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Rural medical assistants in Chhattisgarh:
policy analysis and lessons for India

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Dedicated to my parents,
who taught me about the values of life,
and to my family,
who always stood by me

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Summary

In 2001, the Indian state of Chhattisgarh started a novel course for medical assistants, to counteract physician shortage in rural areas. In 2009, 858 rural medical assistants (RMA) had been posted. In 2010, the Government of India announced a similar countrywide course.

Based on primary and secondary data and making use of Walt and Gilson's conceptual framework, we analysed the development and implementation of the RMA process in Chhattisgarh to date. We observed a complex and dynamic interaction between actors, content and context from agenda setting up to implementation. Political commitment and contextual determinants played a key role throughout the process. Power relationships between actors shaped and reshaped the process, but broad participation and purposeful alliance building among actors were lacking. Weak planning affected the content of the policy, which disregarded the need for regulation, monitoring and an enabling working environment.

The continuing Chhattisgarh RMA process offers Government of India a path to live up to its commitment. An enabling environment, participatory planning and continual context-specific assessment are all key elements of a potential sustainable solution for rural health in India. It is up to government to act wisely now.

Disclaimer

This dissertation has been written as part of the Master's curriculum at the Institute of Tropical Medicine (ITM). It has not been subjected to peer review. The views expressed in this document are those of the author and do not necessarily reflect those of the ITM or any other party. Possible inaccuracies, factual errors and acknowledgment of due credit to the work of others, are the sole responsibility of the author.

Table of Contents

1.0 Introduction	1
1.1 Clarification of terms.....	2
2.0 General objective.....	3
2.1 Specific objectives	3
3.0 Methods	3
3.1 Limitations	4
4.0 Contextual analysis.....	4
4.1 The Indian health system.....	4
4.2 Public health system in India.....	4
4.3 Urban health system.....	6
4.4 Private health sector.....	6
4.5 Status of human resources in health in India	6
4.6 Reasons for shortage of physicians in rural public health services	9
4.7 Privatisation of medical education and its effect on the rural health services.....	10
4.8 Ethical Issues of practice and its effect on rural services	10
5.0 Contextual analysis: Chhattisgarh.....	11
5.1 Socio-economic and health status.....	11
5.2 Rural health infrastructure.....	12
5.3 Health policy and political issues.....	13
5.4 Policy options within the contextual setting	14
5.5 Need for non-physician clinicians and evidences elsewhere.....	16
5.6 What is important: ensuring availability or ensuring competence?.....	17
5.7 Minimum package of activities vs specialized services	17
6.0 Discussion	18
6.1 The Content.....	20
6.1.1 Gaps, limitations and inconsistencies	21
6.2 The Actors.....	23
6.3 Analysis of interrelationship of places, forms and level of power.....	26
6.4 Agenda setting for the policy development.....	27
7.0 Synthesis and lessons learnt	33
8.0 Conclusions.....	34
9.0 References.....	35
Annex A: Map of Chhattisgarh	40
Annex B: List of interviewees.....	41
Annex C: Chhattisgarh Chikitsa Mandal Act	43
Annex D: Medical/surgical interventions permitted to be carried out by RMA.....	48

List of abbreviations used

AYUSH	Ayurveda, Unani, Siddha and Homoeopathy
BPL	Below Poverty Line
BRMS	Bachelor of Rural Medicine and Surgery
CCM	Chhattisgarh Chikitsa Mandal (in English: Chhattisgarh Medical Board)
CGHS	Central Government Health Services
CHC	Community Health Centre
DH	District Hospital
ESIS	Employees State Insurance Scheme
GDP	Gross Domestic Product
GoI	Government of India
HEPVIC	Health Policy making in Vietnam, India and China
LMP	Licentiate Medical Practitioner
IMA	Indian Medical Association
IMR	Infant Mortality Rate
IPHS	Indian Public Health Standards
ISM	Indian Systems of Medicine
MBBS	Bachelor of Medicine and Bachelor of Surgery
MCI	Medical Council of India
MoHFW	Ministry of Health and Family Welfare
MP	Madhya Pradesh
NOC	National Occupation Classification
NRHM	National Rural Health Mission
NSSO	National Sample Survey Organisation
PHC	Primary Health Centre
PIP	Programme Implementation Plan
PPP	Public-private Partnership
RMA	Rural Medical Assistant
SHC	Sub Health Centre
UFWC	Urban Family Welfare Centre
USD	United States Dollar
WHO	World Health Organisation

List of figures

Figure 1: Rural healthcare delivery system in India	5
Figure 2: Density of health workers in India (2005)	7
Figure 3: Rural-urban distribution of health workers in India (2005)	8
Figure 4: Density of physicians in India (2005)	9
Figure 5: Policy-analysis triangle	18
Figure 6: Gaventa's power-cube	24
Figure 7: Stakeholder analysis with regard to power and position/interest	25
Figure 8: Kingdon's model of agenda setting	28

List of tables

Table 1	Rural health infrastructure in India and Chhattisgarh (2001- 2008)	12
Table 2	Human resources in Chhattisgarh (2002 and 2006)	13
Table 3	Training institutes in Chhattisgarh for health professionals	14
Table 4	Timeline of key events and critical incidents	19
Table 5	Curriculum of the three-year course	29
Table 6	Location and strength of the institutes for the three-year course	30
Table 7	Time line of all the batches from admission to passing out	30
Table 8	Postings of RMAs in different districts of the state of Chhattisgarh	31
Table 9	Comparison of performance of RMAs with other health staff with regard to different variables	32

“The integrated human resource planning involves estimating the future requirements for human resource and identifying efficient ways of providing those requirements. There is no unambiguous ‘right’ number and mix of health professionals.”

O’Brien-Pallas
in *Human Resources for Health Development Journal*, 2001, 5(1-3): page 6

“I’m fixing a hole where the rain gets in and stops my mind from wandering where it will go.”

Lennon & Mac Cartney (1967)

1.0 Introduction

All public health systems are dependent on human resources and a major share of resources allocated to public health goes towards them (Beaglehole and Mario 2003). As per Rao and colleagues (2008) “...health workers in adequate numbers, in the proper places, and properly trained, motivated and supported are the backbone of an effective, equitable, and efficient public health care system”.

Determining and achieving the right mix of health personnel is a major challenge for most healthcare organisations and health systems as two thirds of health workers are in the public sector and one third of them are in the private sector. Shortage of human resources in health care organisations applies to both health service providers as well as health management and support workers (WHO 2000).

India is a nuclear power, the world’s largest democracy and 12th largest economy¹. Its economic growth is largely unaffected by the current global economic crisis. It is the seventh largest country in the world with 2.1-2.3% of world’s land area. Its population of 1.1 billion ranks India as the second most populous country in the world after China². India is a multicultural country, with 1,652 languages³ and multiple political parties both at national and regional level. It is constituted of 28 states and 8 union territories. It has democratically elected governments at national and state⁴ down to village level.

¹ 1,235,975 billions USD; 2,941 USD per capita

² United nations statistic division 2007

³ Languages in India, census of India 1961

⁴ Each state undergoes general elections thus different states can have different political parties as ruling governments

The country suffers not from deficiency of aggregate number of doctors but their distribution. It seems ironic that India being a superpower in information technology contributes to one-fifth of the world's share of diseases. A third of all cases of diarrheal diseases, tuberculosis, respiratory and other infections occur India. The country also contributes to one-fifth of all nutritional deficiencies, diabetes, and cardiovascular cases.

Invaded by Mongols, Moguls and ruled by United Kingdom for more than two centuries, India has assimilated and inculcated different cultures into its stride. Rule by kings and decrees have also become part of its culture. This is evident from India's mixed health workforce, which is diverse in nature with presence of different cadres of health workers in Western and Indian systems of medicine and top-down policy approach.

After obtaining independence in 1947, India has grown remarkably becoming the fourth largest country in purchasing power⁵ in the world. Poverty – as expressed in headcount – was reduced from 51.3% in 1977-1978 to 27.5% in 2004-2005 as per criteria of the Planning Commission of India (Planning Commission of India 2007)⁶. Infant mortality rate (IMR) has declined from 146 in 1951 to 53 per 1,000 live births in 2005 (Office of the Registrar general of India 2007) and life expectancy at birth has doubled characterized by a marked disparity in health and socio-economic welfare between regions and castes. As per the constitution of India, four caste categories have been recognised; general, scheduled castes, scheduled tribes and backward classes with the current estimates of 25%, 7%, 16% and 52% respectively (Office of the Registrar General and Census Commissioner of India 2001).

This study presents a policy analysis of addressing the shortage of doctors in the form of creating a new cadre of physicians known as Rural Medical Assistants (RMA), in the Indian state of Chhattisgarh. I attempt to analyze policy content, process and actors involved in managing the problem of shortage of doctors and its consequences (both positive and negative).

1.1 Clarification of terms

As per the revised National Occupation of Classification⁷, medical practitioners in India constitute two streams: allopathic doctors who are trained in western medicine and those trained in Indian Systems of Medicine (ISM). The latter constitute a diverse group –

⁵ International Monetary Fund, World Economic Data base 2009

⁶ Based on consumption data collected using 30-day recall period

⁷ The first ever exercise at classifying Indian workforce in a standardised manner was done in 2004

comprising of Ayurveda, Yoga, Unani, Siddha and homoeopathy – collectively referred to as AYUSH. Both allopathic and AYUSH medical courses are of four-and-a-half year duration with one year of compulsory internship. The accreditation is separate: degrees of Bachelor of Medicine and Bachelor of Surgery (MBBS) are under the Medical Council of India; AYUSH have a separate council (India 1956). For all practical purposes, in this text ‘doctors’ and ‘physicians’ refer to the allopathic stream, and ‘AYUSH’ and ‘ISM practitioners’ to the Indian stream.

The Medical Council of India (MCI), enacted through a legislation of the Parliament of India in 1956, is an autonomous regulatory body and is responsible for accreditation, registration and recognition of medical colleges and medical courses. It lays down guidelines and rules for starting new medical colleges and/or new medical courses and/or recruitment of teaching staff. Although a small institution with only regulatory responsibilities, MCI is a powerful body with its own legislative framework, and often cannot be overruled even by the Ministry of Health. Likewise, in all the states there are state medical councils under which physicians need to register for accreditation of their degrees or diplomas.

2.0 General objective

To comprehensively analyse policy aspects of the Chhattisgarh’ Rural Medical Assistant (RMA) course.

2.1 Specific objectives

1. To analyse the interactions between policy actors, content and context and its effect on the policy process of the RMA course in the state of Chhattisgarh;
2. To contribute to evidence-informed policy making by drawing lessons from the analysis.

3.0 Methods

Detailed analysis of the context of human resources in health is presented for India and Chhattisgarh. A literature survey of shortage of physicians in India is presented. I analyse at length the formal and informal mechanisms through which the RMA policy was developed and implemented – the RMA course being the policy option taken in Chhattisgarh to address

shortage of physicians – using primary data from key informant interviews, direct observation and focus group discussions and secondary data from grey and peer-reviewed literature.

I analyse these data using Walt and Gilson's framework, widely known in health-policy research circles as the policy-analysis triangle (Walt and Gilson 1994), modified to the Indian context (Bird *et al.* 2007). Analysis of power of actors is done using Gaventa's power cube (Gaventa 2006) and analysis of agenda setting is done using the streams theory of Kingdon (2001).

3.1 Limitations

My own observations as one of the stakeholders in the state from January 2006 till August 2009 can have some bias on the analysis. This work is for general public, health public, not precisely for an Indian politician, a policy maker or a bureaucrat.

4.0 Contextual analysis

The problem of shortage of physicians is a universal phenomenon in many countries worldwide. An understanding of health service organisation in India and the state of Chhattisgarh is presented here. It is necessary to understand the context in which the RMA intervention took place. I first present a brief on the health system in India and then narrow down to the state of Chhattisgarh which is the focus of my study.

4.1 The Indian health system

The health system in India is a mix of a large public and a strong private health infrastructure and includes different systems of medicine. Private health care sector is the dominant health care provider both in rural and urban areas. It means that the financing of health service is mainly private with considerable out-of-pocket payment at the point and time of delivery of services.

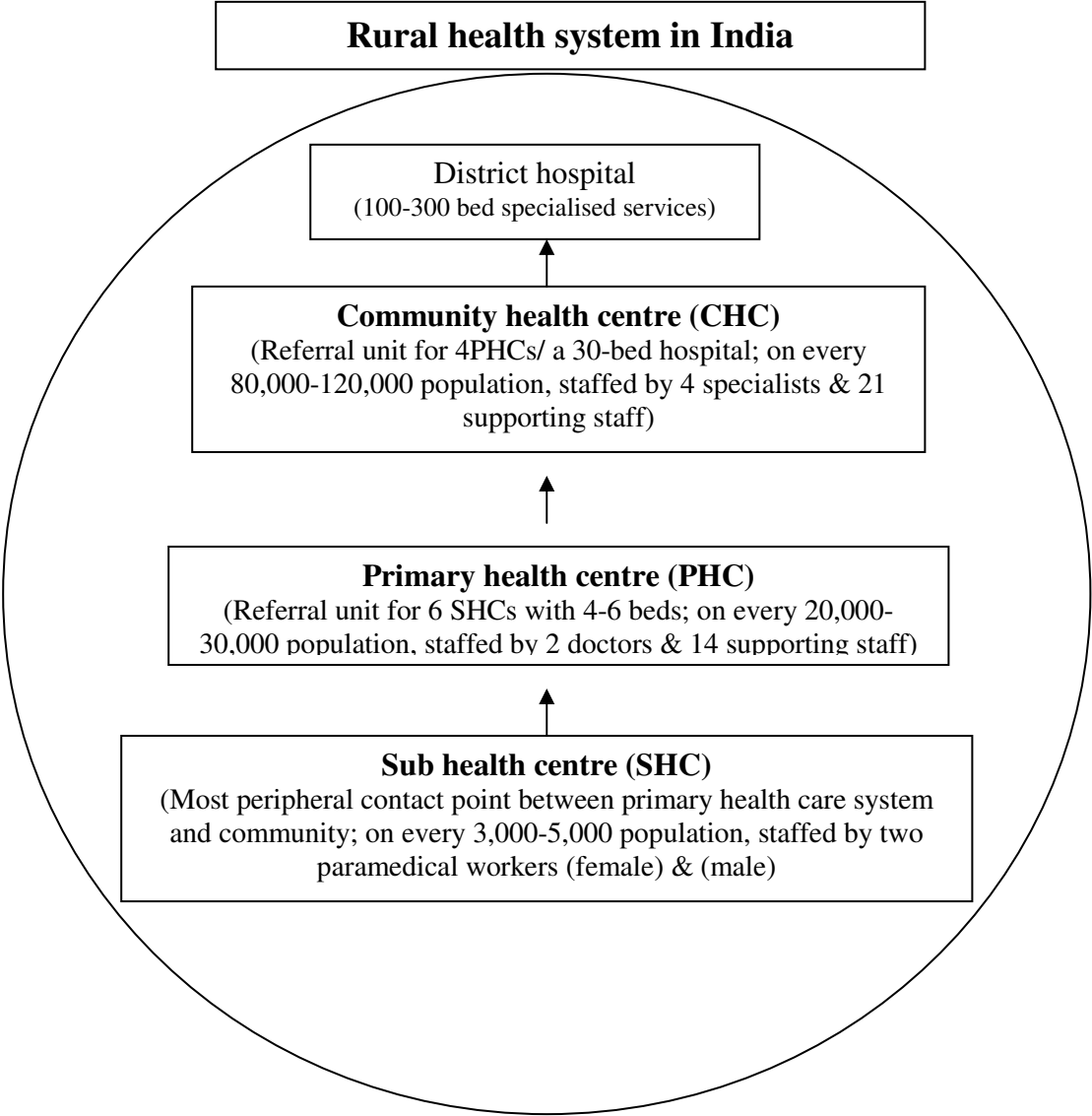
4.2 Public health system in India

The public health system in India is shown in Figure 1. The public health system has two distinct health care delivery infrastructures; rural and urban. The Indian rural public health care delivery system is a four-tier system from sub-centre (sub health centre, SHC), primary health centre (PHC), community health centre (CHC) to district hospital level based on the population criteria under jurisdiction. According to norms, a sub-centre staffed by a male and

a female worker caters to 3,000-5,000 population; a primary health centre with a 15-person mixed staff including two medical doctors, caters to 20,000-30,000 population; a community health centre with a 25-person mixed staff including four specialist medical doctors, caters to 80,000-120,000 population, and finally a district hospital caters to the entire district population (Bhore 1946; NRHM 2005, see Figure 1)

There have been efforts since 1983 (after the first National health policy) to significantly increase public health infrastructure. As of 2001, average population per PHC has improved from 75,000 in 1981 to 31,652. The average population coverage of CHCs is 173,641 against the norm of 80 to 120,000 population in plain and tribal area respectively (Ministry of Health and Family Welfare 2008).

Figure 1: Rural healthcare delivery system in India



4.3 Urban health system

This includes a district hospital and a network of health centres, which are managed by the local government bodies called municipal corporations in big cities and towns. In big cities and towns there are civil hospitals, urban family welfare centres (UFWC), health posts and post-partum centres. UFWC and post-partum centres are the nodal point for provision of reproductive and child health and family welfare services. Apart from these, there are dispensaries and hospitals for employees in formal sector through the employee's state insurance scheme (ESIS) and the central government health scheme (CGHS).

4.4 Private health sector

The private sector includes both for-profit and nonprofit health care providers. The informal sector is prevalent in the country in the form of faith healers, traditional birth attendants and other unqualified medical practitioners. There are also private pharmacies dispensing medicines without any prescription from physicians. In all, there are health care institutions ranging from general practitioners and one-bed clinics to big nursing homes and corporate hospitals dispersed based on the motive of maximising profits.

4.5 Status of human resources in health in India

As per the WHO definition of health professionals (physicians, nurses and midwives) there were 2,168,223 health workers in India in 2005, which means a density of about 20 health workers per 10,000 population. The 2001 census estimates health worker availability per 10,000 population, adjusted for qualification, based on the self-reported occupation in National Sample Survey Organization (NSSO 2004-05). It shows that there are 3.8 physicians per 10,000 population as opposed to 6 per 10,000 reported in the census. Similarly, nurses are also 2.4 per 10,000 population as opposed to 5.8 per 10,000 population; and overall density of health workers is 8 per 10,000 population as opposed to 20 per 10,000 population (see Figure 2).

Figure 2: Density of health workers in India (2005)

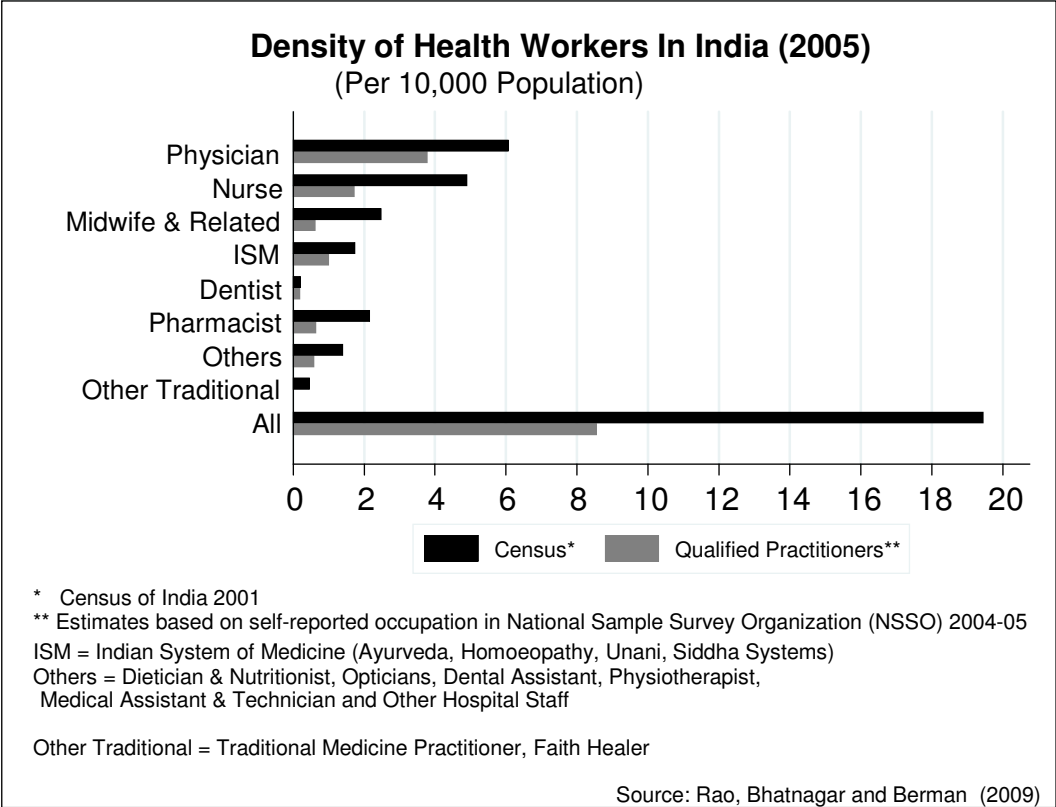
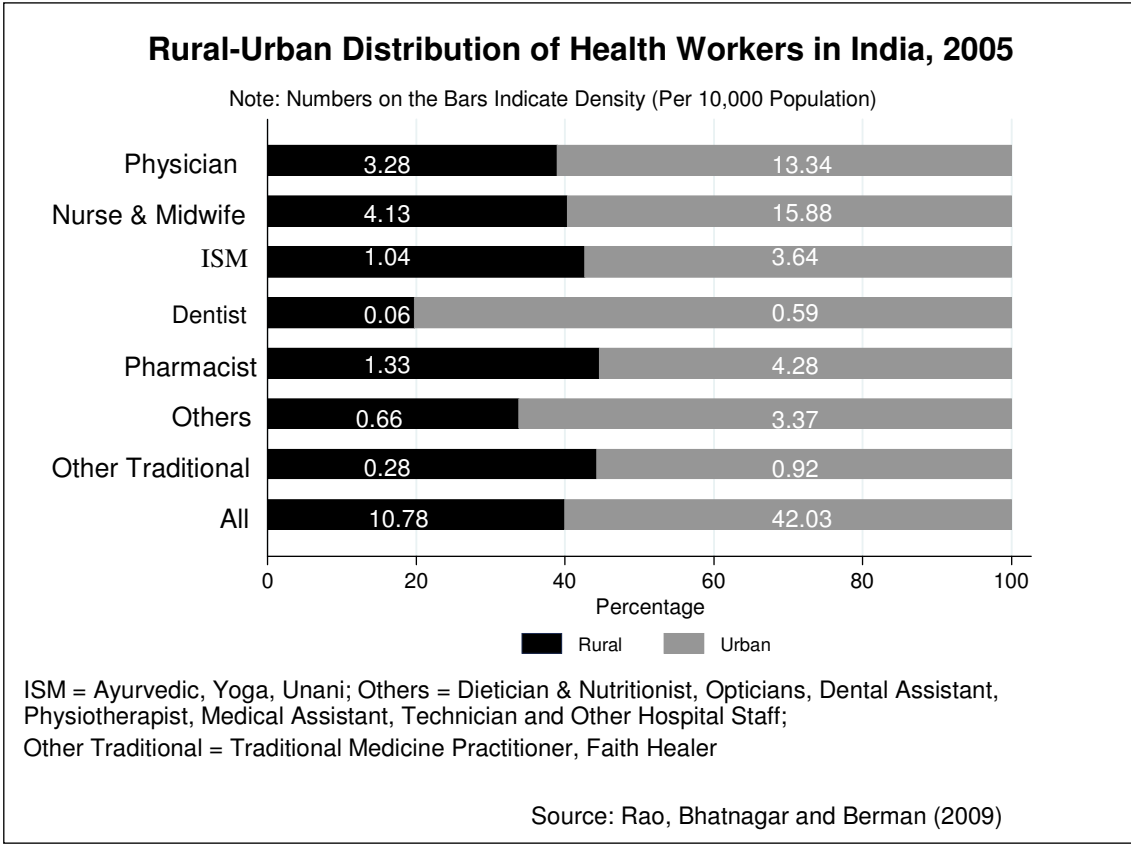


Figure 3 gives the rural-urban distribution of health workers in India in 2005, showing large mal-distributions between rural and urban areas and within and between the states. The density of physicians in rural areas is 3.3 per 10,000 population whereas it is four times higher in urban areas at 13.3 per 10,000 population. Other health professionals show a similar rural-urban mal-distribution. In the case of nurses and midwives, it is 4.1 per 10,000 population in rural areas as compared to 15.9 per 10,000 population in urban areas. The overall density of health workers in rural areas is 10.8 per 10,000 population as compared to 42.1 per 10,000 in urban areas.

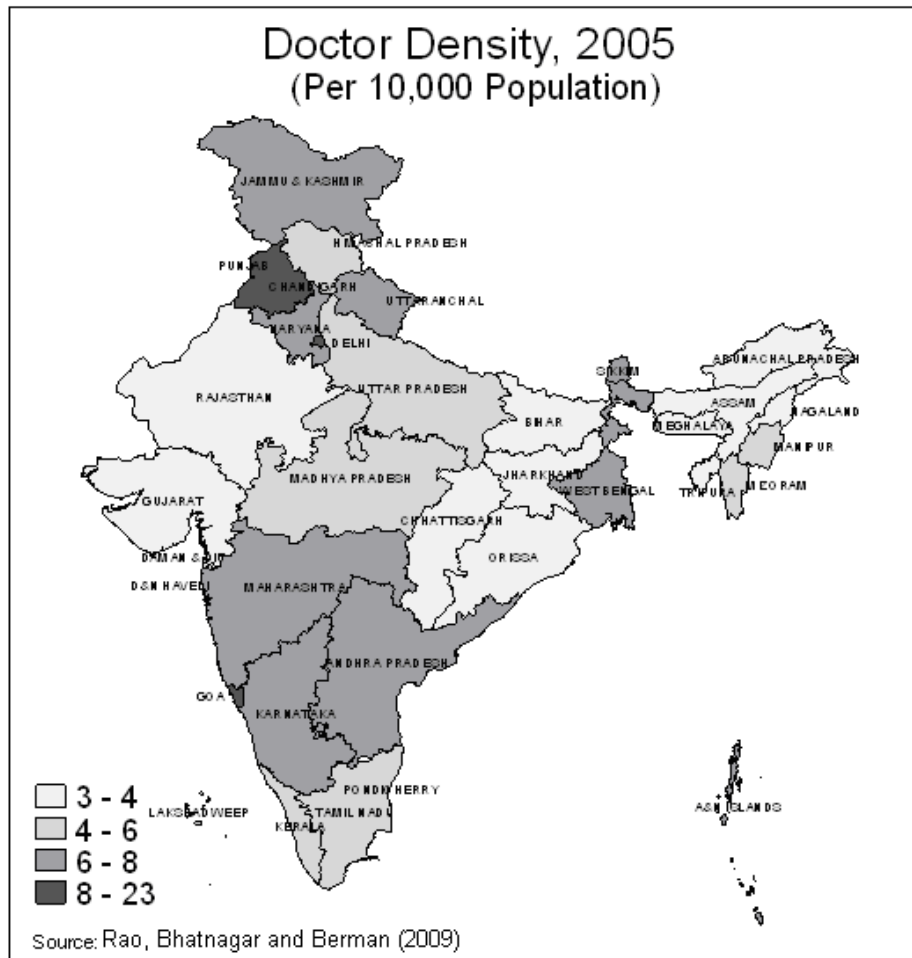
With 72% of India’s population being rural, the total number of doctors working in the rural public health sector (PHC and CHC) is 23,858, which corresponds to only 3.7% of all doctors or 1 doctor per 3,112,820 population in the rural public health sector. Expressed differently, 60% of the physicians are in urban areas and 70% in the private sector of health (see Figure 4 for density of physicians in India in 2005).

Figure 3: Rural-urban distribution of health workers in India (2005)



There are large numbers of medical practitioners in the informal sector as well. Often they are the first point of contact, in rural areas and urban slums. As per the study of Rao and colleagues (2008), 25% of the allopathic practitioners belong to the informal sector, out of which 42% are in rural and 15% are in urban areas. A study conducted in Rajasthan state (Banerjee 2003) reports that 41% of private medical practitioners had no accredited medical degree.

Figure 4: Density of physicians in India (2005)



4.6 Reasons for shortage of physicians in rural public health services

In reply to a question in the upper House of the parliament, the Government of India notified that there is no shortage of physicians in the country with regard to aggregate numbers, estimated to be 683,682, i.e. 6 per 10,000 population, in 2007. However, only one in 10 physicians work in rural areas where 60% of Indian people live (Press Information Bureau 2007). The reasons for such a mal-distribution are multi-factorial and are related to the socio-economic conditions in rural areas, working and living conditions, less work satisfaction and lack of opportunities for continuing medical education in rural areas (Kalantri 2007). Besides, every year 40% of medical graduates go for specialisation after which few opt to serve in rural areas. This may further worsen if the trend continues like in Egypt where 62% of physicians are specialists (Gaumer 1999)

The National Health Policy (GoI 2002) document states that most of the ISM practitioners are practising modern medicine due to poor regulation. Although, such practice violates various

Supreme Court orders⁸, it continues due to scarcity of physicians in rural and economically backward areas of the country (Berman 1998; Bilimagga 2002). This kind of access to modern medicine and mushrooming of private pharmacies in India has somehow responded to the demands of the community, unmet by government services.

4.7 Privatisation of medical education and its effect on the rural health services

India adopted the strategy of opening medical education to the private-for-profit sector in health with the aim of bridging the gap among 'what is required', 'what is produced' and 'what is available' to serve in the rural areas. The number of private medical institutes multiplied by 9 between 1950 till 2004 (Mahal and Mohanan 2006a). As per Medical Council of India (2007), the proportion of privately funded and managed medical institutes is half of all medical colleges (134 out of 269) and is still growing. At the current rate more than 30,000 physicians are produced every year, which is 4.5% of total number of physicians in India, estimated to be 683,682 in 2007 (Press Information Bureau 2007). Although this has led to improvement in total numbers of physicians, it has simultaneously increased regional inequities and mal-distribution of physicians between rural and urban areas (Mahal and Mohanan 2006b).

4.8 Ethical Issues of practice and its effect on rural services

Public medical education in India is highly subsidized against the privately funded institutes where the students have to personally finance their expensive studies. This subsidised education can be considered an investment that might pay dividend after completion of studies. Again by contract, 50% of medical graduates out of total 30,000 yearly passed out coming from private medical institutes, it is difficult to expect them to serve in rural areas where there is no incentive of any kind.

Yet, the mechanisms are lacking to orient medical graduates to repay their subsidized education as an ethical and moral obligation in the form of ensuring equity and equality of health care services to the society. Lack of family medicine in medical curriculum and less than 3% of seats for community medicine as a post graduate degree in the medical institutes are also one of the reasons apart from societal pressure for the medical graduates to go for specialisation.

⁸ The Supreme Court of India ruled in 1996 and 1998 against allopathic practice by ISM and unqualified practitioners

The issue of ethical obligation becomes further complex when there are precedents that more than 56% of medical graduates migrated internationally from All India Institute of Medical Sciences (AIIMS), one of the premier medical institutes of the country between 1956 and 1980 (Khadria 1999; Kaushik, Mahal and Jaiswal 2006).

5.0 Contextual analysis: Chhattisgarh

Given this context of shortage of physicians in rural areas and the reasons for this as discussed above, I present below the specific situation of the state of Chhattisgarh.

Chhattisgarh was crafted out of a larger state, Madhya Pradesh, in the central part of India on 1st November 2000 by the Madhya Pradesh Reorganisation Commission. It is geographically the 9th largest state, covering 135,194 square kilometres. It is 17th in rank by population of 20.1 million. The population density is half that of the national average: 154 for the state as against 312 per square kilometre for the country (Office of the Registrar General and Census Commissioner of India 2001, Government of Chhattisgarh 2010). The state has 40% of the land area classified as forest land. Of the 18 districts of the state, 12 are classified as remote, tribal and extremist-affected areas⁹.

5.1 Socio-economic and health status

As per the 2001 census, 89% of the state's population is underprivileged and one-third of its population is tribal. The state has one of the highest population of indigenous tribal people in India. 12% of the population are categorised as scheduled castes and 45% as other backward classes. The 61st round of the National Sample Survey of the Ministry of Statistics and Programme implementation has estimated Chhattisgarh to be the third poorest state in the country with 40.9% of the population below the poverty line (BPL). With regard to key health indicators, infant mortality rate and maternal mortality rate are 57 per 1,000 live births and 335 per 100,000 live births respectively, higher than the national figures of 53 per 1,000 live births and 254 per 100,000 live births (Sample registration system 2009). Despite winning the fourth J.R.D. Tata award for population and reproductive health programmes in 2008, the state is facing several challenges particularly the severe shortage of human resources in rural health services. It also has to contend with malnutrition and several

⁹ According to the website of the Ministry of Home Affairs, Government of India, certain areas including some districts in Chhattisgarh are affected by 'Naxalites', an armed guerrilla force, against which the Ministry has set up Naxal Management Division on October, 2006 (Source: Website of Ministry of Home Affairs, Government of India, accessed in May 2010 – <http://mha.nic.in>)

communicable diseases. Chhattisgarh has for instance the highest leprosy prevalence in the country: 2.4 per 10,000 population. The state also reported a low coverage of institutional delivery (18.1%, as 40.8% India-wide) and of immunisation (59.3% of children fully immunised¹⁰), amongst others.

5.2 Rural health infrastructure

The rural health infrastructure in the state is on the same pattern as elsewhere in the country i.e. sub-centres, primary health centres, community health centres and district hospitals (see Figure 1). The national norm for population coverage is not satisfactorily implemented in the state due to gaps in infrastructure and human resources (see Table 1).

Table 1. Rural health infrastructure in India and Chhattisgarh (2001- 2008)

Health facility	Population norms	India (2001)	Chhattisgarh (2005)	India (As on March 2008)	Chhattisgarh (As on March 2008)
		Population coverage (and number of centres)	Population coverage (and number of centres)	Population coverage (and number of centres)	Population coverage (and number of centres)
CHC	Tribal /80,000	243,120	143,517	192,583	132,000
	Plain /120,000	(3,054)	(116)	(4,276)	(136)
PHC	Tribal /20,000	32,458	32,201	35,104	26,000
	Plain /30,000	(22,875)	(517)	(23,458)	(721)
Sub Centre	Tribal /3,000	5,407	4,360	5,638	4,000
	Plain /5,000	(137,311)	(3,818)	(146,036)	(4,741)

Source: MoHFW, Rural health bulletin (2006; 2008)

Apart from distribution and population coverage of the health centres, the human resource situation is also poor across several health staff categories as seen in Table 2.

¹⁰ Children up to 12 months of age receiving BCG, oral polio and three doses of DPT are considered fully immunised

5.3 Health policy and political issues

In this context the Congress party assumed government at the time of creation of state, preparing for elections in 2003. The biggest challenge the state government had faced in the health sector was the challenge of human resources. Table 2 compares the human resources at different levels at the time of state formation (2002-03) and in 2006-07.

Table 2. Human resources in Chhattisgarh (2002 and 2006)

	Year 2002-03			Year 2006-07		
	Sanctioned	Posted	Numbers Vacant (percentage)	Sanctioned	Posted	Numbers Vacant (percentage)
Auxiliary nurse-midwife & lady health visitor (at SHC & PHC)	5,729	4,667	1,062 (18.5)	6,470	5,275	1,195 (18.4)
Multi purpose worker & supervisor	3,785	3,121	664 (17.5)	4,467	3,149	1,318 (29.5)
Medical officers (CHC & PHC)	1,455	516	939 (64.5)	2,571	1,345	1,226 (47.6)
Specialists (CHC & DH)	291	103	188 (64.6)	1,006	291	715 (71)

Source: Chhattisgarh State Health Resource Centre 2010

Distribution of health professionals across the regions of the country is an important determinant for physical access to health care in the community (Nigenda 1997; Wibulpolprasert and Pengpaibon 2003). Chhattisgarh being no exception has experienced both shortage and mal-distribution of health staff. Most of the former health staff remained with the parent state of Madhya Pradesh.

With regards to tackling the shortage of health professionals (doctors, nurses and midwives) the capacity to produce trained health professionals at the time of creation of the state was limited. This can be understood from Table 3 which compares the training infrastructure in the state in 2000-2001 and today.

Table 3: Training institutes in Chhattisgarh for health professionals

2000-01	Present Status
<ul style="list-style-type: none"> • One medical college with capacity of 100 students per year • One private (for profit) college of nursing admitting 30 students per year in undergraduate nursing course 	<ul style="list-style-type: none"> • 2nd medical college opened in August 2002, got recognition in 2006 with intake capacity of 50 • 3rd medical college opened in July 2007 with intake capacity of 50 (yet to be recognised by MCI) • Government college of nursing with 33 intake capacity (2005) • Two nursing colleges; post graduate nursing course • Ten nursing colleges: undergraduate course • Four nursing colleges: diploma in nursing <div style="text-align: right; margin-right: 20px;"> <p>In the private sector</p> </div>

Source: Chhattisgarh State Health Resource Centre 2010

With the constraints of limited resources and allocation of resources, the particular interest of the government was to address the challenge of shortage of physicians.

5.4 Policy options within the contextual setting

In the pre-independence era two classes of physicians were present in the health work force: medical doctors who underwent a five-and-a-half year course and licentiate medical practitioners (LMPs) with three to four years of training. About two-thirds of the rural practitioners were LMPs (Priya 2005; Gautham and Shyamprasad 2009). The unease of medical doctors and their resistance towards LMPs forced the government to abandon the LMP course in the years following independence.

To address the problem of availability of physicians at rural public health services, there have been many strategies practiced in the past in India. Each option is having its strengths, weaknesses, opportunities and threats as well as positive and negative externalities. These options are:

- Positive discrimination for rural area candidates in medical education;
- Subsidized medical education for rural candidates;
- Compulsory rural services after medical graduation;
- Open new medical colleges in rural areas;
- Modifying the existing medical curriculum to Community Medicine
- Scale up the intake capacity of existing medical colleges;
- Contracting-out and contracting-in;
- Workforce management;
- Incentives (financial and non-financial);
- Non-physician medical practitioners.

In the past many approaches like preferences to rural candidates for medical education, compulsory rural practice, opening up of medical colleges in rural areas, penalising physicians for not following the rural service bond have been practiced in India to attract young doctors to the rural health services but many of them could not succeed to attain the desired results (Kalantri 2007). The Government of India in 2007 tried to impose a mandatory one-year rural internship before awarding the medical graduation degree. Such practice is common in other countries like Singapore and Malaysia where mandatory National Health Service is for three years (Ramdoss and Venkatramanan 2007; Press Information Bureau 2007). The incentive approach, both financial and non-financial, is one of the strategies tried in many states of India. It has been applied as positive discrimination for specialization for in-service physicians, practiced in Haryana state and as higher salary structures for physicians to serve in remote rural areas, practiced in the states of Himanchal Pradesh, Uttarakhand and Chhattisgarh (Rao, Sundararaman and Jain 2010). But it involves a human-resources-in-health (HRH) policy and plan at national and sub-national level as also advocated in the 'WHO guidelines for policies and plans for human resources for health in WHO African region'. Compulsory rural services is already in practice elsewhere in the state of Tamil Nadu (after medical graduation) and in Maharashtra as a pre-requisite for specialisation after medical graduation.

Opening up of medical colleges in rural areas (as in the state of Gujarat) and scaling up the intake of existing medical colleges have also not succeeded to attract physicians to work in

rural areas. Still, DNA News reported that the MCI announces to open 100 more medical institutes in rural areas in coming years: “100 new med colleges for rural India” (2009).

Public-private partnerships in the form of contracting-out the primary health care to NGOs like in the state of Karnataka (Prashanth 2008) or contracting-in doctors from public service in other states has also not worked out due to issues of accountability, co-ordination and regulation.

Even direct recruitment of physicians from the technical directorate as happened in the state of Haryana or taking decisions on posting of physicians to remote rural areas centrally like in the state of Uttrakhand has also failed due to nepotism, and regulation and control issues. Failure of all the policy responses can be seen as due to inability to consider context, cultural beliefs and practices and lack of a human resources policy plan at national and state level.

5.5 Need for non-physician clinicians and evidences elsewhere

Each country has developed its own way to address the deficiency of physicians at first-line health services. In many places trained non-physician clinicians are now providing curative, preventive and promotive services as a minimum package of activities. This coping mechanism is seen both in developed and developing countries.

In some African countries they are the mainstay of the health care delivery system in absence of physicians and provide curative as well as some surgical services also (McCord 2009). In Asia, the strategy of barefoot doctors to address physician shortage in rural areas was developed in China in the late 1940s and continued until the early 1980s. In India similar practice was in vogue in the form of community health workers in the 1970s (Haines 2007).

In India, there is a strong debate on the exclusive cadre for rural health services and key stakeholders like IMA and ex-Union Minister for Health have expressed their views against it (IMA Kerala 2010; Mudur 2010; Ramdas 2010). The Task force on Human Resources for NRHM, Government of India (2005) has mentioned in its report about the lack of a bio-psycho-social component in the medical curriculum and detachment from the primary level care in the teaching. It also considered the option of a short-term course for primary health care.

5.6 What is important: ensuring availability or ensuring competence?

Many terms are now in practice for RMA kind of cadre, ranging from 'qualified quacks' to the more neutral 'rural doctors' and 'social physicians' (Verghese 2010). With the current trend of physicians going for specialisation, there seems less hope for young physicians going for rural services (Gol 2005), as re-emphasised by the National Knowledge Commission of Gol (National Knowledge Commission 2007): forceful rural service cannot address the issue of commitment and quality care. The current debate is about the competency of this cadre rather than about the improved coverage of health facilities, which was aimed at and to some extent achieved by posting of RMAs. It is evident from studies in Tanzania that there is no significant difference in the services provided by Assistant Medical officers (non-physician cadre) than from physicians in terms of providing complicated obstetric care (McCord *et al.* 2009)

5.7 Minimum package of activities vs specialized services

The report of task force on human resources for NRHM mentions that medical graduates in India lack knowledge on common diseases for which patients come to PHCs. Rather, the training of medical graduates in urban environment in tertiary care hospitals makes them dissociated from the basic minimum package of services to be provided at PHC. An older study, done by the National Institute of Health and Family Welfare (1992), elaborated the absence of knowledge in medical graduates about immunisation, nutritional advice, oral contraceptives, intra-uterine contraceptive devices, intra-venous fluids and other items. With enough evidence on the status of medical education in the country, the course for RMA was based on training of family medicine and skill development through a minimum package of curative, promotive and preventive services.

Out of many options outlined above mainly two options were considered by the ruling government: opening new medical colleges and scaling up the intake of the existing medical college. Another option was a brainchild of the Chief Minister himself, exploring the possibility of starting a new cadre course on the pattern of licentiate medical practitioner (LMP), which was practiced in the states of Assam and West Bengal but abolished after the recommendations of the Bhore committee in 1946. The ruling congress-party government considered developing a three-year course to train medical professionals or 'three-year doctors' as it was then popularly known to serve in rural areas. They did so based on four assumptions:

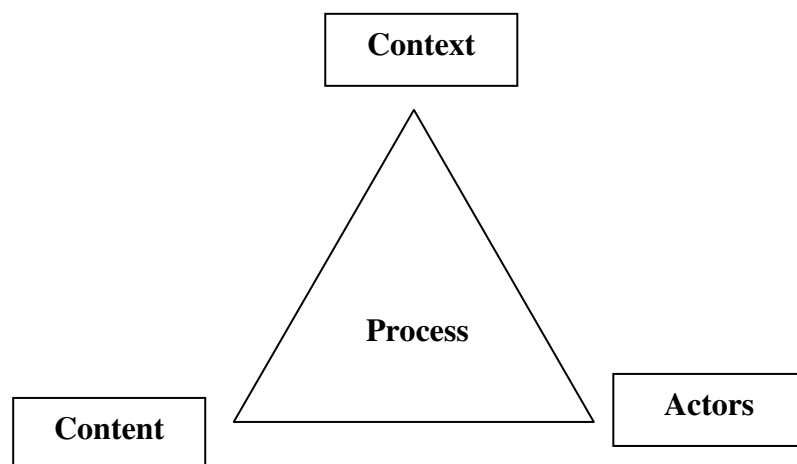
- (i) Candidates from rural areas are more likely to serve back in rural areas and thus can address the issue of physician's deficiency at rural health services;
- (ii) Less opportunities for them to get engaged in private practice in urban areas and thus can retain them at rural health service;
- (iii) This new cadre can replace the unqualified medical practitioners in informal sector;
- (iv) All this would be possible within the three years life span of the political government.

The subsequent events are mentioned in the timeline of Table 4 (See next page).

6.0 Discussion

Policy analysis using the framework of Walt and Gilson (1994), modified and adopted to the local context on the pattern of the model used in the Health policy making in Vietnam, China and India project (HEPVIC 2007) is applied to Chhattisgarh. Consequently, I use three broad headings: actors, policy content and context. I add one more: impact on the policy process. I explore the inter-relationships between the actors by applying Gaventa's power cube.

Figure 5: Policy-analysis triangle



Source: Modified from Walt and Gilson (1994)

Table 4: Timeline of key events and critical incidents

Time line	Events
01 st November 2000	Creation of State of Chhattisgarh
December 2000	Committee formation of medical college for three-year course
February 2001	Proposal for formation of Chhattisgarh Medical Board called Chhattisgarh Chikitsa Mandal (CCM)
March 2001	<ul style="list-style-type: none"> - Refusal of Medial Council of India for recognition of course - Approval of the CCM by State Ministry of Finance - Approval of the CCM from the state senate; Gazette notification - CCM formation and nomination of three members' commission - CCM – Director of Health Services & Medical Education and Secretary of Health - Approval of the course by administrative body of the state
April 2001	Name of the course- Diploma in Modern Medicine and Surgery
May 2001	<ul style="list-style-type: none"> - Proposal approved by the Governor of the State - Formation of CCM and Gazette notification - Indian Medical Association filed a case in High Court
August 2001	Course name changed to 'Diploma in Alternative Medicine'
2 nd October 2001	Three Private Institutes inaugurated by The Chief Minister
2001-2003	Three batches were inducted for the course (2200 students in total)
January 2003	<ul style="list-style-type: none"> - Strike by students- 'Diploma in Modern and Holistic Medicine' - State elections and new political government; admissions stopped
November 2003	
July 2004	2 nd strike of students; 'Practitioner in Modern and Holistic Medicine'
December 2006	3 rd strike; increased duration of internship; state recognition
01 st September 2008	Official announcement of closure of the course
October 2008	All three batches finished their Internship (809 students dropped out)
2009	Rename of cadre to Rural Medical Assistant (RMA) and recruitment
2010	<ul style="list-style-type: none"> - MoH consultation with officials of Chhattisgarh on three-year course - Government of India announced to launch a new three-year course called 'Bachelor of Rural Medicine and Surgery (BRMS)
February 2010	

6.1 The Content

The 7th schedule of the Indian Constitution bestows the responsibility of public health and sanitation to the state governments. Although state medical council can not contradict recommendations of MCI, a state can initiate a new medical course based on its need provided it registers the course in a separate state medical register. Chhattisgarh being a newly created state, facing physicians' deficiency in rural public health service decided to shorten the standard four-and-a-half year course of MBBS to three years. This was an attempt to address the scarcity of physicians in a short span of time. This new course cadre is known today as rural medical assistant (RMA).

Elsewhere in India – in the yet undivided state of Madhya Pradesh, in West Bengal and in Assam – the same kind of course was in practice but was discontinued in the absence of approval by MCI and resistance from the Indian Medical Association (IMA). The concept of creating a new cadre and thus shortening the standard course of physicians was to fill the gap of physicians in rural public health system. Though no convincing evidence was documented about the poor performance of this cadre or indicators of service delivery, on the grounds of ethics and compromise on quality of medical education, the course was abolished. On the contrary during a key informant interview, a retired district leprosy officer, who was himself a licentiate medical practitioner, mentioned:

“The only difference between LMPs and physicians was the duration of course and not competence or ability to perform. In fact, LMP improved the coverage of health facility and they by their performance reached up to the level of district programme officer in their career pathway.”

The Chief Minister of Chhattisgarh (2000-2003), a scheduled tribe (ST) member himself, was an Indian administrative officer (IAS)¹¹ and was the longest chairing District Collector of Raipur¹² in the yet undivided Madhya Pradesh state. He quit administrative services, joined politics and became the first Chief Minister of the Chhattisgarh. It is said that he understood the cultural behaviours and practices and was well aware of the health seeking behaviour of the people of Chhattisgarh. The RMA course was his brainchild as explained by another key informant interview subject who is a professor as well as a key actor within the Chief Minister's office placed in charge of the RMA course.

¹¹ Indian administrative service is the most coveted central administrative service and officers are referred to as bureaucrats in India. Beginning at the senior-most officer in the district, they may go up to the federal level as a Cabinet Secretary

¹² Now the capital of Chhattisgarh

“Mr Ajit Jogi was intellectual, brilliant and visionary. He was a voracious reader and was well aware of the developments in the field of health in India and elsewhere. He revived the concept of village health guide in the form of Mitanins¹³ within Chhattisgarh and gave it to the entire country. He envisioned addressing physicians’ unavailability through the establishment of a new cadre oriented for rural service.”

The intention of the policy of RMA was to address the shortage of physicians in rural health services, as it was also a political mandate for the government. The state government used its authority to take the decision to bring the new cadre. Although the state government did not have the necessary means and technical know-how to implement the new cadre of RMA, it moved ahead under the political leadership.

The policy of creating and training a new cadre of RMA was in alignment with international policies of addressing deficiency of trained human resources in health. Several countries in sub-Saharan Africa have similar cadres under the name of clinical officers, health assistants, nurse practitioners or health-post aids (Fulop, Roemer and Milton 1987; Mullan 2007; Huicho 2008). Yet, the concept of RMA failed to attract any support in India due to lack of evidence. Similar courses elsewhere in India were not studied scientifically and their utility and impact were not determined. These courses never entered into national policy. As mentioned by another key informant interview subject, an advisor to the Government of Chhattisgarh, on the issue of RMA not entering national debate:

“You know, in India, people go by statements and form opinions quickly without going into evidence. It is quite natural, this is the way we are; but it is changing.”

6.1.1 Gaps, limitations and inconsistencies

As we have seen in Table 4, the Chhattisgarh RMA course was implemented within a short span of one year. This is one of the main limitations in the policy development and implementation as no time was given for alliance building. But it was part of the design. Another area which is talked about is the delegation of opening and running the RMA colleges to the private-for-profit sector under public-private partnership (PPP)¹⁴ with limited

¹³ Mitanins are today more widely known as Accredited Social Health Activist (ASHA), the term used for this cadre under the National Rural Health Mission (NRHM)

¹⁴ PPP in medical education is a common trend in India and more than 49% of medical colleges are privately funded

regulation and control mechanism. This is evident in the scenario that initially it was decided to admit 100 students per batch but in reality 150 students were admitted in all six medical colleges opened so far. Privately funded RMA colleges faced problem of availability of teaching staff and had less infrastructure than required as per the standards. Another interviewee, a director of an RMA college said:

“We faced enormous difficulties in arranging teaching staff for RMA course. Most of the staff were general physicians who were preparing for post graduate course¹⁵ so they were just passing time here. Rest of the staff was arranged through district hospital clinicians.”

Another issue was the minimum package of remuneration to the teaching staff, which varied according to their experience. The most important gap was in the recognition of the diploma as mentioned by an interviewee, an RMA himself:

“During studies our main concern was the recognition of the diploma and our future after graduation as there was no carrier development plan in place.”

Despite all resistance, gaps and barriers, the RMA course took off and students were admitted for three batches till November 2003, when a new government took charge and stopped the admissions with immediate effect. As per the version of another interviewee, an officer in the health department of Chhattisgarh:

“There was no defect in the policy or vision. Course was derailed just because of opposition by MCI and IMA. But we could still implement smoothly and now we are in process of recruiting all graduate RMAs.”

As RMAs are now in the process of getting posted in different PHCs and CHCs as per the plan of government, it is necessary to know their views on the course, quality of education they received. In one of the focus group discussions conducted with RMAs it was opined that

“(...) at the time of admission we were given impression through the media that we will be posted as junior doctors to physicians in public health facilities but it came out to be false as the course progressed (...)”

On medical education, one of the opinions expressed was as follows:

¹⁵ In India, more than 50% medical graduates go for specialization

“(...) some colleges lacked the basic infrastructure and teaching staff and clinical teachings were not given due importance by the district hospital officers, who were given the mandate to teach us. We felt a bias or discrimination (...) being into three-year medical course.”

6.2 The Actors

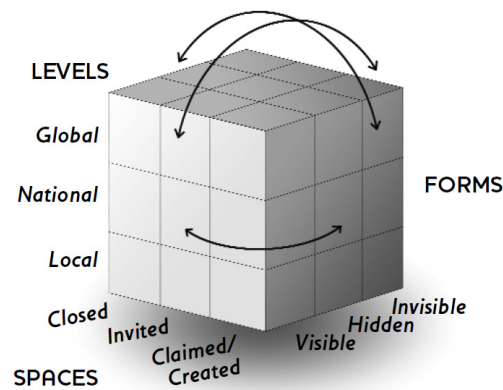
Identification of actors with regard to level of power and their position

There were many actors that affected the policy process through direct and indirect influence pertaining to their powers, interests, ideologies, personal experience and skills. These actors were:

- Politicians at central, state and local level;
- All relevant Ministry of Health agencies;
- The Medical Council of India (MCI);
- The Indian Medical Association (IMA);
- The judiciary;
- Leading actors in the private health sector;
- The RMAs themselves;
- Academicians/analysts/professional colleagues;
- Actors in the informal health sector;
- Private for-profit sector in health;
- Beneficiaries (direct, indirect, ultimate);
- The media;
- Others.

In the formulation of the policy of starting a three-year course there were three key actors; the state government, MCI and IMA. These three actors can be interpreted as representing the three different power levels in Gaventa's power cube (See Figure 6): the central Ministry of Health represented by MCI, the state government representing the power at state level, and the Indian Medical Association representing the power at district level.

Figure 6: Gaventa's power cube



Source: Gaventa (2006)

Stakeholder analysis with respect to power and interests shows that state government faced opposition from central government both in the form of MCI as well as from national politicians. At the time, the political party in power at the federal level was different from the one at power in the state. Other opponents were the state Ministry of Finance, IMA and the nurses' association. State government was powerful to the extent that it secured the agreement of the civil servants, bureaucrats and technocrats and engaged them in the dialogue through communication and meetings. Other stakeholders like medical professional bodies, workers' association, and community organisations were not engaged in the process of decision-making and actors like faith healers and workers' associations were not given any importance due to their lack of power. Community which has the power of electing a government can be considered as having invisible form of power. State government itself can be considered as elected representatives of the community and thus claimed its space in a closed form at state level.

Within the state government, the Ministry of Finance was initially opposed to the course because of a projected financial burden. This emerged in several meetings with the personnel from the health department. Considering this opposition, the Health Department identified the financial implications and chose to contract out medical training as well as co-opt bureaucrats from within the system on an honorary basis to the Chhattisgarh Chikitsa Mandal (CCM, Chhattisgarh Medical Board in English). The proposal eventually was approved by the Finance Department. This chain of events shows how a change in stance was brought about through the re-structuring of the RMA programme. Also, when there is a

broad political consensus, the departments tend to innovatively solve disagreements among themselves.

The private-for-profit sector also generated support for the government in the form of following the norms and conditions for the course and making speedy logistic arrangements for the initiation of the course.

The stance of the actors, either in opposition or in support, remained as such throughout the policy process till 2003. A new political government formed towards the end of the year 2003, composed by the party earlier in the opposition at the state level. At that time this party was also in power at federal level, which had earlier opposed the RMA initiative. This resulted in a changed stance of the new state government, and admissions were stopped. Two years later, in 2005, yet another change at the federal level brought back in the party that had started the course at state level. This complex web of interactions between forces at different government levels created an unstable future for the RMA initiative. However, a new actor was emerging in the form of course graduates demanding their right to work and public recruitment. Graduate students had support from a very strong actor in the form of the Court of Law, which played a hidden role in the power relationship as explained by Gaventa’s power cube. Judiciary does not claim its space *suo moto* but can make a big impact through its verdict once it is invited or involved through a public-interest litigation or a civil suit. Figure 7 explains the stakeholders with respect to power and their position.

Figure 7: Stakeholder analysis with regard to power and position/interest

		Position of the actor		
		Supporter	Neutral	Opposition
Power/leadership	High	State ministry of health Public service commission State assembly Ministry of education	Local politicians	Ministry of finance Medical council of India Opposite political parties Doctors’ association Central MoH
	Medium		Research/ training inst.	Nurses’ association Workers’ association
	Low	Community Private sector in health Media	Traditional healers International org.	Faith healers

6.3 Analysis of interrelationship of places, forms and level of power

The government being constituted by a clear political mandate with a majority in the legislature, there was no barrier to take up major reforms. However, the next elections were scheduled in just three years and hence one of the important reasons why the process of RMA was rushed through.

Through the Gaventa's power-cube framework, we see that the MCI claimed its space as a regulatory body. MCI has limited human resources (through membership only) but enormous powers and it abides by certain laid down rules and regulations. Initially there was an attempt from government to have dialogue with this key stakeholder but that did not prove enough as MCI maintained its position against such kind of courses. It discharged its powers and disapproved the RMA course based on the ethical issues of standards in medical training. Although there was no information about the need of the state, its context and evidence on usefulness of RMA like cadre. Stances of MCI as an institution and/or being led by a personal ideology are debatable. Recent information gives a reason for this debate on the grounds that MCI president was arrested for financial mal-practices (Chatterjee 2010). Further developments¹⁶ raise question marks on this coveted statutory body.

IMA also claimed its space through Court of Law by filing a civil litigation. The Indian Medical Association (IMA)¹⁷ is a voluntary and the only representative organisation of physicians. Its role is to protect the interest of its members, looks into ethical practices and conduct of physicians as well as its societal obligations. It has been the classical opponent of any course which can affect the interest of physicians therefore the stand of IMA was anticipated. Claiming the power in this form at national and local level did not deter the state government from going ahead. It modified however the future of the course. MCI's refusal of recognition and the involvement of judiciary forced the government to change and re-name the course title again and again, thus loss of credibility for both the RMA course and the state government. This gave enough reason to the oppositional political parties to create more resistance to the RMA course and to gain political mileage out of it. Nearing general elections forced the government to divert attention from the RMA course.

¹⁶ The President of India dissolved the MCI on account of corruption charges on President of MCI. Available from Zee news <http://www.zeenews.com/news626922.html> Accessed on 16th May 2010

¹⁷ IMA was founded in 1928. it has its branches in all the districts of India, registering more than 178,000 physicians as members

With regards to bureaucrats, they have higher status in the level of powers. Bureaucrats are planners, advisors and implementers of policies and claim their space in the decision-making. They work in tandem with politicians and execute the political ideologies of a government. They have visible form of power in policy-making but after its implementation it becomes hidden as it takes the name of political government.

Eventually students emerged as powerful actors at local level and claimed space in the policy process. Their growing demands to recognise the course and assurance for the public service played a visible form of power in modulating the policy.

The media played an important role in agenda setting and influenced the power relationships among all the actors. It changed its stand with the change of government and acted swiftly in favour of ruling government.

6.4 Agenda setting for the policy development

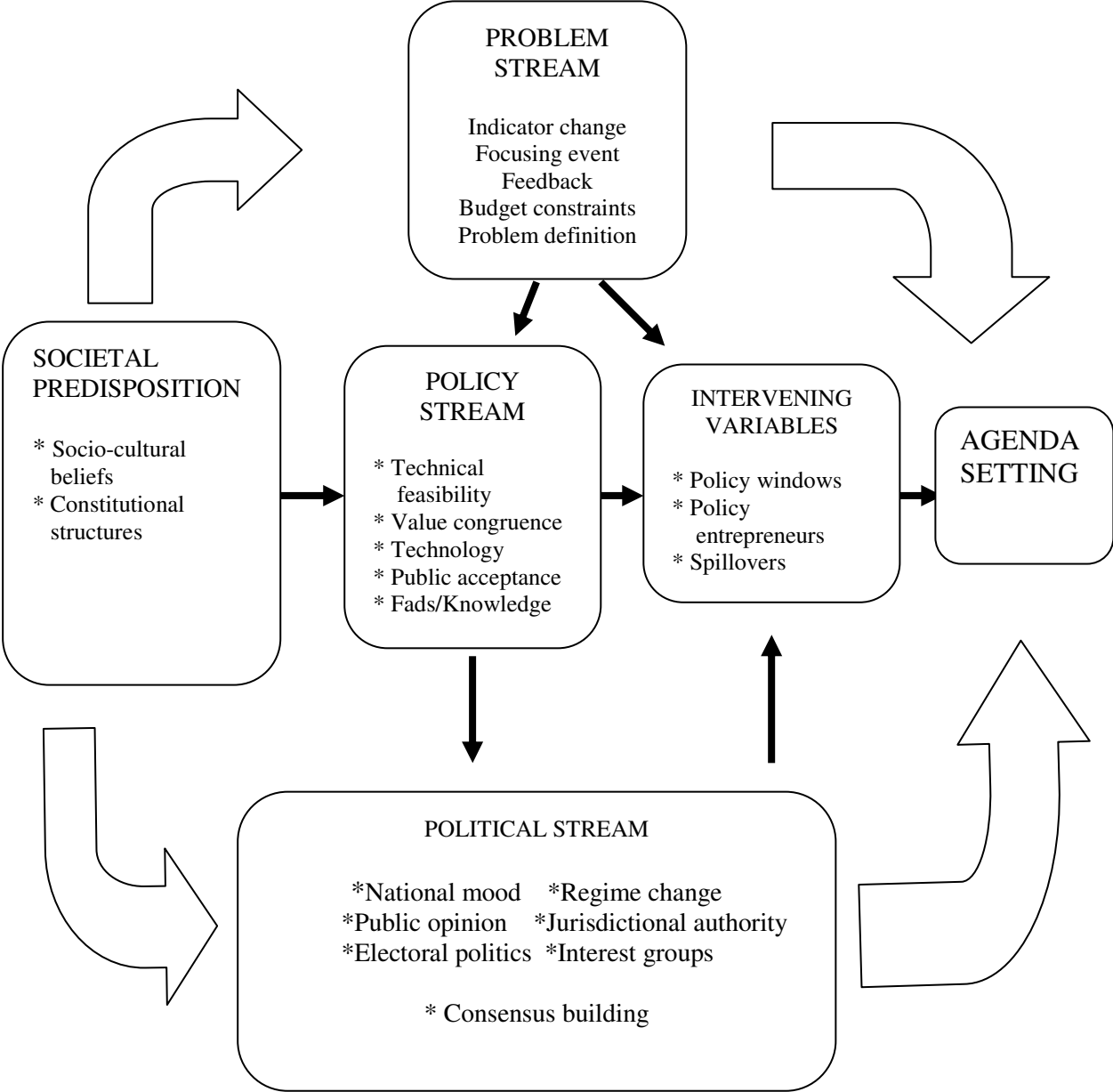
Policy options for the government were many but the time left with the government as a ruling party was only three years before next general elections. Agenda setting for RMA course development can be analysed by using the model of Kingdon (2001) model of agenda setting (see Figure 8).

The political stream had a dominant role in the agenda setting of the RMA course. Public opinion about the public health services was very poor due to poor infrastructure in health and human resource deficiency in all tiers of health care delivery. Also, being a democratic government it was a mandate of the public authority to look into ways and means to provide quality health care within shortest possible time.

Societal predispositions were strong as 89% of the population was underprivileged (scheduled tribes, scheduled castes and backwards). Faith healers were the first point of contact for medical advice and this was compounded by lack of physicians in PHCs & CHCs. Although the RMA course was hardly technically feasible, the policy stream did not have much role in the agenda setting as the same course was not being in practice in any state. There was no experience of such policy implementation but public support was there as it was projected that within 3 years all the health facilities will be filled by physicians. The Chief Minister himself was actively involved in the policy development and acted as 'policy entrepreneur'. Even with budget constraints and negative feedbacks from IMA and MCI,

government decided to move ahead for the development of RMA course with a vision to produce enough RMAs to be available at all the health facilities within a short span of time, preferably before next general elections.

Figure 8: Kingdon’s model of agenda setting



Source: Kingdon (2001)

As expected many students with biosciences as a subject in higher secondary applied for the course and were admitted in the colleges after interview against the vacant seats. Roughly

9,000 applications were received for the first batch¹⁸ and in total 2,200 students were inducted over three years in the assigned six RMA colleges.

RMA course started in October 2001 amidst all the events and preparations were done simultaneously to prove it successful. A committee of three members comprising of experts in the field of public health and medicine approved the course curriculum. Table 5 details the RMA course curriculum.

Table 5: Curriculum of three-year course

Batch	Subjects	Content description
First year	Anatomy, physiology and biochemistry	Teaching methodology based on demonstrations, lectures & practical
Second year	Pathology, microbiology, pharmacology & social & preventive medicine	Teaching methodology based on demonstrations, lectures & practical with emphasis on National Health Programmes and common diseases. Focus on family medicine
Third year	Medicine (paediatrics included), surgery, obstetrics & gynaecology, oto-rhino-laryngology, ophthalmology and orthopaedics	Teaching methodology based on demonstrations, lectures & practical with other subjects of alternative medicine. Symptomatic and syndromic approach for the practice of medicine, minor surgical procedures. Focus on family & community medicine

Source: Chhattisgarh State Health Resource Centre 2010

Although it was initially decided to start the course with three colleges only, six colleges were opened within a span of six months. All were privately funded colleges. Table 6 gives details about the location and number of students passed out of each college.

¹⁸ State Health Resource Centre, Chhattisgarh. 2010. Information on RMA course. [letter] (Personal communication, 4 April 2010)

Table 6: Location and number of students passed out from RMA colleges

Name of the institute	District	Number of students (completed the course)
Anusha Memorial Medical Institute	Bilaspur	264
Biken Institute of Medical Science	Kanker	200
Ma Bambleshwari Medical Institute	Kawardha	229
Shri Kedarnath Institute of Medical Science	Korba	180
Balgangadhar Tilak Institute	Jagdalpur	308
Mahrishi Ashtang Medical Institute	Sarguja	210
Total		1,391

Source: Chhattisgarh State Health Resource Centre 2010

The government changed the name of the course repeatedly to avoid legal problems. This created uncertainty in the mind of students and they went on strikes thrice with the demand of legalisation of the diploma by the State Medical Council. This caused repeated interruptions in the studies and examinations were delayed by many months. Table 7 gives an overview of these delays.

Table 7: Timeline of all the batches from admission to passing out

Batch	Year of admission	Pass out examination	Delay (if any)
First batch	November 2001	January 2006	14 months
Second batch	November 2002	February 2007	15 months
Third batch	November 2003	October 2007	11 months

Source: Chhattisgarh State Health Resource Centre 2010

Finally all the batches got passed out by October 2007 and went for one year of internship: One month in SHC, three months in PHC, four months in CHC, and four months in district hospitals. Institutional structures within NRHM have decentralized the decision-making process to states in their programme implementation plan (PIP)¹⁹. This gives freedom to the state to make their own policy plan in alignment of federal government guidelines and this

¹⁹ At state level 30% of funding in health comes from federal government and each state is expected to submit its yearly PIP to NRHM, MoH

includes recruitment of trained human resource on contractual basis. Till recently, 858 RMAs were recruited under NRHM at remuneration of US\$ 180 (INR 8,000) per month, as against US\$ 340 (INR 15,000) per month for medical doctors. The proposal got approval both NRHM and the State Ministry of Finance as it was not seen as a financial burden for the state government. Even in the worst scenario of ceasing the fund from NRHM, state finance budget would be able to take up this activity.

A bond was signed by all RMAs prior to rural postings to practice in rural areas only and not indulging into private practice out of their place of jurisdiction. To start with all the remote rural PHCs were filled with male RMAs. Females were posted in CHC only, considering their security and other factors. Gradually government planned to post all the RMAs in the entire state. Table 8 summarizes the posting in different districts and levels of health facilities.

Table 8: Postings of RMAs in different districts of the state of Chhattisgarh

District	Classification of district*	Sanctioned post	Posted at PHC	Posted at CHC	Total
Bijapur	Difficult	17	14	3	17
Bilaspur	Normal	82	74	10	84
Dantewada	Difficult	30	28	02	30
Dhamtari	Normal	26	23	03	26
Durg	Normal	86	72	14	86
Jagdalpur	Normal	67	58	09	67
Janjgir	Normal	48	39	09	48
Jashpur	Normal	38	31	07	38
Kanker	Difficult	38	34	04	38
Kawardha	Difficult	26	22	04	26
Korba	Normal	41	37	04	41
Koriya	Difficult	31	28	03	31
Mahasamund	Normal	30	26	04	30
Narayanpur	Difficult	09	07	02	09
Raipur	Normal	81	63	18	81
Raigarh	Difficult	57	50	07	57
Rajnandgaon	Normal	51	47	04	51
Surguja	Difficult	98	81	17	98
Total		858	734	124	858

*Based on infrastructure, extremist affected & topography

Source: Chhattisgarh State Health Resource Centre 2010

With only one year of service delivery by RMAs in health facilities, it is very early to comment on their performance. One study is already available, conducted by Rao, Sundararaman and Jain (2010). This study compares the performance of RMAs against physicians, paramedical and ISM practitioners with respect to different variables like history-taking and physical examination and correctness of prescription. The study results demonstrate no significant difference between the performance of RMAs and that of other physicians. In fact RMAs are better than others in some areas. Table 9 summarizes the results.

Table 9: Comparison of performance of RMAs with other health staff with regard to different variables

	RMA	Physician	ISM practitioner	Paramedical
Correct History Taking	43% (2,418)	44% (2,170)	32%*(2294)	25%*(2,170)
Correct Examinations	40% (1,521)	42% (1,365)	29%*(1443)	21%*(1,365)
Correct Investigation	80% (117)	81% (105)	75% (111)	61%*(105)
Correct Diagnosis	86% (234)	86% (210)	66%* (222)	54%*(210)
Prescriptions (non-harmful)	61% (156)	61% (140)	51% (148)	33%*(140)
Home care	37% (1,287)	37% (1,155)	31%* (1221)	26%*(1,155)

* Significantly different from medical officer at α 0.05

Source: Rao, Sundararaman and Jain (2010)

Although RMAs are being posted in different health facilities but they have their own perceptions about the services and working conditions. One RMA opined during group discussion:

“(...) this is a good platform for us to practice (...) out-patient consultations have increased after our posting (...). We want to serve in the rural areas but there is still resistance from other co-workers being a three-year course graduate (...) not all but majority of staff don’t respect and listen to us.”

Another RMA in the same group discussion said:

“ If salary structure and disrespect continues then it would be difficult for us to continue in the services.”

7.0 Synthesis and lessons learnt

In continuation with description, analysis and discussion of Chhattisgarh's RMA, I will now summarize my understanding of the policy process to date. From there I will derive recommendations for the future. The latter aims at answering the need of a changing context. Indeed, as of 2010, setting up an RMA cadre is no longer a matter of a solitary state or few states like Chhattisgarh, West Bengal or Assam. On 4th February 2010, the Union Minister of Health and Family Welfare announced the Government of India's proposal to launch a three-and-a-half year course for Bachelors of Rural Medicine and Surgery (BRMS). In this new context, contributing to evidence-informed decisions seems a righteous aim.

We have seen how a health-policy issue got prioritized in the agenda of the government. Priority for a specific health-policy option (RMA in this case) and its path-dependence was based on political vision and ideologies of different ruling parties at different points of time. Equally noteworthy are the polarity of powers and the change in stance of different governments with respect to the particular health-policy issue (shortage of physicians) at various points in time. Medical education is one of the noble professions and an opportunity for societal recognition and status. It was necessary and essential that bureaucrats formulated and laid down regulations and control, taking into account that training was privately funded. The effect of media in agenda setting and in attracting young students was important for the success of the course. The change in stand of media with the change of government – and its impact – illustrate the role of media as powerful actor. As regarding policy implementation, we have noted that working conditions and enabling environments have not changed, despite filling all the posts with RMAs. Conflict of interest and street-level bureaucracy is getting reflected in the interaction, job delegation and routine works.

Eventually, we arrive at a series of lessons learnt, potentially relevant for consolidation of the course in Chhattisgarh and for scaling up or spreading out elsewhere in India:

1. Policy making is a complex issue. Policy is all about politics and political commitment is required for reforms or change in existing situations in health.
2. Policy making is a consultative, participatory process which builds on available evidences on a particular health policy issue in a particular setting, each having an impact on the process itself.

3. Intersectoral co-ordination is necessary for successful design, planning and implementation.
4. It is necessary to do stakeholder analysis with respect to their power, position and potential to affect the policy.
5. In health systems, human resources and health service provisions are not mutually independent therefore a clear and comprehensive policy plan is necessary to address an issue like shortage of physicians in rural health services.
6. Health-system performance is dependent on the relationship between actors and context. Therefore physical filling of spaces with human resources is not expected to work unless enabling environments are achieved also.
7. As the health systems are changing rapidly, human resources planning should be flexible and responsive to the needs of the country or regions. It should be relevant and valid for the context.
8. There should be sufficient balance between plan and implementation.
9. Health care is labour intensive. Therefore human resources planning should be short-term, medium and long-term, formulated and reviewed for its purpose, strengths and weaknesses as well as opportunities seized and threats to cope with. Issues like the future carrier pathways, salary structure and continuing medical education are three important areas to be looked into.

8.0 Conclusions

Retention of physicians in rural areas is a challenge for many countries. Different strategies can and have been applied in different settings. Policy development is largely influenced by context, and political commitment largely defines which policy option gets on the agenda. Political commitment is necessary but not sufficient to convert the agenda into action.

The Government of India has now proposed to launch a three-year BRMS course and spread it across the country to fill deficiency of human resources in health. The Chhattisgarh RMA process provides evidence that successful policy implementation depends on appropriate planning, taking into account the dynamics of context, actors, and content. Indicating the need for comprehensive planning beyond short-time crisis management and gap filling, the Chhattisgarh RMA experience offers Government of India a path to live up to its commitment. Enabling the living and working environment, participatory planning and continual context-specific assessment are all key elements of sustainable solutions. It is up to government to act wisely now.

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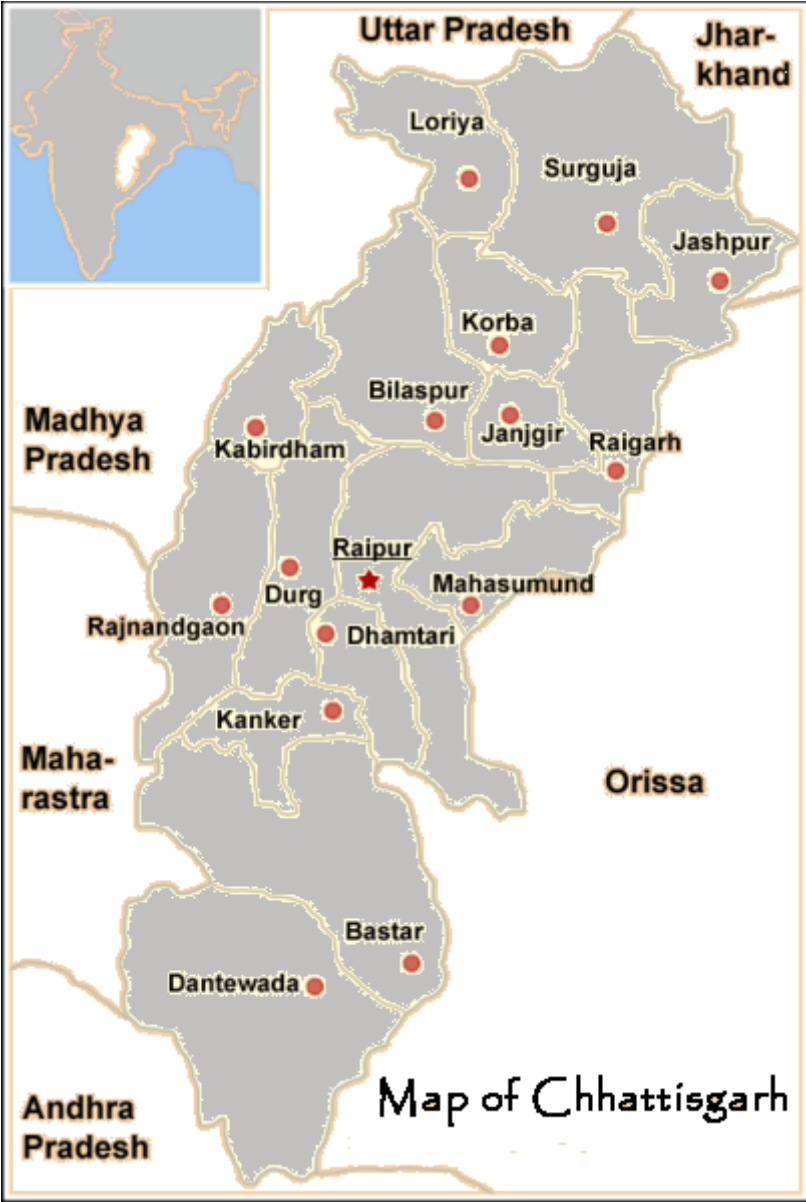
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Annex A: Map of Chhattisgarh



Annex B: List of interviewees

Key stakeholders (past and present) were identified. Consent was taken from them through e-mail and interviews and a focus group discussion was conducted through skype video conferencing and phone. The basic purpose of conducting interviews was to know the stakeholders' versions and opinions, in order to arrive at a comprehensive understanding of the policy process. Interviews were semi-structured and each interview was held for minimum 30 minutes.

Following is the list of stakeholders and topics covered during interview;

1. Ex. Director of Health Services
2. Director, State health resource centre
3. Deputy director of health services
4. Director, RMA college
5. Ex OSD (officer on special duty) and Professor & Head, department of public health, Medical college
6. Nodal officer, RMA, directorate of health services
7. Senior programme co-ordinator, State health resource centre
8. Programme assistant, RMA programme
9. RMAs – 5 in numbers
10. Licentiate medical Practitioner (Retired from District leprosy officer)
11. A politician from Congress party- previous ruling party at the time of RMA
12. A politician from Bhartiya Janta party (BJP)- present ruling party

Functions of the interviewees

1. Ex. Director Health services: Technical Head of the health department of the state. Looks into administration and responsible for all the health and family welfare activities [interviewed on 25th February 2010]
2. Director, State health resource centre: Provides support to government of Chhattisgarh and directorate of health in all the technical matters such as policies, plan, implementation, monitoring and evaluation etc. [interviewed on 15th May 2010]
3. Deputy director of health services: deputy of the director and in-charge of the programme and activities delegated by the director [interviewed on 10th March 2010]
4. Director of RMA college Bastar and Kanker district: In-charge for all the infrastructure and logistic management for the RMA course including staff recruitment [interviewed on 20th May 2010]
5. Head of the department of public health and ex-officer on special duty to the Chief Minister: He was responsible for co-ordination with various department,

implementation of RMA course, monitoring of the standards and regulation[Interviewed on 20th May 2010]

6. Nodal officer for RMA programme, Directorate of health services: responsible for RMA postings, administrative issues and monitoring of RMAs performance [Interviewed on 15th May 2010]
7. Senior Programme Co-ordinator, State Health Resource Centre: provides technical assistance to the government and directorate of health services [Interviewed on 10th February 2010]
8. Programme Assistant (an RMA himself), RMA programme, State health resource centre: looks into the matter pertaining to training of RMAs [Interviewed on 30th March 2010]
9. RMAs focus group discussion 5 in numbers: posted in various health facilities and discharging their duties [FGD conducted on 20th May 2010]
10. LMP, Retired District leprosy officer: worked as a civil servant in the state of Madhya Pradesh [Interviewed on 15th February 2010]
11. A politician representing the Congress party who was in power at the time of implementing the RMA course [Interviewed on 25th March 2010]
12. A politician representing the present ruling Bhartiya Janta Party (BJP) [Interviewed on 30th March 2010]

Annex C: Chhattisgarh Chikitsa Mandal Act

छत्तीसगढ़ राजपत्र, दिनांक 18 मई 2001

198 (13)

सूचिका
पेजल

CHHATTISGARH BILL (No. 7 of 2001)

THE CHHATTISGARH CHIKITSA MANDAL VIDHEYAK, 2001

TABLE OF CONTENTS

Clause :

CHAPTER-I PRELIMINARY

1. Short title, extent and commencement.
2. Definition.

CHAPTER-II ESTABLISHMENT AND CONSTITUTION OF THE CHHATTISGARH CHIKITSA MANDAL

3. Establishment of Mandal.
4. Constitution of Mandal.
5. Disqualification from membership.
6. Term of office of nominate and elected members of Mandal.
7. Resignation by nominated or elected member.
8. Disabilities for continuing as member of Mandal.
9. Filling of casual vacancy.
10. President and Vice-president of Mandal.
11. Conduct of business to be as per Rules.

CHAPTER-III POWERS AND FUNCTIONS OF BOARD

12. Powers and functions of Board.

CHAPTER-IV PRACTITIONER IN MODERN MEDICINE AND SURGERY SCHOOLS AND RECOGNITION

13. Minimum standards of Practitioner in Modern Medicine and Surgery Education.
14. Permission for establishment of new Practitioner in Modern Medicine and Surgery Schools, new courses of study etc.,
15. Non recognition of qualifications in certain cases.
16. Power to require information.
17. Inspection of Practitioner in Modern Medicine and Surgery Schools.
18. Withdrawal of recognition.

CHAPTER-V SECRETARY AND OTHER OFFICERS AND SERVANTS

19. Secretary and other officers and servants of Board.
20. Duties of Secretary.

CHAPTER-VI FUND OF MANDAL

21. Fund of Mandal.
22. Purposes for which the fund of the Mandal may be utilized.
23. Accounts and Audit.
24. Budget.

Clauses :

**CHAPTER-VII
REGISTRATION AND STATE REGISTER**

25. Registration and State Register.
26. Power of Board to prohibit entry in, or to order removal from, State Register name of any person.
27. Alteration of State Register.
28. Procedure in inquiries.
29. Appeal against order of Mandal.
30. Prohibition on practice except as provided in this Act.

**CHAPTER-VIII
RULES AND REGULATIONS**

31. Power to make rules.
32. Power to make regulations.

**CHAPTER-IX
MISCELLANEOUS**

33. Penalty for dishonest use of certificate.
34. Cognizance of offence.
35. Information to be furnished by Mandal.
36. Power to amend schedule.
37. Control by State Government.

SCHEDULE.

CHHATTISGARH BILL
(No. 7 of 2001)

THE CHHATTISGARH CHIKITSA MANDAL ADHINIYAM, 2001

A bill to provide for the establishment of a Chikitsa Mandal in the State to regulate Practitioner in Modern Medicine and Surgery Education, and the practice by Practitioner in Modern Medicine and Surgery Practitioners.

Enacted by the Chhattisgarh Vidhan Sabha in the Fifty Fourth year of the republic of India as follows :-

CHAPTER-I
PRELIMINARY

(1) This Act may be called the Chhattisgarh Chikitsa Mandal Adhiniyam, 2001.

Short title, extent and
Commencement.

(2) It extends to the whole of Chhattisgarh.

(3) It shall come into force on such date as the date as the State Government may, by notification appoint, and different dates may be appointed for different areas.

2. In this Act, unless the context otherwise requires,

Definitions.

(a) "Mandal" means the Chhattisgarh Chikitsa Mandal under section 3,

(b) "State Register" means a register maintained under this Act and expression "Registered" and "Registration" shall be construed accordingly.

(c) "Medicine" means modern medicine in all its branches and includes surgery and obstetrics, but does not include veterinary medicine and surgery.

(d) "Recognized qualification" means any of the qualifications specified in the schedule.

(e) "Registered Practitioner" means any person enrolled on the State Register under the provisions of this Act,

(f) "Regulation" means a regulation made under section 32.

(g) "Practitioner in Modern Medicine and Surgery" means a person who has been granted the certificate of Practitioner in Modern Medicine and Surgery, and who practices medicine.

CHAPTER-II
ESTABLISHMENT AND CONSTITUTION OF THE CHHATTISGARH CHIKITSA
MANDAL

(1) The State Government shall, as soon as may be establish by notification, the Chhattisgarh Chikitsa Mandal from such date as may be specified therein.

Establishment of the
Mandal.

(2) The Mandal shall be a body corporate by the name of the Chhattisgarh Chikitsa Mandal, and shall have perpetual succession and a common seal with power to acquire and hold, property both moveable and immoveable and subject to the provisions of this Act, to transfer any property held by it, and to contract, and do all other things necessary for the purposes of its continuation, and may sue and be sued in its corporate name.

(1) The Mandal shall consist of the following members, namely :-

(i) Five members elected from amongst them selves by persons enrolled on the State Register.

Constitution of the
Mandal.

Provided that in case of the constitution of the Mandal for the first time after the commencements of this Act the members under this category shall be nominated by the State Government, and such nominees may not be enrolled on the State Register.

- (ii) Five members to be nominated by the State Government as follows :—
- One representative on the Indian Medical Association, Chhattisgarh State Branch out of a Panel of five persons to be proposed by the State Branch of the said association.
 - One member from amongst the members of the Medical Faculties of the Universities in the State.
 - Two members from amongst the members of Chhattisgarh Government Health Service holding Group A post out of whom one shall be a lady doctor.
 - A Dean of one of the Medical Colleges of the State.
- (iii) Director Health Services Chhattisgarh.
- (iv) Director Indian Systems of Medicine, and Homeopathy, Chhattisgarh.

(2) The name of every person elected or nominated shall be published in the official Gazette, and members shall enter and shall for the purposes of their term be deemed to have entered upon their respective offices with effect from the date of such publication.

5. A person shall not be qualified for being nominated or elected as a member of the Mandal, if :—
- He is not a citizen of India; or
 - He is an undischarged insolvent; or
 - He is of unsound mind and stands so declared by a competent court; or
 - He has been sentenced for an offence involving moral turpitude; or
 - He is an employee of the Mandal, and is remunerated by salary or honorarium; or
 - His name has been removed from the State Register.

Disqualification for Membership.

6. (1) Save as otherwise provided in this Act, all elected and nominated members shall hold office for a term of five years from the date they enter upon their office as provided in sub-section (2) of section 4.

Term of office of Nominated and Elected members of the Mandal.

Provided that the members nominated under proviso to clause (i) of sub-section (1) of section 4 shall hold office till the elected members have entered their offices, and the members so elected shall continue to be in office for the un-expired term of nominated members under clauses (ii) of sub-section (1) of section 4.

- (2) Notwithstanding the expiration of the term specified under sub-section (1) the outgoing member shall continue in office till the nomination or election, as the case may be, of his successor.

7. The nominated or elected member of the Mandal may at any time resign from his office in such manner as may be prescribed by the regulations.
8. (1) If any member other than ex-officio member of the Mandal during the period of his office:—
- absents himself from three consecutive meeting of the Mandal without permission of the Mandal; or
 - is absent out of India for a period exceeding twelve consecutive months; or
 - becomes subject to any of the disqualifications specified in section 5; or
 - ceases to be registered practitioner under any Act for the time being in force.

Resignation by Nominated or Elected Member.

Disabilities for continuing as Member of the Mandal.

The Mandal shall declare his office as vacant;

Provided that no declaration shall be made under this sub-section unless a reasonable opportunity of being heard is given to the member concerned.

CHHATTISGARH ACT
(No. 9 of 2007)

THE CHHATTISGARH CHIKITSA MANDAL (SANSHODHAN) ACT, 2007

An Act further to amend the Chhattisgarh Chikitsa Mandal Adhiniyam, 2001 (No. 7 of 2001).

Be it enacted by the Chhattisgarh Legislature in the Fifty-eighth Year of the Republic of India, as follows :—

1. (1) This Act may be called the Chhattisgarh Chikitsa Mandal (Sanshodhan) Adhiniyam, 2007. **Short title and Commencement.**
(2) It shall come into force from the date of its publication in the Official Gazette.
2. In Section 2 of the Chhattisgarh Chikitsa Mandal Adhiniyam, 2001 (No. 7 of 2001) (hereinafter referred to as the Principal Act) :— **Amendment of Section 2.**
For clause (c), the following clause shall be substituted, namely :—
“(C) “Medicine” means, Modern and Holistic Medicine and all its branches.”
3. In the Principal Act and its Schedule wherever the words “Practitioner in Alternative Medicine” occur, they shall be substituted by the words “Practitioner in Modern and Holistic Medicine”. **Substitution of certain words in Principal Act.**

Annex D: Medical/surgical interventions permitted to be carried out by RMA

Source: Directorate of Health Services, Government of Chhattisgarh

Common medical conditions permitted for treatment by RMA

- 1) Febrile illness, diarrhoeal diseases, upper respiratory infections, acute bronchitis, malaria, amoebiasis, giardiasis, worm infestations, gastroenteritis, cholera, typhoid fever, vitamin deficiencies, iron deficiency anaemia, malnutrition, bronchial asthma, first aid in ischemic heart disease, acute gastritis, viral hepatitis, urinary tract infection, common skin infections, scabies, first aid in trauma, and animal bite.
- 2) In children treatment before convulsion, measles, chicken pox, asthma, scabies and other common skin infections.
- 3) Antenatal and postnatal care
- 4) Follow up in treatment diseases initiated by Medical Officers of CHC and PHC.

Surgical and obstetric procedures permitted to be carried out by RMA

- 1) Repair and dressing of small wounds, drainage of abscess; burn dressing, applications of splints in fracture cases, application of tourniquet in case of severe bleeding wound in a limb injury.
- 2) Conduction of normal delivery, emergency management of complications of pregnancy and childbirth, suturing of 1st degree perineal tears.
- 3) Follow up of all National Health Programmes in Coordination with the BMO.

Drugs permitted for prescription by RMA

- 1) Antacids, H₂ receptors blockers, proton pump inhibitors, antihistaminics
- 2) Antiamoebics: metronidazole, tinidazole, dooloxanide furoate
- 3) Antiscabies: benzyle-benzoate, gama benzene hexachloride
- 4) Topical antifungal
- 5) Anticholenergic: dicyclomine
- 6) Antiemetics
- 7) Antipyretics and analgesics
- 8) Laxatives
- 9) Oral rehydration solutions
- 10) Hematinics and vitamins
- 11) Bronchodilators: salbutamol, theophyline, aminophyline, expectorants

- 12) Antibiotics: cotrimoxazole, trimethoprim, norfloxacin, quinolones, tetracycline, gentamycin, cephalosporin, erythromycin, nitrofuratoin, metronidazole, tinidazole, ampicillin
- 13) Antitubercular drugs: INH, rifampicin, ethambutol, pyrazinamide
- 14) Anti-helminthics : mebendazole, albendazole
- 15) Antimalarials: chloroquine, quinine, primaquine, sulfadoxine-pyrimethamide,
- 16) Antileprosy: dapsone , rifampicin, colfazimine
- 17) Antivirals
- 18) Oral contraceptives
- 19) Gentian violet 1% solutions
- 20) Xylocaine local
- 21) Methylergometrine tablets
- 22) Mehylergometrine injections (for post-partal haemorrhage)

Note

Linkages with communities to increase the service delivery

Regular meeting with the peripheral staff

Certain emergency drugs can be given before referral

Referral of all sick patients after initial management

Procedures not to be performed by RMA

Medico-legal cases

Post-mortem