improve their performance. If reasons for poor performance are pertaining to poor availability of infrastructure and equipments then all efforts are made by the state health authorities to create an enabling work environment at the facility level. Disciplinary actions are also taken against doctors with poor performance who fail to deliver even in a facility with the required infrastructure and equipments. Good performances are also rewarded with better promotion and transfer opportunities.

(iii) Revised compensation packages – The compensation package of the specialists and other doctors have been revised in the year 2008. The proposal of revised high compensation package initially faced resistance within the health department because of the concerns related to parity issues. The proposal was backed by the Health Directorate to meet the opportunity cost of the doctors who are required to stay and work in rural/ remote areas. As a result the compensation packages were revised for critical cadres like Specialists, MBBS & AYUSH doctors and paramedical staff. Remuneration of specialists posted in “non-difficult areas” is now increased to Rs. 32,000 per month while salary packages for specialists posted in difficult areas are further hiked and categorized

based on the grade or category of difficult area. Highest package is of Rs. 60,000 per month for serving in Grade I difficult area, followed by Rs. 50,000 per month for Grade II and Rs. 40,000 per month for Grade III areas. Six additional increments have also been introduced for post graduate degree specialists and three for diploma post graduates working in difficult areas.

(iv) Difficult area allowance – Out of 91 Community Health Centers(CHCs) and 427 primary health centers (PHCs), 10 CHC and 50 PHCs are identified as located in difficult area where doctors are by in large reluctant to work. To encourage and attract critical professional service providers to these areas, special incentives were introduced under NRHM for specialists, MBBS doctors, staff nurses and paramedics. The range of difficult area allowance is in accordance to the remoteness/backwardness (Grade I, II & III) of the area of posting. MBBS doctors staying at PHC head quarters are entitled to an additional payment of Rs 5000 per month and this rises to Rs 10,000 per month for PHCs in Mewat and Morni hills. AYUSH doctors posted in CHC in Mewat region receive an additional Rs. 8000 per month. Specialists in the field of Medicine, Gynecology, Pediatrics, Anesthesia, Orthopedics and Surgery get Rs 15,000 per month for serving in difficult rural areas and Rs. 25,000 per month for Mewat and Morni hills. Staff nurses receive an incentive of Rs. 3000 per month while Paramedical staff receives Rs. 2,000 per month for any difficult area

	Medical officers	**Specialists**	**Contractual Staff Nurses**	**Para Medical**
Difficult Area CHCs(10)	-	1500	-	-
Difficult RuralPHCs(50)	5000	-	-	-
MORNI (PHC)	10000	-	3000	2000
MEWAT PHC/CHC/ G	10000	25000	3000	2000

Source - State PIP 2009-10

Outcomes

One of the major and explicit achievements of these innovative strategies is the massive reduction in the number of vacancies of doctors at public health facilities of Haryana. 825 doctors including 525 specialists were appointed during the year 2008-09. Currently state authorities are able to state claim that there are no vacancies of specialists in the state. This was unthinkable two years ago. As of April, 2009 319 MBBS doctors and 231 Specialists have joined on regular posts through the new recruitment process. In the course of implementation of the new recruitment policy, the Health Directorates realized the importance of developing strategies with a focus on retention of human resources .

The entire gamut of workforce management policies and a fast recruitment process for regular government posts has made government service attractive for the doctors. This is evident from the consistently increasing number of applications received for every new round of interviews. In total about 3,000 applications were received by the Directorate of Health Services in response to the advertisements of 1,044 posts in different rounds.

Has increased presence of skilled human resources in the facilities, led to improved access and utilization of services? Though there is no formal evaluation that has been done, early reports in the review meetings are encouraging. Bed occupancy at public health facilities has increased to 100 % from 40 % in the last one year. Outpatient and in patient attendance of patients has also increased. Comparing the period January to April 2008 with the same period in 2009, we note that there has been an 11% increase in outpatient (OPD) cases, a 20% in the number of deliveries conducted at the public health institutions and a 25% and 24% increase in the number of major and minor gynecological surgeries, respectively.

Not all of this can be attributable to increased human resources alone. Other processes of strengthening public health systems proceeded in parallel- these include the distribution of free medicines to all patients at the public health facilities, the introduction of surgical packages at subsidized and fixed user fees. Earlier user fees were liberal.

Conclusions

In the entire discourse on health sector reform of the nineties and even contemporary discourse, the failure to recruit or retain or ensure performance of skilled professionals in the public health system has largely been treated as evidence of the inherent non-viability of public health delivery and the need to search for partnership alternatives. Yet this often ideologically driven discourse almost completely left out simple measures needed to make the public health system viable, and overcome the constraints to its growth.

Haryana's simple yet audacious reform of dispensing with the cumbersome process of Public Service Commission recruitment, and its dispensation with the whole logic of contractual appointments has solved one of the most intractable problems of the state health systems. But it has done more; it has cleared the cobwebs of the mind and helped us to think out of the box about how to make the system work. One notable feature of the Haryana programme was the persistence with the approach and the political steer. It would be impossible for the administration to have moved through such a basic reform, if it had been unable to carry the political good will along with it, or if there had not been the readiness to take a political decision to change the system at such short notice. In many states the early failure of this policy where many recruits failed to join would have been enough justification for scrapping the reform. Instead Haryana went in for building a package of measures to address retention of services providers recognizing that such a

package was needed to complement the moves they had made to attract doctors. They have also introduced a system to monitor individual service provider's outputs and performance and innovatively linked it up to providing them more role in decision making – instead of projecting it only as a disciplinary control.

No doubt, it will still be a challenge to sustain utilization and build on performance, and though they are on the right track, such advances are fragile, and too easily reversed. Also this is but one small step in all the processes that lead to improved health outcomes. The main learning from Haryana was that some of the most basic problems of crafting credible health systems lend themselves to easy solution, given some administrative imagination and political will.

ANNNEXURE – CASE STUDY 1

Annex 1: District wise comparison of service utilization (Jan – April 2008 and Jan – April 2009)

District	No. of Outpatients		No. of Inpatients		Inst. Deliveries		Gynecological surgeries				No. of Doctors			
							Major		Minor		MBBS		Specialist	
	2008	2009	2008	2009	2008	2009	2008	2009	2008	2009	2008	2009	2008	2009
Ambala	180595	175717	27845	23673	1491	1615	68	137	--	--	101	101	30	39
Bhiwani	247132	271574	31328	26074	1056	1970	30	24	--	5	62	97	9	12
Faridabad	118178	122842	13974	12820	2675	3163	117	231	261	335	--	--	--	--
Palwal	57164	68620	0	0	1080	1396			48	69	18	26	1	11
Fatehabad	112726	114787	8496	8605	1632	2089	129	94	4	8	27	31	14	37
Gurgaon	136124	153230	8980	16111	2732	2843	73	158	1	7	60	73	22	31
Hisar	126228	109403	7632	4182	1772	1860		55		84		78		20
Jind	170922	182736	11870	13240	1886	2935	46	60	611	660	36	51	9	11
Jhajjar	116485	118044	3546	4328	1072	1151	1	1	6	125	56	47	9	26
Karnal	183461	254379	8610	11050	1744	2899	75	137	292	493	45	78	26	36
Kaithal	137503	138525	4037	4707	1863	2210	22	30	80	100	36	41	22	31
KKR	133822	158163	14376	14704	504	1045	66	144	142	144	45	58	14	21
Mewat	81300	104145	3132	3771	1639	1320	26	-	-	166	31	28	0	13
Narnaul	126749	140645	6502	7518	1639	1848	124	140			24	39	1	7
Panipat	34549	45929	4428	8910	1106	1139	32	44	0	2	16	30	5	22
Panchkula	118703	159947	23660	26022	232	824	343	516	9	65	21	73	31	47
Rohtak	156963	171369	2995	5882	3858	4640	5	22	532	547	59	59	11	20
Rewari	40267	46803	3214	5164	275	370	31	66	63	65	58	66	8	15
Sirsa	89495	113495	7806	16613	3450	3142	138	151	3	3	37	47	10	23
Sonepat	150594	174466	6452	8562	1062	2524	98	100	174	183	58	86	19	34
Y.Nagar/Jagadhari	34352	41894	6601	5902	644	1040	213	87	94		50	50	20	36
Total	2553312	2866713	205484	227838	33412	42023	1637	2197	2320	3061	40	1159	261	492
Increase		313401		22354		8611		560		741		319		231
%		11		10		20		25		24		28		47

CASE STUDY - 2

Chhattisgarh's Experience with 3-Year Course for Rural Health Care Practitioners: A Case Study

Shomikho Raha[1], Dr. T. Sundararaman[1], Dr. Garima Gupta[1], Dr. Kamlesh Jain[2], Dr. K. R. Antony[2], Krishna D. Rao[3]

[1] National Health Systems Resource Center, New Delhi
[2]State Health Resource Center, Chhattisgarh
[3]Public Health Foundation of India, New Delhi.

Chhattisgarh's Experience With 3-Year Course for Rural Health Care Practitioners

Situation analysis

The state of Chhattisgarh was carved out of south-eastern Madhya Pradesh (M.P.) in late (November) 2000. With regard to key socio-economic and health indicators (including IMR and MMR), this state lags behind the rest of the country. Although geographically the ninth largest state, covering 135,194 sq.km, its rank by population size would be much lower as its population of 20.83 million (2001 Census) is dispersed with a population density which is half that of the national average (154 for the state as against 312 per sq.km for the country). One thirds of its population is tribal, the highest amongst large states and 40% of the land areas is classified as forest lands, Of the 18 districts of the state, 12 are classified as remote, tribal and extremist affected areas.

Providing health care is a human resource intensive activity, and in Chhattisgarh state the shortage of trained health care providers is among the most acute in the entire country. The state has 4692 sub-centers sanctioned and of these almost one-third do not have even a single ANM, though they are expected to take on two ANMs. Only 540 staff nurses are available against the 1344 required by IPHS norms for working in primary and secondary public health facilities in Chhattisgarh (National Health Systems Resource Centre (NHSRC) and Academy of Nursing Studies, 2009). The shortfall for doctors both MBBS graduates and Specialists is about 72%, with 1455 medical officers posted at PHC against the posts of 1737 and only 247 specialists available against the sanctioned 637 posts (State PIP 2009-10). The shortfall in doctors is even more severely felt as the vast majority of the inadequate numbers that do exist are located in urban or semi-urban areas, with certain large tracts of rural and tribal areas almost devoid of even a single doctor-(with MBBS qualification).

At the time of its bifurcation from the state of Madhya Pradesh,, Chhattisgarh had no government nursing college and only a single private college of nursing admitting 30 students for a four year BSc Undergraduate degree course. . Four years after the creation of the state, the Government College of Nursing started functioning at the state capital, Raipur, with an annual intake of 33 students. At present there are 2 colleges that offer postgraduate programmes in nursing (M.Sc), 10 colleges that offer undergraduate degree courses in nursing and 4 that offer diplomas in nursing (GNM) all of which are in the private sector. In 2000, there was a single medical college in the entire state admitting 100 students, and even this was considered one of the least favored medical colleges by students in undivided Madhya Pradesh. This was because it was relatively poorly staffed and a limited reputation for quality and outcomes. This college had to be strengthened after the creation of the state, and a second medical college opened in August 2002, got recognition in 2006 and a third was initiated in July 2007. Two further medical colleges remain in the pipeline. Though for a state these are rapid strides forwards, it would be quite some time before this would translate into increased recruitment in public sector recruitment. The immediate impact of a new states was a stagnation or even a small drop in the number of doctors in 2006 as compared to earlier (see table 1) which could be due to the fact that the rapid urban and industrial development of the state could support a larger number of doctors in private practice. In the year 2001 only 516 medical officers were available at PHC level out of total of 1455 sanctioned posts. By 2571 it had increased to 1345 but this was still only about half the number of sanctioned posts. As the numbers of facilities rise to meet the national norms,

and as the number of posts rise to meet the IPHS norms the gaps between what is posted and what is needed would become even more. For example the table below shows that 6470 posts of ANM and LHV are sanctioned- but if the second ANM as mandated by IPHS is sanctioned that would push up requirement by another 4692 ANMs.

Table 1: the Changing HRH situation in Chhattisgarh State

	In year 2002-03		In year 2006-07			In year 2002-03		In year 2006-07	
Facility	Sanctioned	With sufficient infrastructure and facilities	Sanctioned	With sufficient infrastructure and facilities	**Cadre**	Sanctioned	In position	Sanctioned	In position
Sub-centers	3818	1458	4692	1853	ANMs + LHVs	5729	4667	6470	5275
PHCs	513	327	717	400	MPW + supervisor	3785	3121	4467	3149
CHCs	114	34	133	70	Medical Officers	1455	516	2571	1345
District Hospitals	6	6	16	14	Specialist	291	103	1006	291

Source: –SHRC, Raipur

As evident from the table above, since the formation of Chhattisgarh, the largest challenge the state government has faced in the health sector is the human resources challenge. Chhattisgarh had one of the lowest human resource denisities in India, and perhaps one of the lowest anywhere in the world. To address the challenge with respect to physicians, one of the options that the state government considered was the option of a three-year course to train medical professionals or three year doctors as it was then popularly known to serve in rural areas.

The policy options in Chhattisgarh[5]

The initial idea of a 3-year diploma course for training a health care practitioner for rural areas stemmed from the new Chief Minister's office and was a result of his direct intervention. The initial logic was that if candidates from rural areas are brought into a 3-year diploma programme, they would be more likely to return and serve in such areas. Their opportunities for urban private sector employment would be less. Another rationale that was articulated was that a formally trained skilled provider in the underserved areas of Chhattisgarh would serve as a better than to the "*jhola chaap*" doctors practicing in these

[5] This Case Study is a result of information collected through extensive interviews with key informants representing different stakeholder interests within government and outside, including a focused group discussion with over 40 graduates from the 3-year courses and 12 'Rural Medical Assistants' (RMAs) currently in government employment. In addition, all published documentation related to the 3-year course or to the RMA postings has been drawn on. Finally, the Case also contains primary data collected and expressed here for the first time. The authors are grateful to all who participated in this study, in providing or facilitating information on this case.

regions. This is a term that derisively refers to the unqualified practitioners of modern medicine that has mushroomed over the villages.

Given the fact that the outcomes from new medical colleges would take over six years to be visible, a three year course would yield results within the political lifespan of the government of the time. Moreover, starting new medical colleges, conforming to guidelines of the Medical Council of India (MCI) required significant capital investment from the government and recruitment of human resources. Even if the financial resources were to be found, the human resources would be difficult, for even the existing state college in the state capital was facing shortages of key faculty members.

The implementation process of the 3-Year course

Formation of the Chhattisgarh Chikitsa Mandal (CCM)

From early 2001, when discussions to the three year course began, opposition from the Medical Council of India, the professional council regulating medical education, was anticipated. In discussions shared among the Health, Law and General Administration Departments, it was agreed that the powers of recognizing the council which would approve the three year course should be given to a body created for the purpose through an Act passed in the Chhattisgarh state legislative assembly. The MCI would thus not have to approve the course. Such a State Act could be passed by the state without requiring the approval of the central/federal government or the president. MCI was however contacted and they formally rejected this course, even without going into any discussion of objectives or course content. The Chhattisgarh government however proceeded, using existing precedence of West Bengal having briefly implemented such a course and with the knowledge that in Maharashtra and Karnataka, where similar courses had been implemented. The operationalization of the plan was given great urgency by the political leadership. Within days of the decision, a committee was formed in the Health Department. Within the month, a committee of senior secretaries presided by the Chief Secretary forwarded a letter of approval to the Chief Minister (CM). Still within the same month, the CM signed for the legislative assembly to meet to consider a proposed bill. The very next month the assembly met and passed the act. The notification rules were drawn out and printed as an extraordinary Gazette on 18 May. The state assembly accepted these rules four days later and the e Chhattisgarh Chikitsa Mandal (CCM) came into existence.

One important reason for such a quick process was the clearance or no objection from the Finance Department. The principal reason for quick clearance by the Finance Department was the explicit understanding that the CCM would be an autonomous body with no financial burden to the state government. The CCM was expected to raise its own finances through fees charged from private agencies in return for being given permission for starting institutes which would run these 3-year courses and later to be supplemented by through registration fees charged to graduating three year doctors. Private managements of these institutions were expected to recoup these losses and make a profit through tuition fees. The costs to the government of running the CCM were expected to be minimal with a total of only three officials linked to the new registration body; all of whom were already on government payrolls and were being seconded for the task. The CCM comprised the Director of Health Services as President, the Dean of the Medical College in the state capital as Vice-President

and a district chief medical officer to be seconded in as Registrar. With such limited initial capital and human resources in CCM, the new registration body was a limited institution.

The powers that the CCM was authorized with, however, were not so limited. It was initially given several responsibilities: (i) to inspect private bids made for starting the new institutes for the 3-year courses, (ii) to be the nodal authority in-charge of the admissions process of the students to these institutes, (iii) to have power to change the syllabus of the course, (iv) to fix norms and guidelines for charging tuition fees for the 3-year course, (v) to be the authority charged with undertaking the examinations process as well for this course; and (vi) to be the registration body for graduates from the 3-year course. These were far more powers than the state medical council had and even more than the Indian medical council had for its regulation of medical courses..

Opening of the Institutes

Since the 3-year course was not going to be public funded, the institutes for imparting this education were all planned to be private. The locations proposed were in rural/tribal districts, but with access to a large government hospital usually the district hospital to make it possible for clinical teaching and internship. Fifteen applicants responded to an expression of interest advertisement by the government. It is notable that although the CCM was charged with the responsibility of initially inspecting the infrastructure and facilities available for the first year of non-clinical teaching alone, the final selection of the initial three institute locations was solely with the state government. First three colleges were inaugurated in October, 2001 at Ambikapur, Jagdalpur and Pendararoad. At this stage, the syllabus for the remaining two years was still not prepared. Three further institutes at Kwardha, Katghora and Kanker opened a year later in end 2002, with two of these going to two owners of the first batch of institutes opened. Although initially it was decided that each institutes would have maximum of 100 students, all the six institutes were allowed to admit 150 students per year. The student admission was in three categories:

1. 50 % free merit seats – 75 seats,
2. 35% payment merit seats – 53 seats
3. 15% NRI seats – 22 seats.

There was only a 20-day period for applications to the first three institutes, but even in this short time there were approximately over 9,000 applicants who applied for admission to these three institutes in the first year. Admissions happened for three years before the course was stopped. For the first year, CCM conducted the admissions as per the provisions of the Act. In the subsequent years when the institutes took the lead through an association they formed called the "Three Year Medical Institute Association of Chhattisgarh" (TYMIAC). The cut off for the admissions of the first batch was 75% in the required the school-leaving examination, with inclusion of Biology being compulsory. In the first two years, eligible candidates were called for interview in the order of their scores in the school leaving examination, and given the seats in the institutes of their choice, against vacancies that existed at the time of their appearance- a process that has of late being called counseling – though in fact no counseling occurs. This counseling was centralized and held at Raipur. In the third year of admissions, even this centralized counseling was given up and admissions were directly done at each institute. For entry to the third batch, there was a significant fall in

the number of interested applicants as compared to the first batch. The reasons for both these developments are explained below.

The influence of legal issues on the Name and Content of the Course

The Indian Medical Association (IMA), representing largely private doctors, opposed the idea of a 3-year course of medical education as a dilution of the standards of the medical profession. Not surprisingly, therefore, the IMA filed a case questioning the legality of the Chhattisgarh three year course almost immediately after the CCM Act. Even though there was no verdict in favor of the IMA, the state government's engagement with the three year course was almost exclusively dominated by its having to survive this legal challenge and to find the legal space to start and continue with this course. Such primacy to legal sanction, did manage to keep the legal space open, but it came, at the expense of attention to other issues that were equally important, if not more, to the actual functioning and to the institutional support the course may ideally have had. Above all, there was very limited clarity on three vital issues- the syllabus, the exact identity of the graduating students, and institutional provisions related to standards and the transparency of process – especially admissions, hiring of faculty and maintenance of quality in certification.

The first influence of the pending legal battle over the 3-year course was the change in its name, even before the course formally started. At the time of the CCM Act, the 3-year diploma course was to create a "Practitioner in Modern Medicine & Surgery". Three months later, however, the course was re-titled "Diploma in Alternate Medicine". This was a direct response to the legal concerns with the use of "Surgery" and modern medicine in the title, both of which attracted clearance from the medical council of India which had not been consulted. To justify this claim to "Alternative Medicine", there were subjects introduced to the syllabus that had not been considered before – *viz.* biochemic medicine, herbo-mineral medicine, acupressure, physiotherapy, magneto-therapy, yoga, and Edward Bach flower remedies and acupuncture indeed every possible alternative medicine name that could be thought off.

Institutional hurdles faced and created: Speedy implementation at a cost?

The unusually rapid progress in setting up these courses, despite legal hurdles related to the strong political will – in the form of the chief minister's personal and explicit priority for this scheme. Internally there was administrative reluctance to rush through such a course. The IAS officer who was secretary to health was relieved of this task and the task was handed over to a faculty member of the preventive and social medicine department who was designated as an" officer on special duty" reporting to the health minister directly and with many of the powers of the secretary. The ostensible reason was that the health secretary has several tasks whereas the OSD brought from outside the career civil services was appointed explicitly to deliver on the 3-year course. The health secretary, not being the reporting authority for the OSD, had no reason to be involved with this 3-year program henceforth. The Director of Health Service, while the officiating President of the CCM, is a senior career government official mandated to oversee much more than the CCM and has an important working relationship with the IAS health secretary to preserve. In contrast, the post of OSD, perceived to be a 'temporary political appointment', commanded far less compliance from the Director of Health Services and other senior career officials compared with the authority of the health secretary. This resulted in a working environment where the OSD had limited

cooperation within the government – and there was little sharing of information and a lack of ownership of this course. It is also within this strained working environment with other key health officials that the OSD sought to bring important 'corrective' changes. After the first year of the course had already begun, it was decided to affiliate the private institutes to the established universities in Chhattisgarh and to bring the exams under the purview of these universities instead of the CCM as stipulated in the May 2001 Act. It was also decided that the authority responsible for admissions to the 3-year diploma course be transferred from the CCM (as under the Act) to the private institutes. The underlying rationale driving both these midstream changes was a revised assessment of the CCM aimed at reducing its powers. The CCM created through the May 2001 Act was no longer deemed a legitimate body, in this revised perspective, to conduct examinations; instead the universities were expected to better facilitate recognition for the course. These changes again had unintended but deleterious effects on the course. First, the attempt to link the course to the universities delayed the first-year examinations by nearly half-a-year and became the initial cause for the course getting derailed in its schedule (see Table 2). Second, the CCM or any single independent nodal agency was far less directly involved in the admission of the second batch to the diploma course and indeed for the admission of the third batch in 2003, many seats were "filled on the spot" without Counseling, with no quality standards on an almost walk in basis.[6]

As part of this revised perspective on the CCM, the name of the 3-year course was changed yet again to "Diploma in Holistic Medicine and Paramedical Course" in March 2003 through an internal government order. The thinking behind this change was that the change of name would pave the possibility for graduates of this course to be registered with the State Paramedical Council and not under the CCM. The state paramedical council would be less likely to be legally challenged than would the CCM as it would be clearly outside the purview of medical councils and associations. The name change, however, struck a problem from another quarter, this time the students. The students launched an agitation declaring that the term "paramedical" was a dilution of the status of the course, away from the medical profession to which they desired affiliation. The name of the course instead was revised again following the July 2003 student strike to "Diploma in Modern and Holistic Medicine". Therefore, legal and political issues, rather than any dialogue over the aims and purposes of the course, governed the decisions to change the name of the course several times and with it, its stated curriculum. Lacking clarity in objectives from the very beginning, these changes only added to the confusion.

The legal and political turns and twists also led to constant redefing of the syllabus of the 3-year course. The initially designed syllabus for the 3year course was a scaled down and trimmed version of the MBBS curriculum with some additional subjects of AYUSH(the indigenous steams), alternative medicine and public health added in to justify the term "Alternate" and thereafter "Holistic". Two Inspection committees in 2004 and 2005 examined the syllabus and recommended changes in syllabus to make it more appropriate for the epidemiological needs of the rural and tribal population- but these were not carried out. The only modifications made related to alternative and holistic medicines and was done to justify the new names of the course.

The change in the state government after the November 2003 elections brought all issues of course objectives and identity of the graduates into a fresh review. The new

[6] Moreover, anecdotal evidence suggests that the vacant free and management seats were converted into NRI seats with a fee structure of 1.5 lakh per year.

political regime, dropped officer in-charge of the 3-year course (the OSD) as a political and irregular appointment, The health secretary who had been pushed aside to make way for the OSD was brought back to re-formulate policy on the course after a gap of almost two years. The government was now willing to define the course objectives more clearly, but they faced a situation because the courses were in an advanced stage with three batches studying and students resorting to agitation to safeguard both their identify as doctors and to gain employment prospects from the government.

Delayed Clarity: Student Agitations and closure of further admissions

At its inception and when the course was initially for training a "Practitioner in Modern Medicine & Surgery", it was not clear whether the 3-year course would be a "diploma" or "certification" course. The precedence in West Bengal that influenced the making of the course in Chhattisgarh was a diploma program. There exists also an, instance of a 3-year certificate courses, such as the one run by the national AIDS program of the country..

At the time of admissions, almost all the students were given to understand that they would graduate as a three year trained doctor with a high likelihood of government job in rural and tribal areas due to the significant vacancies that exist in primary health centers (PHCs). This belief was based on media statements and coverage and on verbal assurances of the state government, but no order to this effect had ever been issued. As the verbal assurances failed to be followed up and as students had enrolled, some of them after paying fairly high tuition fees or in some cases capitation fees, the students became restive. There were several agitations of students, promoted by institution owners and supported by political interests of districts in which the institutions were located and from where the students came. In total there were three major strikes.

The main reason for the first strike of students in January 2003 was a demand to change the name of the course from "Alternative Medicine" and to secure guaranteed government jobs. The name of the course was changed following this strike.

The second major agitation was in July 2004 for change of the name from "Diploma in Modern and Holistic medicine" to "Practitioner in Modern and Holistic medicine" and in order to increase the duration of internship from 6 months to one year. Students also sought a stipend for the period of internship (much like MBBS students get), security of a government job and recognition of the course by the State Medical Council. This led to the change of the name for the final time and an increased duration of internship to one year.

The longest strike lasted one month in December 2006 with the main demands remaining the same, including recognition of the course by State Medical Council in order to practice allopathy.

All these agitations of students led to further delay of the annual exams and further derailed the course schedule. The legal and political issues along with the various strikes of the students also contributed towards the growing unpopularity of the course in the state, which led to far decreased numbers of applications especially for the entry of the final 2003 batch. The entry requirement of 75% percentage for the first batch dropped to 65% and 40% for the second and third year batches, respectively. There were also around 809 dropouts from the six institutes out of total 2200 admissions made.

Faced with this scenario, the new state government which anyway did not have to own the moral responsibility of this adventure, found it opportune to immediately stop any further admissions to the course. Managing three batches of students- a total of 1391 students was complex enough and it had no appetite for more. Thus on 1st September 2008, the course was officially ended. Attention now shifted to the question of what should be done with these 1391 students.

Table 2: Derailed Timeline for the Different Batches admitted to the 3-Year Course

	Admission	1st-Year Exam	2nd-Year Exam	3rd-Year Exam	Length of delay in completion
First Batch	Nov 2001	Mar 2003	Oct 2004	Jan 2006	1 year, 2 months
Second Batch	Nov 2002	Oct 2004	Dec 2005	Feb 2007	1 year, 3 months
Third Batch	Nov 2003	Mar 2005	Sep 2006	Oct 2007	11 months

Source: CCM, Raipur and corroborated in interview with students of different batches, 23 May 2009.

Iterating to a solution: The birth of the RMA

The May 2001 state Act created the CCM as the only deemed body to register the 3-year course graduates, which allowed the course to legally begin even though it was not recognized by MCI. The creation of CCM, however, did not facilitate the legal status of the graduates as practitioners of allopathic medicine. Education is constitutionally in the Concurrent List (subjects shared between Centre and states). This implies that if there is a central Act already in existence, states cannot contradict the central Act without legal violation. As per the MCI Act (1956), MCI and state medical councils have the sole authority to allow the registered physicians to practice allopathy. With the Chhattisgarh State Medical Council having no role in the registration of the three year graduates, and with no likelihood of their being able to recognize this course, the students cannot legally, practice modern medicine. This became clearly stated in a Supreme Court (SC) Ruling of February 2003[7]. This particular ruling noted a precedent[8] when by virtue of such qualifications as prescribed in a State Act being registered *in a separate State Medical Register* with the State Medical Council a person was "entitled to practice allopathic medicine under Section 15(2)(b) of the 1956 [MCI] Act."[9] The CCM Act was a state act, but since this qualification was not registered with the state medical council, it could not confer the rights to practice allopathic medicine.

[7] Supreme Court of India decision on *Subhashis Bakshi v.West Bengal Medical Council* (Civil Appeal No.152 of 1994)
[8] Cited as *Dr. Mukhtiar Chand v. State of Punjab*, (1998) 7 SCC 579.
[9] SC decision on *Subhashis Bakshi v.West Bengal Medical Council*, pp. 287-288.

One response to this situation was to allow them to practice as paramedicals under the paramedical act. The paramedical act specifies that the paramedic could provide that medicine or that care which he or she was trained to provide- and this could have provided the cover needed. But the problem with this was that the graduates of the three year course aspired to be called doctors and medical professionals and would not settle for the term paramedicals or even alternative medicine. The government therefore had to define what they could be allowed to practice, which did not fall under the MCI Act but yet would be medical enough to manage this situation.

With the clarity that no legal independent practice in allopathic medicine was possible for these students, a bipartisan high powered committee was tasked to find a viable employment for these students. One suggestion that this committee considered was to revive the post of Assistant Medical Officer (AMO), an earlier posts which had been abolished in 1976. The post had been occupied by the three year Licensed Medical Practitioner (LMP) of West Bengal and the Registered Medical Practitioner (RMP) of Maharashtra. The proposal in Chhattisgarh was to create a third post of AMO in addition to the 2 MOs that had been already sanctioned per PHC. This proposal however was rejected by the Finance Department on grounds that such an increase in health personnel expenditure was not justifiable.[10] The next option considered was to post them as Block Extension Educators (BEE). This is a post financed by the central government and which has duties not only of health education but of assisting the block medical officer in management tasks. Being a centrally funded post, it would create no additional financial burden on the state exchequer. The post of the BEE, was higher than a field supervisor but immediately under the medical officer which would be a positioning in the hierarchy that would be acceptable. However this was rejected by the students who were not ready to accept any post without the word "medical" in it. And at any rate the center would fund only about 250 BEEs and many of the posts were not vacant.

The current decision is to appoint Rural Medical Assistants in leu of the second MO post which was kept in abeyance. The government thus saves half the salary of the second MO-Rs 8,000/-against Rs.15,000/-to MBBS doctor by this measure. The RMAs were sanctioned selectively in the PHCs classified as remote or tribal in districts with the most acute shortage of doctors. By the letter of the law they are not to be posted where there is no medical officer, for they are only assistants, and therefore they would not contravene the law. However in practice medical officers would not join in many PHCs and these RMAs may have to function independently which is acceptable. Already pharmacists and nurses and AYUSH doctors do the same. Government employment with medical functions thus becomes possible, but private independent practice by these graduates is still not permissible. The IMA finds this truce acceptable and so do the students who have got the title of 'medical' in their designation and government job- two key demands of theirs. The funds are from the central

[10] The process of sanctioning 2 MOs per PHC had already taken two years (2004-6) to get budgetary approval. Interview with Dr. D.K. Sen, 22 May 2009.

government through the NRHM mechanism and therefore the state finance department finds it easier to accept- though in the long run it would have to take this over.

Most important of all, over half of the State's 700 odd PHCs were languishing for the lack of a doctor and at one go, all of them are not having a doctor in place- even if legally he is an RMA, to the public he or she is a doctor!! The state has sanctioned two doctors per PHC in 2005 and this is in accordance with IPHS norms. It was barely able to fill the PHCs with even one doctor and was had used AYUSH doctors to fill in over 200 posts. Now with 1391 RMAs potentially available, most PHCs could be made functional. It seems to be a win-win situation all around, even if this solution was arrived at after a prolonged iterative process.

Recruitment of RMAs in rural postings

There has been overwhelming positive response to recruitment of RMAs to the most rural and tribal PHC postings, where previously no trained physician existed; RMAs are stipulated to work under supervision of the first Medical Officer. However, this does not translate always into direct supervision as RMAs are present in PHCs where usually no other MO is willing to accept a posting.

RMAs in non-tribal areas are supposed to get an honorarium of Rs. 8000 per month (significantly less than the salary of a MBBS-trained doctor) and those in tribal areas are appointed on honorarium of Rs. 9000 per month as per approved NRHM PIP. But the government had appointed them on uniform salary of Rs.8000 per month. Appointments are contractual and for a period of 2 years. In 2008, the CCM conducted the first round of interviews for 398 sanctioned posts of RMAs in the identified 12 with large tribal and remote rural areas. About 225 candidates were selected and posted. Preference was given to their native districts if that 'home district' was among the 11 districts selected for RMA postings. The scope of practice of RMAs is summarized in Box 1 and detailed in Appendix C below. The remaining 173 posts were re advertised in 2009 and 529 applications received and another 78 were recruited. About 303 out of 398 RMA posts are filled. The 95 posts of RMAs which were not filled fall under the SC/ST category. They remained vacant, not because of a dearth of interested applicants, but due to the absence of adequate numbers of SC/ST students ever trained in these institutes. The reservation rules at the time of admissions were either insufficient or poorly implemented. These first RMAs have been posted in the most remote and difficult areas of Chhattisgarh to provide health services.

Table 3: Postings of RMAs in First & Second Recruitment Drive

District	Sanctioned Posts	Positions filled during the First recruitment round in 2008	Positions filled during the Second recruitment round in Feb,2009	In Position	Vacant
Bijapur	13	3	5	8	5
Narayanpur	7	7		7	0
Jagadalpur	55	33	9	42	13
Jashpur	32	18	4	22	10
Surguja	77	54	1	55	22
Koriya	27	12	10	22	5
Kanker	28	12	15	27	1
Korba	31	29	2	31	0
Raigarh	47	31		31	16
Rajnandgaon	33	20	7	27	6
Dantewada	24	2	10	12	12
Kawardha	24	4	15	19	5
Total	**398**	**225**	**78**	**303**	**95**

Source: CCM, Raipur and SHRC, Raipur

Table 4 Postings of RMA after Third Recruitment Drive

S. No	District	Sanctioned Posts	In position (PHC)	In Position (CHC)	Vacant
1	Bijapur	17	14	3	0
2	Narayanpur	9	7	2	0
3	Jagadalpur	67	58	9	0
4	Jashpur	38	31	7	0
5	Surguja	98	81	17	0
6	Koriya	31	28	3	0
7	Kanker	38	34	4	0
8	Korba	41	37	4	0
9	Raigarh	57	50	7	0
10	Rajnandgaon	51	47	4	0
11	Dantewada	30	28	2	0
12	Kawardha	26	22	4	0
13	Bilaspur	84	74	10	0
14	Dhamatari	26	23	3	0
15	Durg	86	72	14	0
16	Janjgir Champa	48	39	9	0
17	Mahasamund	30	26	4	0
18	Raipur	81	63	18	0
	Total	**858**	**734**	**124**	**0**

Source: CCM, Raipur and SHRC, Raipur

In light of this positive experience of posting RMAs in underserved remote areas and existing 740 vacancies of Medical officer, the state has recently increased the total RMA posts to 858. With the policies of contractual appointments of MBBS doctors and recruitment of contractual AYUSH doctors at the post of MOs, only 1407 posts could be filled out of total MO posts of 2147. Therefore to make up the gap, in a recent order, the state government had introduced one RMA post at all PHCs and an additional post for Lady RMAs at CHC level in all the 18 districts of Chhattisgarh irrespective of the difficult, rural or tribal status of the districts.[11] About 74 RMAs who had joined in the second round of recruitment also appeared in the third counseling seeking change of posting location. Thus 629 posts were filled through the counseling sessions conducted by CCM from 1st – 8th Oct, 2009. Thus of the total l sanctioned posts of 858 RMAs, 229 were recruited from earlier two rounds and 629 recruited after the third round. At the time of this documentation, those selected from the third round are joining. Even if all do not join, the historic nature of this achievement cannot be diminished. For the first time, probably since independence, a way has been found to fill up all these vacant posts.

Differences between the 3-year course and MBBS graduates: In training and aspirations

The 3 year diploma course was justified as an effort to prepare skilled health care providers for the underserved areas. Locations of the six institutes were selected to be in rural areas. Unlike for MBBS graduates, the one year of internship for these three year students has a significant exposure to rural public health system with 1 month of training at Sub-Health Centre, 3 months at PHC, 4 months at Community Health Centre (CHC) and 4 months at District Hospital (DH). At the DH, there are rotational postings in the departments of Surgery, Medicine, Obs & Gyn, as well as orthopedics and pediatrics for 20 days each and for 10 days each in the Orthopedics, ENT, Ophthalmology and Casualty departments. This gives to the students, field-based learning of the public health systems and enables them to develop skills to provide health care services even with limited availability of equipments and facilities. The MBBS graduates, on the other hand, are taught in urban settings focused around a tertiary care hospital. Their rural posting is often in their own outreach center, which is not a sufficient exposure to the public health system. They have tended to therefore develop an urban orientation and preference to practice in a tertiary care n set up, rather than in rural areas.

It is also significant that in our focal group discussions and interview, the 3-year course students expressed their role models to be doctors working in the PHC, CHC or DH where as for MBBS students the role models have most usually been their professors in medical colleges.[8] It has been well documented that the vast majority of MBBS graduates aspire almost singularly on further specialization through post-graduate studies. Although the

[11] Interview with Chhattisgarh Health Minister, Shri Amar Agrawal, Raipur, 22 May 2009. The Minister expressed a vision of recruiting all the current 1391 graduates from the 3-year courses in the coming years and hoped that their successful posting in such remote and tribal areas would provide the necessary evidence to restart such a course at some later date.

curriculum for the 3-year course and MBBS are similar, it is still the graduates from the 3-year course who are more likely to serve in rural and tribal areas, as compared to MBBS graduates. This difference in the aspirations of students is attributed mainly to the design and pattern of the courses.

In terms of performance the difference between MBBS and the three year doctors is being studied using the sample of the first 50 RMAs who have joined public service.

Box 1: Scope of the Rural Medical Assistants (RMAs)

- Assist in implementation of all National and state level health programs
- In case of any emergency situation, RMAs have to provide primary health care services and then refer the patients to higher level of public hospitals based on the requirement.
- Provide preventive health education and measures to attain good health.
- Provide limited primary level treatment for some of the conditions.
- Provide basic maternal and child health care, conduction of Delivery, Basic management of complications of pregnancy and childbirth, Suturing of first degree Perineal tears.
- Perform simple operative procedures - repair of small wounds by stitching, drainage of abscess; burn dressing, applications of splints in fracture cases, application of tourniquet in case of severe bleeding wound in a limb injury
- Provide primary level treatment for 5 – 7 days only if the improvement is visible in the health of the patient else they should refer the patient to the nearby CHC for further treatment.
- Permission from the High Court and Supreme Court to dispense certain *Over The Counter (OTC) Drugs*
- Linkages with communities to increase the service delivery.
- Regular meeting with the peripheral staff.
- Follow up in treatment diseases initiated by Medical Officers of CHC and PHC
- Follow up of all National Health Programs in Coordination with the BMO.

[8] Discussions with a group of 30 graduates from the three year course.

Lessons from the case

The 3-year course was a response to a major crisis in human resources for health that the newly formed state of Chhattisgarh faced. The state responded to this crisis in multiple ways- and it is interesting to look back now on what was tried and what was not tried and why this was so and what were the outcomes of different efforts.

One effort was to open up new medical colleges. Two colleges have been successfully opened and two more including a centrally sponsored one is planned. The other was nursing schools and ANMs schools. These two have opened up and though less in numbers and slower to start off than could be asked for they are progressing well. A third was the Mitanin programme, a community health volunteer programme of a woman health activist in every hamlet that is doing relatively well. It has survived and grown and it is exploring new directions of growth. A fourth, very little discussed and even less documented is a major effort to train village RMPs, or quacks in less polite usage, to provide rural care. These informal medical practitioners had only to be nominated by the panchayat and sent to the

district hospital, where they would then get a six month training and a certificate and then be sent back. About 1100 persons were so trained and state considered providing two of them with government employment in each panchayat and then gave it up, preferring them to be market driven. This by all reports failed to make any impact and has disappeared from public consciousness, but is worth digging up, if not for anything, at least to not repeat it. The fifth bold experiment and the most curious of the lot is this three year course. It ran three years and then stopped by the government, but in a final spin seems to have come up as a winner with fresh possibilities.

Some officials interviewed for this study have suggested that the entire problems are due to the speed with which initial implementation of the 3-year course occurred. It did not allow time for substantial consideration of the various aspects which were later noted as weaknesses. Such a reading is only partially true for even the haste was part of the design. A better analysis of what happened and the lessons therein would be from a stakeholder analysis. Each stakeholder had a differing programme theory- a different interpretation of the context, of the objective, of the way various mechanisms were supposed to work and the outcomes these mechanisms would deliver. There were also many different expectations of the programme. Let us reconstruct these programme theories.

One is the programme theory of the political party in power at the time of starting the course, and with it of the administration, represented then by the OSD, who was willing to implement then the political mandate. To them the expansion of medical education was the fundamental political achievement- and the political and social good will they would gain from such an expansion. Access to medical education is one of the most powerful vehicles for upward social mobility, and for a political middle class coming into its own with the creation of a new state this was all the more important. This had to happen in the here and now and in large enough and dispersed enough measure to secure the good will in time for political mileage and social recognition. Medical college expansion would be too slow and too cumbersome and affect too few. If a large number of graduates are thrown into the market and they are less competitively placed as compared to 5 year doctors, they would have to gravitate to the rural areas and thereby the rural shortage of doctors would be achieved. The main barrier to this is the restrictions imposed by the medical council, which have to be legally and administratively circumvented and haste is part of the process of doing so. To the students one has to promise a regular medical education, for that is the main attraction of the course, but simultaneously to the legal front one has to project it as alternative medicine.

Is this an unfair portrayal? Were not the architects of this programme serious about the rural human resource gap and trying to address it- primarily. Certain reasons that question this are the following: there were no plans explicitly made for public sector employment. There were no standards strictly followed- for faculty and for students and for clinical teaching as CCM failed to monitor the set standards. The rules of admission allowed for NRI seats and management quotas. All the education was positioned in the private sector and none of the parties had much experience of running any such institution. All of these indicate a lack of seriousness about the course as a vehicle of creating doctors specially tuned to work in rural areas. We must also remember one aspect about this context. The government was also trying similar experiments in the entire educational field. Over 125 universities – all private had been sanctioned under another hastily planned state law and most of these had to be closed once the new government came to power. Many of them had no buildings or faculty- but were sanctioned. Permission to start up professional colleges and universities were one of the important forms of rent seeking in those days and could have acted as a driver. Note

especially the capitulation of more and more functions to the organization of these institutions and to the hasty increase of students and the picture is complete.

Now consider another programme theory of the medical professional and their institutions. In this understanding the three year course is nothing but a political stunt that would provide under-qualified medical professionals who would compete on the market with fully qualified professionals. Though in theory 5 year medical professionals would be able to command the market because of better knowledge and skills and because of higher status, in practice, given information asymmetry, patients cannot be trusted to make the correct choice. The likelihood of these three year doctors working in remote areas is remote. Also even if they do, they are less likely to be effective and more likely to make dangerous mistakes than their five year counterparts. As the programme rolls out, and the three year graduates fight to be called doctors, and the government fails to post them into remote areas, their fears seem genuine.

Now to consider the students. Many of them saw the course as an opportunity for upward social mobility into the social and economic privileges of being called a doctor. They possibly knew that the course was unrecognized and the government job was uncertain but counted on their collective and individual political influence to swing these two dimensions. The moment this seemed less likely applicants to the course dropped sharply and it may be that those who still apply have either a different motivation or are more determined to somehow make it into the medical ranks. If they find that there is no career progression from RMAs and cannot return to the city, and they are stuck there some of them may settle for this, but most would return to their dissatisfied status. Their acceptance of the current compromise may just represent a pragmatic judgment that given the forces at work, they should first secure these two gains, the medical word in their title and the government job for some more time, before they take up the struggle again.

Now consider another programme theory- one that is current in NRHM circles and also the way that some of the other architects of the course conceived it. We present this with some elaboration, given the wisdom of hindsight. That is to plan this only as an approach to putting in place physician skills at the primary health center – especially in remote and rural areas. If this indeed be the aim the following corollaries would follow:

a. Allow only public sector institutions to teach this course or at least ensure that all seats are merit based. There is no role for capitation fee paid management quota, much less NRI quota. If the institutions are private run, the government may consider paying the institution for every student who turns out and joins government service. If students have to pay a high tuition fee for admission that it would tend to select students who are well off seeking upward political mobility.
b. Allow only as many seats as are needed for filling vacancies in public sector. No role or space is provided for private practice. This in itself is a powerful way of ensuring that these candidates staying in the rural posting. Inform students and select students by their clear willingness to work as RMAs. This would need an interview-counseling process that makes this clear. Do not offer them the option of going into private practice as doctors or working in urban areas. This will lessen the candidates who would apply and make it unattractive for anyone to pay capitation fees, which in turn would make it unattractive for private sector. The government would need to live with this logic. The entrance examination may be used, but with all its risks, an aptitude and attitude assessment in the interview would help select students for rural areas better.

c. Reassure the medical professional that this sector is not going to compete with them in the urban market. If doctors are willing to stay in rural areas, this would be unnecessary, but till then this is needed.
d. To satisfy in part the aspirations of the political leadership and politically active groups and the students do offer an up gradation to a regular MBBS after 5 to 10 years of service with a bond to serve another 5 years.
e. Set down standards for admission, for number of faculty and for certification.
f. Define the syllabus carefully, so that it is practice oriented.
g. Choose the institutions to conduct this course carefully. With profit motive ruled out, few would apply and whether government should take it up or find not for profit institutions who would.
h. Accredit under the paramedical act, with modifications if needed and ensure that the upgradation course is recognized by the Medical council of India before it is begun.
i. Build up an institutional mechanism at state and district level to design and implement this course.

The way forward

At the time of writing this case study, the political- administrator position is modified to see this model as offering a way forward to solve the problem of retention in rural areas. This is because of four factors- graduates have accepted this arrangement, PHCs vacancies have been greatly reduced , preliminary reports show patient and public satisfaction with the arrangement, and finally the professional resistance to this arrangement is muted, if not altogether absent. An evaluation is ongoing to test whether the professional skills they have and use is comparable with other alternatives and to formulate strategies of improving this. The preliminary reports are positive and the clinical gaps appear remediable in-service.

Currently the Ministry of Health is also thinking of upgrading the Health Sub-centers to an independent, fully functional curative care unit in addition to the hither to preventive and health promotive roles like the one being implemented in China. In this context, RMAs are the best option to be placed in such Health Sub Centers in addition to the ANMs considering the cost factor and availability of such human resource in remote areas.

When the Urban Health Mission is rolled out, there will be shortage of qualified medical personnel to man the Urban Health Centers providing better curative services than the unqualified practitioners normally the urban poor and the slum dwellers resort to. Here the three year course graduates may also prove to be a good option.

There are thus calls to re-start the course. Assam has also started up a similar programme, and this reinforces a trend. This case study is meant to remind ourselves of the history of how it worked, so that we learn from the past. There could be a trend to just declare it is working and go back to an unregulated, hasty market based education model. Only this time it would not be as easy to absorb the graduates in the public health sector as earlier. Moreover both legal and professional resistance would be more, for it would not be able to tell the courts or the profession that this is about alternative medicine, and not allopathic medicine. Students also, given the past experience of a successful agitation would be more persistent. There is a potentially useful role to play for this three year course, but only if it is highly focused as a strategy of providing access to professional skills in rural and remote areas, and it consciously shies off from other stated and unstated objectives. The conditions by which this focus on rural retention is maintained, does not lie in only its three year nature, it lies also on which sort of students are selected for the course, the number of students who are selected for the course, who conducts the course, how the syllabus is oriented, and whether at all the graduates are allowed to do private practice in urban areas, or for that matter anywhere, and if not how they would be restricted.
There is nothing wrong with imposing such restrictions- indeed that is precisely what would make it acceptable to all stakeholders. World over creating professional skill sets that have limited acceptability in private markets and in international migration, and are by policy kept off public markets, has been an useful device to make professional skills available where they are needed. But for this to work, the other policy corollaries have to be part of an essential package- with some good on the job support and training too, if we need health outcomes in addition to user satisfaction. Also a career path that provides for long term sustainability of the option. Thus we need a professionally competent long term plan- not one designed for the immediate alone.

Chhattisgarh has been able to achieve a set of immediate objectives through a process of iteration, including the cancellation of errors, some hard negotiation and some good luck. Despite this, the sheer historic scale of this public health achievement should not be lost on us. For the first time, perhaps since Independence , it has been possible to post a person with medical skills in all the PHCs of this region. However this Chhattisgarh's past approach to generating RMAs cannot be the basis of policy for re-starting the three year medical course in Chhattisgarh or the terms of its replication. The three year course could be re-started, and other states can consider its replication, only after a policy decision on all these aspects is taken and the support mechanisms needed to sustain this process are put in place.

ANNEXURE – CASE STUDY 2

Appendix A

Time line	Events
2000	Committee of 3 members – Professors of Medical college – Design of 3 yr diploma course was proposed
January 2001	Proposal of 3 year diploma medical course
February 2001	Proposal for formation of Chhatisgarh Chikitsa mandal
2nd March 2001	Refusal of MCI to recognize the course
2nd March 2001	Approval for the CCM from Law
2nd March 2001	Approval from Finance department
2nd March 2001	Nomination of 3 members of the CCM – President – DHS, Vice President – Dean Medical Colleges, Registrar – 1 Nominated Gazetted officer
3rd March 2001	Formation of a Committee with DHS, DME and Senior Secretaries as members
27th March 2001	Meeting of Chief Secretary, Addditional Chief secretary, Principal Secretary, Secretary GAD, Principal Secretary Law, Secretary Health
29th March 2001	Approval of the proposal
17th April 2001	Proposal approved in the Cabinet meeting and the Name of the course – Diploma in Modern Medicine and surgery
16th May 2001	Proposal approved and signed by Governor
18th May 2001	Formation of CCM and Gazette notification printed
22nd May 2001	Minimum standard guidelines for Private colleges prepared and EOI floated
31st may 2001	IMA Bilaspur filed a petition against the course at Bilaspur High Court
24th August 2001	Name of the course changed to Diploma in Alternative Medicine , Chhattisgarh Chikitsa Mandal act – amended
29th August 2001	Gazette Notification with new the name of Diploma in Alternative Medicine
September 2001	Inspection of colleges by inspection committee – DHS, Joint DHS, 1 CMOH nominated by Govt. , Registrar CCM, District CMOH
2nd Oct 2001	3 colleges – Jagdalpur, Ambikapur , Pendraroad were inaugurated by CM.

Appendix B

Institutes	Total Students
Balgangadhar Tilak Institute, Jagdalpur	308
Anusha Memorial Medical Institute, Pendra road, Bilaspur	264
Ma Bambleshwari Medical Institute, Kwardha	229
Mahrishi Ashtang Medical Institute, Sarguja	210
Biken Institute of Medical Science, Kanker	200
Shri Kedarnath Institute of Medical Science, Katghora, Korba	180
Total	**1391**

Source: CCM, Raipur and SHRC, Raipur

Appendix C

DISEASE THAT CAN BE TREATED BY A RURAL MEDICAL ASSISTANT

DISEASES TO BE TREATED BY A RURAL MEDICAL ASSISTANT

Acute bacterial infections, febrile illness, diarrhoea, dysentery, viral infections, malaria, amoebiasis, giardiasis, worm infestations, gastroenteritis, cholera, typhoid fever, vitamin deficiencies, iron deficiency anaemia, malnutrition, upper respiratory infections, acute bronchitis, bronchial asthma (status Asthamaticus), first aid in ischemic heart disease, peptic ulcer, acute gastritis, viral hepatitis, urinary tract infection, common skin infections, , scabies, first aid in trauma, and animal bite.

In children treatment before convulsion, measles, chicken pox, asthma(status Asthamaticus), scabies and other common skin infections.

Care in pregnancy, child birth and post natal period, family welfare activities.

Follow up in treatment diseases initiated by Medical Officers of CHC and PHC.

OPERATIVE PROCEDURES PERMITTED TO BE CARRIED OUT A RURAL MEDICAL ASSISTANT

Repair of small wounds by stitching, drainage of abscess; burn dressing, applications of splints in fracture cases, application of tourniquet in case of severe bleeding wound in a limb injury.

Conduction of Delivery , Basic management of complications of pregnancy and childbirth, Suturing of Ist degree Perineal tears.

Follow up of all National Health Programmes in Coordination with the BMO.

DRUGS THAT CAN BE PRESCRIBED BY A RURAL MEDICAL ASSISTANT

Antacids, H2 receptors blockers, proton pump inhibitors, Antihistaminic,

Antibiotics- cotrimaxazole, trimethioprim, norfloxacin, quinolones, tetracycline, gentamycin, cephalosporin, erythromycin, nitrofuratoin, metronidazole, tinidazole. Ampicillin

DID Antitubercular- INH, rifampicin, ethambutol, pyrazinamide, Anithelminthics- mebendazole, albendazole

Antimalerials- chloroquine, quinine, primaquine, sulfadoxine- pyrimethamide,

Antileprosy- dapsone , rifampicin, colfazimine

Antiamoebic- metronidazole, tinidazole, dooloxanide furoate

Antiscabies- benzyle-benzoate, gama benzene hexachloride

Topical antifungal

Antiviral

Antocholenergic- Dicyclomine

Antiemetics

Antipyretics and analgesics

Laxatives

Oral rehydration solutions

Hematinics and vitamins

Bronchodilators- Salbutamol, theophyline, aminophyline

Expectorants

Oral Contraceptives

Gentian violet 1% solutions

Miconazole 1% cream

Vitamin A liquid

Vitamin B complex

Folic Acid tab

Xylocaine local

Methylergometrine tablets

Mehylergometrne- injections (For PPH)

IMPORTANT

- Certain Emergency drugs can be given before Referral
- Referral of all sick patients after initial management.
- Linkages with communities to increase the service delivery.
- Regular meeting with the peripheral staff.

PROCEDURES NOT TO BE PERFORMED BY A RURAL MEDICAL ASSISTANT

- **Medicolegal Cases**
- **Postmortum**

CASE STUDY - 3

Attracting Doctors to Rural Areas: A Case Study of the Post-Graduate Seat Reservation Scheme in Andhra Pradesh

Zubin Shroff[1], Seema Murthy[2] and Krishna D. Rao[1]

[1] *Public Health Foundation of India, New Delhi*
[2] *Indian Institute of Public Health, Hyderabad*

Acknowledgements

A large number of people helped us with their insights as well as data needs for this case study. At the Department of Health, Andhra Pradesh (AP), Mr. B.V. Rao and Mr. B Prem Kumar offered us invaluable assistance with their insights as well as data. Dr M V Ramanamma, at the Directorate of Medical Education and Dr Sailaja Bitragunta of the state Program Information Unit provided us with their perspectives on this scheme. The staff at NTR University for Health Sciences, Vijayawada provided valuable data on the Andhra Pradesh PG entrance examination. We would like to thank all the students who gave us their time to offer their opinion and advice to improve the scheme. Dr Shomikho Raha provided valuable comments on the outline. Finally we would like to thank Dr Mala Rao, Director of the Indian Institute of Public Health, Hyderabad for her support to this project.

Introduction

Recruiting and retaining qualified doctors in rural areas is one of the biggest challenges facing the health sector in India. Qualified health workers are scarce in rural India. Though the majority of the population (70%) is rural, the population-to-doctor ratio is much higher in rural compared to urban areas. This scarcity is due to both the disinclination of qualified private physicians to work in underserved areas and the difficulty faced by the public sector in many states to adequately staff rural health facilities. While the government has made considerable efforts to place doctors (and a variety of other health workers) in rural areas, the reluctance among medical graduates to take up or remain in rural posts coupled with absenteeism has made this a particularly challenging task.

To attract and retain doctors in rural areas, states in India have adopted a range of strategies to place qualified doctors in rural areas. These include compulsory rural service for medical graduates, providing education incentives (e.g. reserving post-graduate seats for in-service candidates), monetary compensation for working in rural areas, contracting-in doctors and other health workers, and placing non-physician clinicians (clinicians with short duration medical training, AYUSH doctors) in Primary Health Centers (PHC).

This case study focuses on one of these strategies - the reservation of post-graduate (PG) seats for public sector doctors[12] serving in rural areas. A number of states in India, including Andhra Pradesh, have schemes in place by which a certain number of PG seats in medical colleges are reserved for doctors serving in the public sector. In the Indian context, reserving PG seats is a particularly powerful incentive to attract doctors to rural areas. This is because of the strong desire among medical graduates to become specialists, which coupled with the considerably few PG seats compared to the number of medical graduates, makes for intense competition for obtaining admission to post-graduate training. It is quite common for medical graduates to spend several years attempting to gain admission to a post-graduate course of their choice.

This case study examines the PG reservation scheme in the state of Andhra Pradesh. It has the following objectives: (i) document the evolution of this scheme; (ii) understand the perspectives of various stakeholders about this scheme; (iii) examine the ability of the scheme to attract doctors to rural areas; and (iv) suggest improvements and recommendations to the PG reservation scheme.

We used a qualitative case study design. Government Officials, PG students from both in-service and the general quota as well as MBBS students were interviewed using semi-structured questionnaires. The study used a purposive sampling design. Quantitative data was obtained from the Dr. NTR University of Health Sciences in Vijayawada as well as the Health Department and Directorate of Medical Education in the state.

This report is divided into five parts. After a brief description of the state of Andhra Pradesh, the salient features of the PG scheme and its evolution are described. The sections following this discuss different aspects of the scheme's performance. A brief discussion section summarizes the main findings and highlights areas of concern.

[12] Doctors serving at Primary Health Centers in the public sector are also referred to as Medical Officers.

Andhra Pradesh

The state of Andhra Pradesh is located in the south-east part of India. With approximately 76 million people it is India's fifth largest state. Hyderabad, the state capital has undergone rapid transformation over the past decade and is India's sixth largest city. The performance of the state in terms of health outcomes such as Maternal Mortality Rate (MMR) and Total Fertility Rate (TFR) is above the national average, though it lags behind its neighbouring south Indian states (Table 1).

Table 1 Selected Health Indicators Andhra Pradesh and India

	Andhra Pradesh	India
Infant Mortality Rate (SRS 2008)	52	53
Crude Birth Rate (SRS 2008)	18.4	22.8
Crude Death Rate (SRS 2008)	7.5	7.4
Total Fertility Rate (SRS 2008)	1.8	2.6
Maternal Mortality Rate (SRS 2004-06)	154	254

Source: National Rural Health Mission, Health Profile of Andhra Pradesh

The health system in Andhra Pradesh is characterized by a large public and larger private sector. The public sector consists of a hierarchy of health facilities comprising of sub-centers,

1,570 primary health centers (PHC), 167 community health centers (CHC), 19 district hospitals and specialty/research hospitals.

Andhra Pradesh is endowed with a large number (36) of medical colleges offering both MBBS and post graduate medical education typically leading to an MD degree and specialization in a specific field of medicine (see Box 1). With the current number of MBBS seats it can be expected that around 4,800 students will graduate from medical colleges in the state each year over the next few years (Table 2) and this figure is expected to increase with more medical seats being recognized by the government. There are a total of 1,940 (degree and diploma) PG seats currently available in the state (Table 3). The substantially larger number of medical graduates compared to the available PG seats makes gaining entrance into a post-graduate program very competitive.

The state government of Andhra Pradesh has been aware of the importance among medical graduates to become specialists and has over the years made sustained attempts to capitalize on this for filling Medical Officer posts. In 2001, the government made it mandatory for all candidates who desired to obtain PG training to have served for one year in a PHC located in a rural or tribal area (GO Ms No 284). However, this is not currently being enforced. There is also a current proposal/ order to introduce post-PG compulsion of one year service with government wherever vacancies exist although there are attempts to get the courts to stay this order. Even earlier, it began reserving PG seats for Medical Officers in government service who had served in rural areas.

Box 1: Medical Education in India

Medical Education in India comprises of the basic MBBS degree, consisting of four and a half years of coursework and one year of internship. Entrance to the MBBS program occurs through entrance examinations taken by students after high school. Specialist training of two to three years duration is imparted through PG (Post Graduate) programs. Entrance to these programs is based on an examination taken by students after the completion of the MBBS program. Competition is intense since there are few PG seats compared to the number of MBBS graduates and the overwhelming number of MBBS graduates desire to specialize. Traditionally medical education has been largely imparted at public institutions. However, over the last few years most of the increased capacity has come from private institutions.

The post-graduate reservation scheme in Andhra Pradesh and its evolution

The in-service reservation scheme has been in existence for a long time in Andhra Pradesh. While it was difficult to ascertain the precise time when the PG reservation scheme began, many senior Medical Officers in the state Health Department had taken advantage of the

scheme to get their postgraduate degree. Below are some of the salient features of the PG reservation scheme and its evolution over time.

Eligibility: To be eligible for this scheme, a doctor serving in the public sector currently has to complete continuous regular service of at least 2 years in a tribal area or 3 years in a rural area or 5 years of continuous regular service with the government. Earlier the eligibility criteria was more stringent, requiring 5 years of service in a rural or 3 years of continuous work in a tribal area. However, the definition and reclassification of a tribal/ rural area has not kept pace with the development of some of these areas.

Eligible Medical Officers take the PG entrance examination, a requirement for all aspirants, but only compete among themselves for the reserved seats. Those who are selected are given extraordinary leave and sent on deputation for further studies. Hence they continue to receive their full salary with all benefits including grade increments and leave (GO Ms No.260 dated 16th March 1975).

Seat reservation: As it currently stands, 50% of the PG seats in pre clinical (Anatomy, Physiology and Biochemistry) and para clinical (Pathology, Pharmacology, Microbiology and Forensic Medicine) specialties and 30% of seats in clinical specialties (such as Internal Medicine, Surgery, Gynecology, Pediatrics, ENT and Ophthalmology) in government medical colleges in the state are reserved for candidates serving in the public sector. In private medical colleges, the same reservation for in-service candidates applies to the approximately 50% of PG seats which are filled through the post graduate entrance examination. The rest of the seats in these institutions are filled by the management of each institution according to its own rules. The percentage of seats reserved for in-service candidates has increased over time. Prior to 2003, 15% of seats in pre clinical and para clinical subjects and 30% of seats in clinical subjects were reserved.

There is a provision to select in-service candidates over and above the specified quota, in case seats are lying vacant. The first attempt would be to fill from the merit list of the entrance test, failing which in-service candidates could be directly taken based on their performance in the qualifying (MBBS) exam, even if they did not appear for the PG entrance test.

Bond: Students using the in-service quota currently have to sign a bond of twenty lakhs rupees (approximately $45,000) to serve the state government for 5 years after completing their PG education. If they decide to quit government service within the bond period, in-service students are required to pay the full bond amount and refund the salary received till date after starting their PG course. The Dr. NTR University for Health Sciences (which administers the PG entrance examination and admission process) is supposed to be the recipient of the bond surety. The department where the specialist is employed is instructed to receive the refund of the salary.

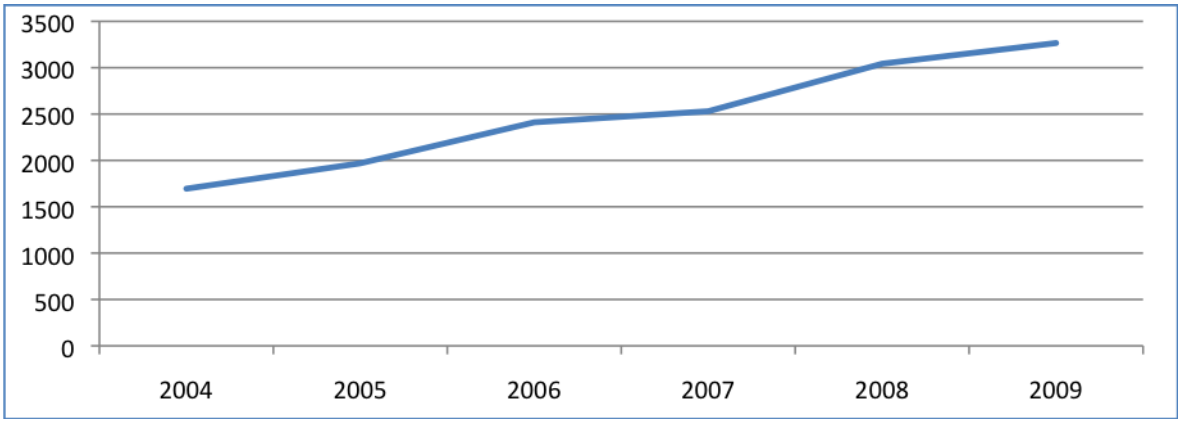
The bond conditions have also changed over the years. In 1997, in-service candidates graduating from PG programs had to remain in government service for 10 years, failing which they paid the Dr. NTR University for Health Sciences Rs 50,000 and refunded the entire salary received during the period of their post graduate studies (GO Ms No 260 14 July 1997). In 2003, even as the state government increased the quota of PG seats reserved for in-service candidates, the earlier bond period of 10 years remained intact, but the penalty of breaking the bond was raised to 2 lakhs of rupees along with refund of salary (12-5-2003 GO

Ms No 154). After another 3 years, a revision in the scheme rules decreased the bond period to 5 years but increased the compensation to 20 lakhs along with refunding the salary received during their study period.

Demand for and supply of medical education in Andhra Pradesh

There has been a huge increase in the number of MBBS graduates in Andhra Pradesh over the last few years. Between 2004 and 2009 the number of students passing their final MBBS examination nearly doubled (Figure 1).

Figure 1 Number of MBBS Graduates in Andhra Pradesh 2004-2009

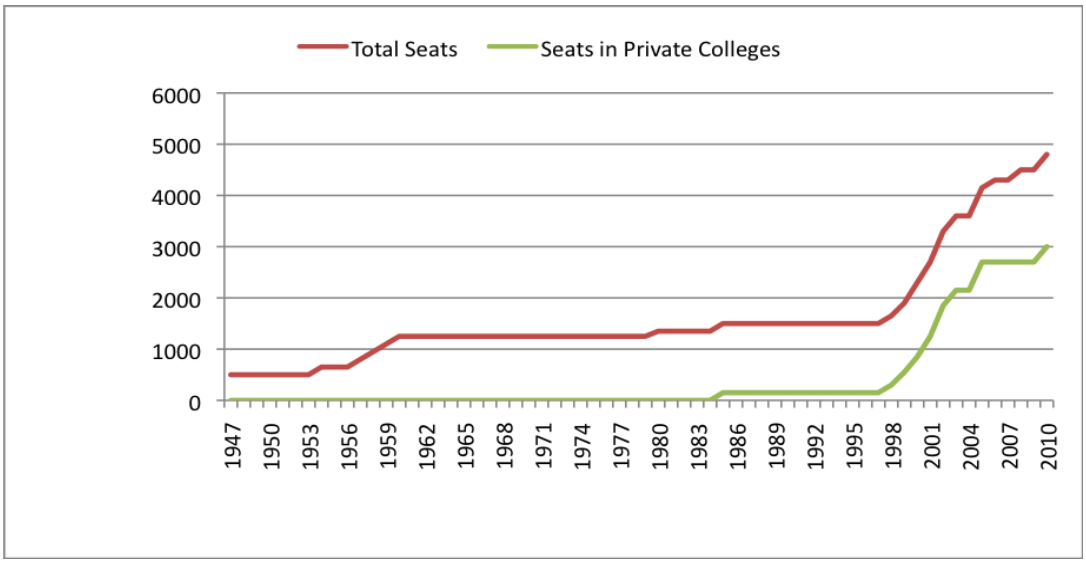


Source: Dr. NTR University for Health Sciences, Vijayawada

This surge is explained by the rapid increase in MBBS seats across the state. Of the 4,800 MBBS seats currently available in the state, 2,900 have been added after the year 2000; this implies a doubling of capacity for MBBS education in the state (Figure 1). A look at the graph below shows that the bulk of this increased capacity comes from the private sector (Figure 2). This fact is important to note because these students have often taken large loans to pay for their education and government service is not financially attractive to them.

Competition for PG seats is intense in Andhra Pradesh. For the 4,800 MBBS graduates expected to graduate each year over the next few years, there are less than 2,000 PG seats. This overall figure under represents the true extent of the competition since a large number of these seats are in specialties that are not much sought after by students. There is also a mismatch between the public and private sectors. While the private sector accounts for over 60% of the MBBS graduates in the state, it has less than 45% of the capacity at the post graduate level (Table- 2). Post graduate courses in private colleges tend to be extremely expensive compared to those in government institutions. Moreover the various reservation policies (15% for Scheduled Caste, 6% for Scheduled Tribes, 29% for Backward Castes) applying to all the postgraduate seats filled by the PG entrance exam, makes it particularly difficult for the people competing in the general merit quota.

Figure 2 Total Number of MBBS Seats in Andhra Pradesh



Source: Medical Council of India

Table 2 Number of Post Graduate Seats in Andhra Pradesh

Type of Program	Public Institution	Private Institution*
Degree	861	664
Diploma	236	179
Total	1097	843

Source: Medical Council of India , * in service quota , only applies to half of the seats in Private Institutions

Easier admission to post-graduate programs for in-service students

Using the in-service quota makes it easier for students to get a PG seat. This is evident from the information on the success rate in the Andhra Pradesh PG entrance examination (Table-3). Over the past few years, the success rate of students using the in-service quota has been almost double of those students not availing of this scheme. However, in the most recent year, the success rate of those using the quota has reduced greatly. This can be attributed to the massive increase in the number of candidates using the in-service quota, more than double than in any of the past three years.

Table 3 Performance of Candidates in Andhra Pradesh PG Entrance Examination

Year		2007-08	2008-09	2009-10	2010-11
In-service	Candidates	670	477	537	1495
	Admitted	322	265	260	353
	Success Rate (%)	48	56	48	24
Non in-service	Candidates	2755	3205	3986	6595
	Admitted	644	613	783	1093
	Success Rate (%)	23	19	20	17

Source: Dr. NTR University for Health Sciences, Vijayawada

Vacancies of Medical Officers at PHCs

Over the past few years there has been a significant improvement in the position of vacancies in the state (Table-4). As recently as 2007, there were 209 PHCs in the state without a doctor which has now reduced to zero. Further, a substantial number of PHCs have more than one Medical Officer present. For example, almost 40% of PHCs in the state have two Medical Officers present and only 2% of sanctioned posts are vacant (according to the latest available information).

Table 4 Medical Officer Vacancies at Primary Health Centers (PHC) in Andhra Pradesh

Year	Total PHCs	Sanctioned Posts	PHCs With Medical Officers			
			Three Medical Officers	Two Medical Officers	One Medical Officer	No Medical Officers
2007	1570	2497	60	211	1090	209
2008	1570	2497	60	56	1444	10
2009	1570	2497	105	656	809	0

Source: Bulletin on Rural Health Statistics in India, Ministry of Health and Family Welfare

Government officials attribute this entirely to the success of the PG reservation scheme. In the words of a senior policy maker: *'It did make a difference, the incentive makes a difference, service quota has really increased willingness to work'*. This opinion is shared by a number of students interviewed.

While there is near unanimity that the PG incentive scheme attracts doctors to government service and rural areas, most officials concede that this alone is no guarantee of improved services or even the presence of doctors at the PHC level. This sentiment was summed up in the following quote from a senior official in the health department: '*85-90% (of those who take up government service) do this only for PG. The situation earlier was that the PHC was 'without doctor no work, now (it is) with doctor no work.'* He claimed that the scheme was

primarily a way *'to stop criticism of (the) government'* for not posting doctors at rural PHCs. The same policy maker cited a case where at a PHC, a mere 10km from the district headquarters there was no doctor found by the local MLA (state legislator) on three visits, in spite of the doctor being posted there.

Vacancies of specialist doctors at Community Health Centers (CHC)

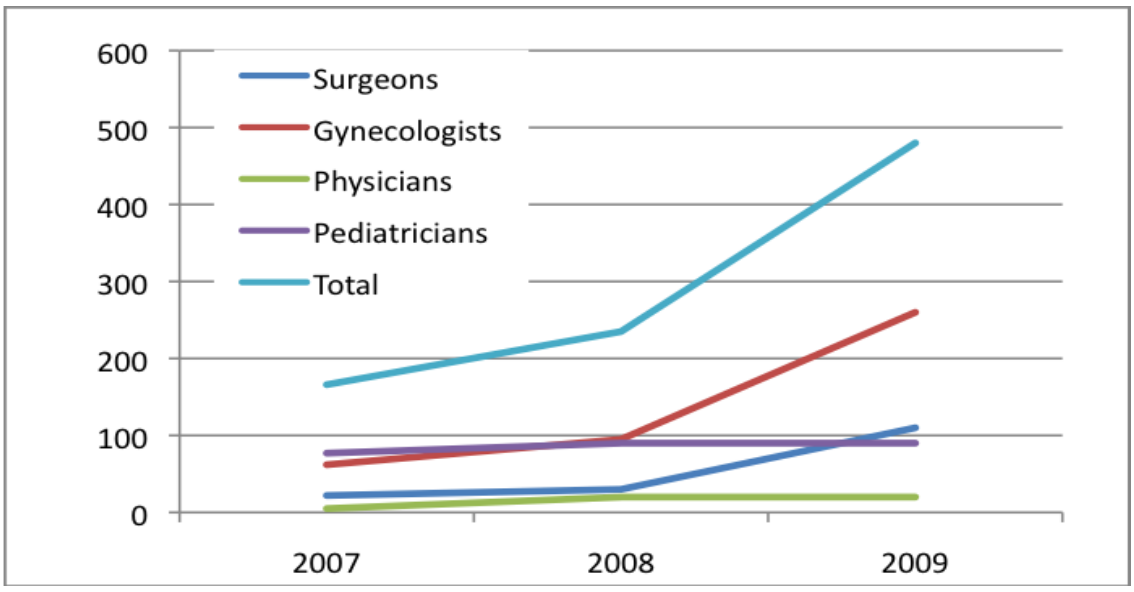
Along with the improved position of Medical Officers at PHCs there has been a progressive and substantial increase in the number of specialists at the CHC level. In 2009 72% of the sanctioned posts for specialists were filled which is a remarkable achievement considering that nationwide, positions for specialists at district and sub-district hospitals are vacant. However, unlike the PHC case, the shortfall is still substantial (Table-5). Further, not all specialist posts have been successfully filled. Another point to note is that the situation varies widely across specialties; while there has been greater success in filling vacancies of gynecologists; the vacancy position is particularly acute for medicine specialists (physicians) as well as pediatricians (Figure 3).

Table 5 Position of Specialists at CHCs in Andhra Pradesh

Year	2007	2008	2009
Sanctioned positions	444	444	668
Sanctioned positions filled (%)	166 (37%)	235 (53%)	480 (72%)

Source: Bulletin on Rural Health Statistics in India, Ministry of Health and Family Welfare

Figure 3 Number of Specialists in Andhra Pradesh working at CHCs



Source: Bulletin on Rural Health Statistics in India, Ministry of Health and Family Welfare

However, government officials were confident that the problem of filling positions of specialists in district and sub-district hospitals could be overcome. A recent government order compels all PG graduates (who are not in-service candidates) to serve in the public sector for at least 1 year after the completion of their specialist education. This measure can potentially increase the number of specialists available for government service, though experience in other states suggests that such requirements are typically difficult to enforce.

There is also a perception in the health department that increasing in the number of medical seats both at the MBBS and PG level will help reduce specialist vacancies. However there are some important caveats to this. Increasing PG seats in the government sector may reduce the attraction of the PG incentive if it eases the pressure on the entrance exam. So while it may potentially lead to reduced vacancies at the specialist level (assuming mandatory rural service for newly graduated specialists), this may be at the cost of filling up vacancies at the PHC level.

Matching training opportunities with specialist needs

There is a mismatch between the opportunities for specialization available through the PG in-service quota and the need for specialists in the state government (Table 6). For instance, in some subjects like biochemistry, microbiology, ENT, ophthalmology and venereal diseases considerably more seats than those required by the health department are reserved for in-service candidates. On the other hand in subjects like surgery, medicine, pediatrics, obstetrics and gynecology there are considerably few seats reserved in relation to requirements.

Table 6 Reserved Post-graduate Seats For In-service Candidates and Requirement

Subject	Number of seats reserved	Health Department Requirement	Percentage of Health Department Requirement Reserved
Anatomy	21	48	44
Biochemistry	24	18	133
Physiology	15	37	41
Pathology	39(degree), 13 (diploma)	103	50
Pharmacology	25	32	78
Microbiology	29	14	207
Forensic Medicine	12	34	35
Medicine	40	250	16
Surgery	40	182	22
Obstetrics and Gynecology	25(degree), 24(diploma)	142	35
Pediatrics	22 (degree), 15(diploma)	81	46
ENT	13 (degree), 6 (diploma)	13	146
Community Medicine	18 (degree), 4(diploma)	31	71
Ophthalmology	16(degree), 10(diploma)	12	217
Psychiatry	6 (degree), 3 (diploma)	31	29
Anesthesia	26 (degree), 21(diploma)	105	45
Orthopedics	20	56	36
Radio diagnosis	8 (degree), 5 (diploma)	51	25
Radiotherapy	2	14	14
Tuberculosis and Chest Diseases	7 (degree),3(diploma)	15	67
Venereal Diseases and Leprosy	10 (degree), 8(diploma)	4	450

Source: Directorate of Medical Education, Andhra Pradesh

Reducing this mismatch is all the more important since the graduates using the in-service quota are compelled to work in government service for a period of 5 years after their specialist training. For subjects such as medicine, surgery, anesthesia and psychiatry, it has

been suggested that the in-service reservation be increased to 50%. On the other hand, for subjects such as ophthalmology and ENT where there is an excess of specialists, it has been recommended to completely do away with the in-service reservation scheme. It has also been suggested that the percentage of seats reserved for each subject be reviewed every three years and re-adjusted as per vacancies and requirements.

Academic Performance of In-service Post-graduate Students

Officials at the Directorate of Medical Education were concerned about the academic performance of in-service candidates in their PG programs. A look at the results of the final PG exam explains why (Table 7).

Table 7 Academic Performance Of General and In-service Candidates in Their Final Year Post-graduate Examinations

	Appeared	Passed	Percentage Passed
In-service students			
Degree	172	100	58
Diploma	20	4	20
General (non in-service) students			
Degree	564	412	73
Diploma	279	230	82

Source: Directorate of Medical Education, Andhra Pradesh

Table 7 suggests that in-service candidates, in both the degree and diploma programs, have a much lower pass rate in the final year PG exams compared to the non-reservation students. Among students too, there is agreement that those who come into the PG program through the in-service quota often have to struggle with their studies. A long gap from academic work as well as increasing family responsibility is often cited as the reason for this.

Enforcement of the bond

In-service candidates are required to sign a bond to serve the state government for a period of 5 years after completing their specialization. If they fail to do so, they have to pay Rupees twenty lakhs and refund the entire salary drawn till that date after beginning the PG course.

An administrative procedure for enforcing the bond exists in the rule book. The Dr. NTR University for Health Sciences (which administers the PG entrance examination and admission process) is the recipient of the surety. The department where the specialist is employed is instructed to receive the refund of the salary. However, there was little awareness in the health department about compliance among graduates with the bond or the process of enforcing the bond. There was no information on whether there were violators or how many had been booked.

One reason for the lack of information on bond compliance is the lack of coordination among the three sections of the health department, all of which play a role in the PG reservation

program. The Directorate of Health is in charge of the recruitment of medical officers at the PHC level. Medical education is the responsibility of the Directorate of Medical Education and medical examinations are the responsibility of an independent institution, the NTR University for Health Sciences. The recruitment of specialists is undertaken both by the Directorate of Medical Education (for teaching posts at medical colleges) as well as by a third organization, the Andhra Pradesh Vaidya Vidhan Parishad (APVVP), which is in charge of CHCs and Area Hospitals. Typically, there is a single bond that the candidate executes covering both the penalty of Rupees twenty lakhs and the refund of salary and this is executed at the NTR University. However, because several departments are involved there did not appear to be a single system of tracking the movement of in-service candidates from the time they join government service to their joining specialist training to their re-joining service after completion of training and subsequent postings. This has hindered collecting information on bond compliance as well as how well returning specialists have been able to serve specialist needs in rural hospitals.

Discussion

The above findings suggest that the PG reservation scheme has been successful in attracting medical graduates to government service and rural posts. By aligning its requirement for PHC doctors with the high demand among medical graduates for PG seats, the government of Andhra Pradesh has been able to fill vacancies at the PHC level as well as increase the pool of specialists available to the public sector. The high growth of MBBS graduates coupled with the much slower growth in PG seats will ensure that the PG reservation scheme continues to be a powerful incentive to attract medical graduates and specialists to government service and rural areas in the foreseeable future.

There are, however, several concerns about this scheme. Foremost among these is the feeling that while the government has managed to fill rural posts through the PG scheme, Medical Officers who are brought to rural posts through this scheme may not be performing their job well. The PG scheme has managed to place doctors in rural posts who would otherwise likely be unwilling or disinterested in serving there. Consequently, the enthusiasm of these Medical Officers for being PHC doctors is likely to be limited and this will certainly impact the quality of their services. One way to lessen this problem is to improve the conditions of service. This should include better pay, better working conditions and substantial avenues for further career advancement. For specialists the presence of adequate support teams in rural hospitals, in addition to equipment and supplies, is also essential.

A second concern is the mismatch between the number of graduating in-service students in each specialization and the governments' requirements for specialists. This mismatch is due to the specific number of seats reserved in different specialties and this is not well correlated with public sector needs. This leads to the inadequate supply (for the public sector) of several specialist types and has implications on the availability of specialists in government hospitals.

A third concern is the apparent lack of oversight on how well the graduating in-service students are serving the public sector needs. This oversight is constrained by a severe lack of information on how many of these students choose to break their bonds, if they pay the penalty of breaking the bond and where they are posted (or end up serving) when they re-join service. Producing this information and keeping regular track of it will enable the state health

department to better manage the program. It is important that a system of tracking in-service candidates from the time they join service to the time they re-join service be implemented. This will not only enable the health department to monitor the PG scheme's performance but will enable better management of the scheme.

There are concerns that this quota increases the overall time required for a medical student to complete his studies and settle down. Because the pool of PG seats available has remained relatively static, reserving seats for in-service candidates makes it even harder for general candidates to achieve their PG degree. This may have the unfortunate consequence of deterring people from entering the medical profession in the first place.

The PG reservation scheme enjoys broad support from policy makers in the state. The increasing number of students taking up the scheme every year is proof positive of the scheme's appeal among doctors in the state. It is also being adopted by many states in India and is emerging as a popular way to fill rural Medical Officer and specialist posts. However, there are several issues which need to be addressed to make this scheme a powerful engine for strengthening rural health care in the country.

References

1) Bulletin of Rural Health Statistics 2007, Ministry of Health and Family Welfare, government of India, New Delhi http://mohfw.nic.in/Bulletin%20on%20RHS%20-%20March,%202007%20-%20PDF%20Version/Title%20Page.htm. Accessed 15th December 2010.

2) Bulletin of Rural Health Statistics 2008. Ministry of Health and Family Welfare, government of India, New Delhi http://www.mohfw.nic.in/Bulletin%20on%20RHS%20-%20March,%202008%20-%20PDF%20Version/Title%20Page.htm Accessed 15th December 2010.

3) Bulletin of Rural Health Statistics 2009. Ministry of Health and Family Welfare, government of India, New Delhi http://www.mohfw.nic.in/Bulletin%20on%20RHS%20-%20March,%202009%20-%20PDF%20Version/Title%20Page.htm Accessed 15th December 2010.

4) Dr. NTR University for Health Sciences, Vijayawada. http://59.163.116.210/colleges/Medical2.asp. Accessed 15th November 2010

5) Medical Council of India, New Delhi. List of colleges teaching MBBS course http://www.mciindia.org/InformationDesk/MedicalCollegeHospitals/ListofCollegesTeachingMBBS.aspx Accessed 10th December 2010

6) Medical Council of India, New Delhi. List of colleges teaching PG courses http://www.mciindia.org/InformationDesk/ForStudents/ListofCollegesTeachingPGCourses.aspx Accessed 10th December 2010

7) State Health Profile of Andhra Pradesh, National Rural Health Mission, Ministry of Health and Family Welfare, government of India, New Delhi http://mohfw.nic.in/NRHM/state%20Files/ap.htm. Accessed 12th December 2010