Evaluation of Chhattisgarh Rural Medical Corps (CRMC)

FINAL REPORT
2013

National Health Systems Resource Center ,
State Health Resource Center and Public Health Resource Society

Evaluation of Chhattisgarh Rural Medical Corps

Conducted by the National Health Systems Resource Center (NHSRC), State Health Resource Center (SHRC) and Public Health Resource Society (PHRS), Chhattisgarh

RESEARCH TEAM

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ACKNOWLEDGEMENT

Dr. Dilip Singh Mairembam, Advisor (HRH), NHSRC and the **Research Team** thank the Secretary, Ministry of Health & Family Welfare and the Additional Secretary cum Mission Director, National Rural Health Mission for giving the National Health Systems Resource Center (NHSRC) the opportunity to undertake the evaluation study of Chhattisgarh Rural Medical Corps (CRMC) in Chhattisgarh.

The Research Team consisted of **Dr. Suchitra Lisam** (Sr. Consultant, HRH) of NHSRC**, Ms. Sulakshana Nandi** (State Convenor) and **Miss Kanica Kanungo (**Programme Coordinator) of PHRS-Chhattisgarh, **Mr. J.P Mishra**, Executive Director and **Mr. Premshankar Verma,** Programme Coordinator of SHRC, Chhattisgarh**.** The Team developed the study protocols and tools, undertook field visits, conducted data analysis, drafted report, provided recommendations and take the responsibility for the interpretations and views expressed herein.

We thank **Dr. T. Sundararaman, Executive Director, NHSRC** for providing invaluable inputs to the study and the NRHM (State Programme Management Unit), Chhattisgarh for extending their support during the study. We are also grateful to the District and Block Programme Management Units of Gariyaband, Jashpur and Kanker districts for providing the necessary data and information. Most importantly, we thank all the respondents of our study who took out time to respond to all our queries and shared with us their experiences, views and opinions. We would also like to express our deep appreciation for the health workforce; the doctors,

nurses, ANMs, MPWs, Lab technicians, RMAs, BPMs and others, working in these challenging areas.

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EXECUTIVE SUMMARY

India has been facing the challenge of shortage of skilled and trained medical personnel, especially in the rural areas of the country where much of the professional cadre is reluctant to work. Governments have adopted various strategies to motivate and retain staff in these areas. One such scheme, the Chhattisgarh Rural Medical Corps (CRMC) was developed by the Department of Health and Family Welfare, Chhattisgarh and the National Rural Health Mission in 2009 to respond to the critical gap in human resources in the state. Under the scheme, health facilities are categorized into three zones according to difficulty levels and various incentives, including financial and extra marks for P.G. admission, are provided for each level.

The aim of this evaluation study that has been undertaken jointly by the National Health Systems Resource Centre (NHSRC), Public Health Resource Society (PHRS) and State Health Resource Centre (SHRC), Chhattisgarh, was to evaluate the implementation and impact of CRMC in Chhattisgarh. The main objectives were to study and document the process of implementation of CRMC, assess its impact of in improving the availability of human resource in these areas, identify the gaps and give recommendations. The study was a mix of quantitative and qualitative research, which included analysis of data and information pertaining to the CRMC scheme and a closer case study of three districts, Gariyaband, Jashpur and Kanker.

Positive impact of CRMC in addition and retention of work force in difficult areas: CRMC has played a role in addition and retention of staff in difficult areas. More than half of the respondents had joined only after CRMC was introduced and for most the extra financial incentive was an important reason for not wanting to shift out. Receiving extra marks for PG is another motivational element that has helped in retention of staff in these areas. However, a number of gaps were identified in the implementation and management of the scheme that need to be corrected for the scheme to make a bigger impact.

Irregular payments and non-payments affecting morale of the beneficiaries: There is no system functioning to track the regularity of payments or respond to grievances related to it. This is creating an additional challenge for the staff, and giving rise to resentment.

Inadequate publicity about CRMC: Most people, when they join the health department, are not aware of CRMC. CRMC as a scheme has not been advertised widely. This has hugely limited the impact of CRMC in increasing HR in difficult areas.

Weak Monitoring and Grievance Redressal systems: Documentation and monitoring systems under the scheme are weak both at the state and district levels. The state and district leadership for CRMC are quite non-responsive to any of the grievances and redressal of grievances was inconsistent and did not follow a system.

Performance indicators not adequately capturing Health Workers' performance: The parameters laid down as performance indicators for CRMC benefits evaluate the individual through the functioning of the heath facility she/he is posted in and therefore it does not adequately capture the workload or performance of the health staff. It also does not take into account the availability of support like adequate staff, and regular supply of medicines and consumables, required for effective functioning of the facility. There are inconsistencies in the way the parameters are designed and the types of services that are supposed to be provided at the various levels. Moreover, the HR available and planned to be made available at the various levels does not seem to go in tune with the parameters laid down. The system of appraisal as it currently stands, seems to make the individual responsible for whole system, which seems to be unjust.

Initial design made comprehensive but in implementation its scope was substantially decreased and limited to being a financial award scheme: The initial design of the CRMC included additional non-financial incentives like insurance, educational benefits for children, housing however, in its implementation the scheme was limited to providing financial incentives and certain advantage for entry into PG. Though the financial incentives have led to retention of staff, non-provision of facilities like housing, education facilities for children, transport and insurance has affected the morale of the staff in the CRMC areas. This may also be one of the reasons for people not finding CRMC attractive enough to join.

Issues in Grading of facilities: The grading of facilities has been undertaken twice, however, no periodicity has been fixed for modification of grading. In the second round of grading, though the number of facilities under CRMC decreased, the increase in categories to difficult, most difficult and inaccessible, helped in more rigorous targeting of facilities. Certain anomalies in grading that were pointed out by the districts did not translate into modification of the list. Inconsistencies in classification of facilities have also been seen based on accessibility criteria.

Lack of support facilities leading to demotivation and challenging work environment: The working environment still remains very challenging in most of the CRMC areas and this remains a serious concern for the state if it wants to reap the benefits of CRMC.

Reduced payments of RMAs demoralizing: Since 2012 the CRMC incentives for RMAs have been reduced from Rs. 8000 in most difficult areas to Rs. 5000. At a time when incentives have been increasing for the rest of the categories, this move is very demoralizing to the RMAs.

Recommendations

a) Establishment of functional CRMC Cells and Grievance Redressal Committees- The State Nodal office has to be made functional. A CRMC Cell along with a Grievance Redressal Committee may be established in order to provide support to her/him and facilitate regular monitoring and grievance redressal at various levels. The implementation needs to be regularly reviewed by the state leadership.

b) Formulation of CRMC Operational Guidelines- Operational guidelines on CRMC need to prepared, that puts together the strategies and outlines the pathways to solve the various problems being encountered by the beneficiary and the block or district health management team.

c) Creation of a CRMC database and ensuring timely disbursal of incentives- A database needs to be created and maintained of all staff under CRMC along with regular updated information on their receiving the incentives.

d) Revision of the System of Grading of Facilities- The state should review the difficulty gradient of facilities at different levels every 3 years. The District Collector could lead the process and if changes are required to current lists, they could indicate the reasons for same.

The principle should be that the state would specify from each district the percentage of facilities that could qualify for each of the three difficulty levels and it is left to the district to choose which facilities they would prioritize for each difficulty levels. Thus, in a moderately difficult district, 10% of the facilities could be considered inaccessible; 20% difficult and 40% most difficult. In an easy district, it could be just 10% as most difficult, 20% as difficult and none as inaccessible. In the most difficult district (e.g. Bijapur); even 20% could be inaccessible; 30% most difficult and remaining 50% difficult (exact detail to be finalized by the State). In the state as a whole, the ceiling could be 10% inaccessible; 20% most difficult and 40% most difficult so that budgetary request to central government remains consistent.

e) Revision of CRMC Contract and ensuring adherence to it- The Contract needs to be looked at once again and modified as per current situation and requirements and the clauses in the Contract need to be adhered to.

f) Increased support to health staff in CRMC areas- In addition to financial incentives, the staff needs to be provided with various supportive services such as housing and transport facilities, insurance and education and support structures like adequate human resource, and adequate supply of medicines and other essential commodities need to be strengthened.

g) Revision and operationalisation of the Performance Management system -The performance parameters should be based on the work-load and performance of the service provider and not only be based on facility based performance. It should also take into consideration the overall infrastructure and support available to the health staff when evaluating her/his performance.

h) Reconsider the change in incentives for RMAs- RMA incentive was reduced by state in 2012. This decision should be reconsidered.

i) Increased publicity and visibility for the scheme - Publicity of the CRMC scheme should be improved.

Conclusion

The study has found that CRMC has been able to fulfill some of it purpose. It has positively impacted the retention and addition of human resource in difficult areas. However, the study also found certain gaps in implementation conditions that could reduce the gains due to this

scheme. In order to make the scheme more effective, the gaps in management of the programme, monitoring, and grievance redressal need to be addressed by the department urgently.

ACRONYMS

ANM	Auxiliary Nurse Midwife
BAHS	Bachelor in Allied Health Science
BPMU	Block Programme Management Unit
CRMC	Chhattisgarh Rural Medical Corp
CMHO	Chief Medical and Health Officer
CHC	Community Health Center
DHO	District Health Officer
DH	District Hospital
DPM	District Programme Manager
EMOC	Emergency Obstetric Care
FMR	Financial Monitoring Report
HMIS	Hospital management Information System
IPD	In patient Department
IPHS	Indian Public Health Standards
IMR	Infant Mortality Rate
JDS	Jeevan Deep Samiti
LSAS	Life Saving Anaesthesia Skills
MMR	Maternal Mortality Rate
MO	Medical Officer
MCTS	Mother and Child Tracking System
MPW	Multi Purpose Worker
NHSRC	National Health Systems Resource Centre
NRHM	National Rural Health Mission
OPD	Out Patient Department
PGMO	Post Graduate Medical Officer
PMT	Pre Medical Test
PIB	Press Information Bureau
PHC	Primary Health Center
PIP	Programme Implementation Plan
PHRS	Public Health Resource Society
ROP	Record of Proceedings
RMA	Rural Medical Assistants
SHRC	State Health Resource Centre
SPMU	State Programme Management Unit
SDH	Sub District Hospital
SHC	Sub-health centers
TDS	Tax Deducted at Source

TABLES

Table 18	Year of joining of Respondents

1. DESCRIPTION OF THE STUDY

1.1 Introduction

India has been facing shortage of skilled and trained medical personnel since last many decades. The problem is more severe in the rural areas of the country where much of the professional cadre is reluctant to work. The number of registered medical practitioners in the country at present is 840130[1], though the overall doctor population ratio is 1:1800 in the country which is significantly lower than developed countries. 70% posts of Specialists at the Community Health Centers (CHC) are still vacant[1].

The biggest challenge for the provision of healthcare services is not only acute shortage of health personnel but also the rationalisation of the existing staff. A positive correlation is seen in critical health indicators like Infant Mortality Rate (IMR), Maternal Mortality Ratio (MMR) and availability of health personnel in countries with better availability of skilled personnel (Sundaraman and Gupta, undated). Thus, in order to keep the staff motivated and retain them for a longer duration especially in the difficult areas, various strategies have been adopted.

According to Lehmann *et al* (2008), the extent to which health workers can be attracted to and retained in remote areas depends on two interrelated aspects: the factors which contribute to health workers decisions to accept and stay in a remote post; and the strategies employed by governments to respond to such factors. Working conditions, including organisational arrangements, management support, high-risk work environments and availability of equipment, have been identified by several authors as being a determining factor in deciding whether to leave or stay in remote areas. Giving examples of countries like Zambia and Indonesia, Lehmann *et al* (2008) have suggested that not only financial incentives but other benefits like renovation of accommodation, contribution to school fees, vehicle and/or housing loans, support for further education, preferential access to training have an impact on attracting doctors who otherwise have not opted for rural posting.

According to Willis Shattuck *et al* (2008), financial incentives, career development and management issues are the core factors affecting motivation for health workers to stay and

[1] http://www.icmr.nic.in/ijmr/2013/april/perspective.pdf

work at one place. The author further suggests that improving working and living conditions maybe more effective than increasing wages to reduce migration. In addition to this, recognition is highly influential in health worker motivation and that adequate resources and appropriate infrastructure can improve morale significantly (Willis Shattuck *et al*, 2008).

According to Government of India[2], there is no shortage in the aggregate number of doctors and nurses in the country but an imbalance in the availability of doctors and nurses in the rural and urban areas of the country. According to Rao and Ramani (undated), for every 10,000 people there are around 10 qualified physicians in urban but only 1 in rural areas. It has been difficult to optimize the available human resource efficiently in the country for which various measures have been taken by the states.

Various states like Arunachal Pradesh, Maharashtra, Tamil Nadu, Andhra Pradesh, Assam, Chhattisgarh, Gujarat, Kerala, Mizoram, Uttarakhand have started diverse Post Graduate seat reservation schemes (Rao and Ramani, undated). According to Rao and Ramani (undated), Andhra Pradesh has one of the longest running Post Graduate reservation scheme. Under this scheme, a doctor serving in the public sector has to complete regular service of at least two years in a tribal area or three years in a rural area or five years continuous service with the government. This scheme brought a significant improvement in the vacancies of public health system. In 2009, all the Primary Health Centres (PHC) of the state had at least one Medical Officer (MO) whereas in 2007 there were 209 PHCs without MOs (Rao and Ramani, undated).

The states of Chhattisgarh and Assam designed new diploma courses in order to provide opportunities to the local rural people which would further address the issue of staff retention. In Chhattisgarh, a three year diploma course, Practitioner in Modern and Holistic Medicine was started in 2001 but was discontinued in 2008 (Sundaraman and Gupta, undated). Around 858 graduates of this course have been employed under National Rural Health Mission (NRHM) as Rural Medical Assistants (RMA) at the PHC & CHC level in the identified districts of Chhattisgarh (Sundaraman and Gupta, undated). In 2004, a 3.5 year diploma course, Diploma Holders in Medicine and Rural Health Care was started in Assam. The first batch of which completed its training in February, 2009 and 92 qualified practitioners had been deployed at the

[2] http://pib.nic.in/newsite/erelease.aspx?relid=30771

remote, far flung and rural areas of the state after undergoing basic internship at various health care centres in the state (Sundaraman and Gupta, undated).

Sundaraman and Gupta (undated) in their draft policy brief mentions about Tamil Nadu state that had opted for rotational posting of staff in difficult areas so that everyone has to spend some years after which they can be posted back in their area of choice. Odhisa, Karnataka, Maharashtra and Nagaland are the other states to implement this but the scheme was not taken by many other states (Sundaraman and Gupta, undated).

West Bengal pioneered a programme for retention of Auxiliary Nurse Midwife (ANM) under which married woman were selected who are likely to remain in the village due to her family, property and social circumstances (Sundaraman and Gupta, undated). Around 4000 ANMs have been appointed this way in the state. Similar to this, Madhya Pradesh started Swalamban Yojana in 2006-07 to fill the gap in the requirement of staff nurses. Under this scheme, women from rural background are selected from under serviced districts and sponsored for the nursing course. The sponsored students have to serve bond of seven years after passing or else have to pay Rs.2lakhs to the government (Sundaraman and Gupta, undated).

The states like Chhattisgarh, Odhisa and Gujarat etc. have also deployed AYUSH practitioners as MOs to ensure primary healthcare services at the PHCs (Sundaraman and Gupta, undated).

Monetary incentive is the most common strategy used to retain staff in rural areas. Around 18 states in India compensate doctors for service in difficult areas whereas five of these states give incentives to ANMs, nurses and paramedics (Rao and Ramani, undated). Chhattisgarh state developed the scheme of Chhattisgarh Rural Medical Corp (CRMC) that includes categorization into three zones according to difficulty levels and offering various incentives for each level (Sundaraman and Gupta, undated).

According to Sheikh *et al* (2012), solutions for rural workforce retention must be founded on an appreciation of the importance of community. The author suggests that the strong community linkages and ethnic identity (notably of underprivileged groups) are the definitive factors favouring doctors' decisions to remain in rural service, thus highlighting health providers' deep rootedness in local communities. Strategies to engage with rural communities and empower

them to demand quality essential services may, in the long term, be the key to creating a more equitable balance of human resources for health (Sheikh *et al*, 2012).

The shortage of the trained manpower is clearly evident in the state of Chhattisgarh especially in the underserved areas. As per the Indian Public Health Standards (IPHS) norms, every Community Health Center (CHC) should have four specialists; a Physician, Surgeon, Obstetrician and Gynaecologist and a Paediatrician. 572 such posts are sanctioned in the state, however only 46 of them are in position with 92% of the posts still vacant (Rural Health Survey, March 2010). In order to ensure smooth functioning of the facilities, two posts of Medical Officers have been approved for every PHCs leading to 1432 total sanctioned posts (Rural Health Survey, March 2010). However, only 40% of such posts have been filled. Also, the AYUSH facilities are available only at half of the PHCs in the state. Not only this, according to the Rural Health Survey 2010, 13% of the Sub-health centers (SHC) are functioning without any ANM or male health worker.

The initiatives like three year diploma course in Practitioner in Modern and Holistic Medicine, posting of AYUSH practitioners at PHCs, CRMC are few of the efforts made by the state government in order to utilize the available resources efficiently as well as retain staff especially in difficult areas.

1.2 Rationale of the study

The Chhattisgarh Rural Medical Corps (CRMC) was developed by the Department of Health and Family Welfare, Chhattisgarh and the National Rural Health Mission in 2009 to respond to the critical gap in human resources in the state. The scheme aimed to increase availability of medical services in difficult and remote rural areas of state. Since its inception, no formal evaluation has been done on CRMC in the state. An evaluation of such a scheme seems to be quite necessary and useful where deployment of such a large human resource is involved. This would help to document and assess the implementation of the scheme. It would identify its strengths and weaknesses and help to improve the scheme further. This study also holds lessons for other states and at the national level with respect to introducing or expanding similar programmes for increasing the availability of human resource in difficult areas.

Therefore National Health Systems Resource Centre (NHSRC) has undertaken an evaluation of the CRMC scheme in Chhattisgarh in collaboration with the Public Health Resource Society (PHRS) and State Health Resource Centre (SHRC), Chhattisgarh.

2. RESEARCH DESIGN AND METHODOLOGY

2.1 Aim

To evaluate the implementation and impact of CRMC in Chhattisgarh

2.2 Objectives

- To study and document the process of implementation of CRMC
- To assess the impact of the scheme in improving the availability of human resource in these areas
- To identify the gaps in implementation
- To give recommendations for further improvements

2.3 Methodology

The study seeks to analyze the implementation of CRMC and the impact on availability of human resources. Thus, the study is a mix of quantitative and qualitative research.

The first part of the study is the analysis of data and information pertaining to the CRMC scheme at state level i.e the features of the scheme, its implementation level, numbers of staffs recruited under CRMC and those who had been paid incentives. The second part of the study is a closer case-study of three districts of Chhattisgarh.

The study has been conducted in three districts of Chhattisgarh. Purposive selection of the districts has been done so as to cover different perspective of staff working in remote and tribal areas, areas adjacent to urban area and conflict affected districts. The districts selected are Gariyaband, Jashpur and Kanker. At least two CHCs are covered in each district; one close to district headquarter and one at the periphery. The specialists, MOs, staff nurses, RMAs and

district officials have been interviewed in every district (Checklist for conducting interviews, Annexure 2-7). 57 respondents have been interviewed. They include those receiving CRMC benefits and those who are eligible but are not receiving any benefits. Along with this state level officials and District level officials also have been interviewed.

Table 1: Facilities visited under the study		
Primary Health Center	Community Health Center	District Hospital
Korrar (Block Bhanupratappur), Kanker	Bhanupratappur, Kanker	DH Jashpur
Dokda (Block Kansabel), Jashpur	Antagarh, Kanker	DH, Gariaband*
Bagiya (Block Kansabel), Jashpur	Mainpur, Gariaband	
Sanna (Block Bagicha), Jashpur	Deobhog, Gariaband	
	Kansabel, Jashpur	
	Bagicha, Jashpur	

*After formation of new district in January 2013, facility was functioning as a CHC and from 1st of May 2013 it has been designated as DH but the required facilities have not been upgraded.

Table 2: Respondents receiving CRMC incentives

Respondents interviewed	Receiving CRMC incentives	Not Receiving CRMC incentives
Specialist	4	0
Medical Officer	18	4
Staff Nurse	6	10
Rural Medical Assistant	12	3
Total	40	17

Apart from the primary data collection, secondary data has collected from the state as well as block and districts visited. Documents issued by the government related to CRMC at various points of time were studied in order to understand the process planned for implementation of the scheme in the state.

3. FINDINGS

3.1 The Policy framework

3.1.1 The CRMC Guidelines

Under CRMC, health facilities including the DH, CHC and PHCs are categorized as Difficult, Most difficult and Inaccessible, depending upon certain indicators which could be revised periodically by the state government as per requirement. The staff in these pre-defined categories of health facilities will be as per the sanctioned post by the state government and NRHM.

As per the initial guidelines, the staff to be covered by CRMC was to include currently working, or retired employees of Department or professionals from private sector with stipulated minimum qualification for the post of Specialist Doctors, Health Officers and Staff Nurses.

In order to attract and retain staff in the difficult areas, CRMC entitles every staff working under the scheme for monthly incentive package apart from the monthly salary/perks from the state government. The incentive package for every staff cadre depends upon the area they serve under the scheme and it would be revised after every two years.

Apart from incentives, CRMC was also to provide insurance of the staff under Group Medical Insurance to cover death or permanent disability due to accidents. It further provides compensation of Rs. 10lakhs in case of any death of the staff due to Maoist attack while discharging his/her duty. Also, the cost of treatment of the staff injured during the attack will be covered under CRMC.

After serving three years under CRMC, Medical Officer (MO) is eligible for extra marks during admission in Post Graduation against reserved seats of State Government. However, after completion of the course they need to serve at least two years compulsorily under CRMC.

The contract period under CRMC is four years where the staff is posted in hard and hardest areas for two years each. Three months prior to expiry of the contract, order would be issued to transfer them from CRMC to other General category institution and the staff would be informed about the new posting. If any of the staff members are willing to extend his/ her contract

beyond this period, it would be extended for another two years. In case any of the staff members wants to continue his/her services even after retirement then after intimating three months in advance the Officer would be considered posted on contractual basis for maximum four years or the period he/she completed 65 years of age, whichever be the first.

The staff working under CRMC may even opt out of the programme before completion of four years of service. However, for this he/ she have to intimate before three months in advance and deposit equivalent amount of one month's incentive to the state health committee. Also, the staff working under CRMC and general category institutions can exchange their places and get transfer by mutual consensus. The staff coming from general category institution will sign a fresh contract of four years. However, the Commissioner, Health Services has the final authority to take decisions regarding these issues.

According to the state guidelines, choices are to be invited for the posts of CRMC from government and contractual staff already posted in CRMC institutions. For the remaining posts, options will be invited from the staff posted in general category institutions. Then also if the posts are not filled, applications from contractual staff, retired officers or people with minimum required qualification will be invited.

CRMC would be operationalized and financed under NRHM and would automatically dissolve with the end of the mission.

3.1.2 CRMC as articulated in the NRHM PIPs through the years

- **Chhattisgarh NRHM PIP 2009-10**

According to the Programme Implementation Plan (PIP) 2009-10, recruitment of staff under CRMC would be done in two ways:

1. Voluntary choice by the doctors who opt for this position in the beginning of their medical education
2. Doctors from other states who are willing to join CRMC

Besides this, the students appearing for state Pre Medical Test (PMT) can also join CRMC after completion of their course. In such cases, Government of Chhattisgarh would bear the entire study cost. On the other hand, the students who do not volunteer to join CRMC after completion of their course will have to bear the full cost of their education and a penalty.

The categorization of facilities as mentioned in the PIP is as follows:

1. Most remote and difficult area
2. Comparatively less remote but difficult area
3. Least remote but difficult area

An area will qualify for being termed as most, more or least difficult area based on the following:

1. Distance from the district head quarter and capital city
2. Amount of forest coverage
3. Approachability
4. Population
5. Security threats
6. Educational facilities

The incentives and benefits to the staff under CRMC would vary depending upon their area of work, which is as follows:

Table 3: CRMC incentives and other benefits proposed in PIP 2009-10

Incentives/ Benefits	Most remote and difficult area	Comparatively less remote and difficult area	Least remote and difficult area
	ZONE III	ZONE II	ZONE I
Hardship area allowance	12,500	7,500	5000
Transport facility	Yes	Yes	Yes
Education allowance for children	1000 per month per child maximum 2000	1000 per month per child maximum 2000	1000 per month per child maximum 2000
Housing facility in transit hostels	Yes	Yes	Yes
Insurance coverage	500	500	500
Earned leave of 30 days in a year	Yes	Yes	Yes
Casual leave of 10 days in a year	Yes	Yes	Yes
One LTC for tour in India	Yes	Yes	Yes
Risk allowance	10,000 per month	5000 per month	2500 per month
Total monthly package	25,000/-	15,000/-	10,000/-

Source: State PIP 2009-10

As per the PIP, financial packages for only Zone II and Zone III would be considered as the scheme is in its initial stage. The total budget of the scheme proposed for the year 2009-10 is Rs.7.35crores.

PIP 2009-10 proposed a cycle of 10 years for the staff recruitment under CRMC where initially the staff would be posted to most remote and difficult area for four years. After serving this period, they will move to the less remote and difficult area for another three years. Finally, they would be posted in the least remote and difficult area for the remainder of their deputation period. After ten years, the candidate can re-enter the CRMC for another cycle. However, if the posts under the scheme diminish the staff can either continue working in the government system as before or opt out of the scheme.

- **Chhattisgarh NRHM PIP 2010-11**

According to the PIP 2010-11, the total number of persons working under CRMC in the state are 1391 which majorly includes MOs and Rural Medical Assistants (RMA). The total incentive for the staff for the year amounts to Rs. 805.86 lakhs. However, the staff is anticipated to increase by 20% after reallocation and appointment of new staff suggesting the increase in budget to Rs.967.03 lakhs for the year 2010-11. In addition to this, the PIP further proposed mobility support of Rs. 500 per month for ANMs posted at Sub Centers under CRMC (difficult) areas. Therefore, the total budget requirement for CRMC proposed for the year 2010-11 was Rs. 1087.39lakhs

Table 4: Staff working under CRMC

Designation	Staff working under CRMC in the state
Specialists	38
Post Graduate Medical Officer (PGMO)	37
Emergency Obstetric Care (EMOC)/Life Saving Anaesthetic Skills (LSAS)	9
Medical Officer (MO)	485
Rural Medical Assistants (RMA)	486
Nursing Sister	1
Staff Nurse	327
Cheif Medical Health Officer (CMHO)	4
District Health Officer (CHO)	2
Bachelor in Allied Health Science (BAHS)	2
Total	1391

Source: State PIP 2010-11

- **Chhattisgarh NRHM PIP 2011-12**

According to the PIP 2011-12, the classification of institutions has been done as per the following criteria:

1. Criteria for physical accessibility
2. Criteria for environmental: nature and social
3. Criteria for housing and family amenities
4. Criteria for vacancy assessment

Depending upon these criteria, the institutions were classified into four categories: accessible, most difficult, difficult and inaccessible. Also, the career building provisions proposed for this scheme under the PIP is as given below:

- For difficult areas 30% of the annual basic salary and 50% in the most difficult and inaccessible areas
- 10% of marks for each years of service in any of these facilities for post graduation in the All India Examination this will be up to maximum 30%
- One distance education course paid from NRHM fund from a recommended programme i.e. Public Health Management, Family Medicine, and Epidemiology
- One to three month skill up gradation/ public health management related training within the country

The benefits to be offered by the state are:

- For serving health functionaries an additional increment in every three years of service
- 10% of marks for each year of services in any of these facilities for post graduation admission in all India examination, this would be up to a maximum marks to 30 where state hold common entrance for post graduation
- Choice of posting after three years working in difficult and most difficult areas
- Special life insurance coverage for staff working in the conflict areas
- Facilitation of spouse posting in the same areas/ institutions

According to the PIP 2011-12, staff of 1658 is working under CRMC, mainly in the difficult areas. The total budget is of Rs. 690.84 lakhs but requirement of budget proposed for the year is Rs. 500 lakhs because there will be still 20-50% vacancies in the most difficult and inaccessible areas.

Table 5: CRMC incentives proposed in 2011-12

Designation	Manpower			Incentive/month		
	Difficult	Most Difficult	Inaccessible	Difficult	Most Difficult	Inaccessible
Specialist	-	38	-	0	20000	25000
PGMO		37	-	0	15000	20000
EMOC/LSAS	-	10	-	0	15000	20000
MO	437	126	51	0	10000	12000
RMA	678	195	86	0	8000	10000
Staff Nurse	-	-	-	-	-	-
ANM	-	-	-	-	-	-
Total	1115	406	137	0	68000	87000

Source: State PIP 2011-12

- **Chhattisgarh NRHM PIP 2012-13**

According to the PIP 2012-13, Department of Health revised the Pre PG Medical rules reserving 50% seats for government servants including CRMC areas. The PIP also proposed of differential incentives and facility based monitoring is to be launched during 2012-13. The policy is being revised both on the part on incentives and geographical areas.

The objective of CRMC has been rephrased in the PIP 2012-13 as to provide incentives to health department staff, posted in rural areas based on local conditions. The categorization of hospitals in every district would be based on geographic locations, availability of transport, education facilities and health manpower. The staff posted in CRMC area is eligible for performance based incentives as decided. The staff claiming CRMC shall also fulfil minimum performance criteria as decided by the state time to time. In addition to this, priority would be given to CRMC area for infrastructure development.

The proposals made for the performance-based incentives in the PIP 2012-13 are as follows:

1. Provide performance based incentives for 2011-12 in May 2012 @ of 10% of monthly pay to contractual staff
2. Incentives for the year 2012-13 to be given in March 2013 and accordingly provisions are made in budget
3. Best performance award to be given to district hospitals, FRUs, CHCs, PHCs and SHCs. Along with this, best district and block award will also be given.

Number of hospitals in the state

Table 6: Number of public hospitals in the state

Facilities	Number
DH	18
SDH	17
CHC	148
PHC	741
SHC	5076

Source: State PIP 2012-13

In 2012-13, nine new districts have been created in the state. Therefore, nine new DHs have been proposed in the PIP 2012-13.

3.1.3 Number of institutions under CRMC

Since the start of CRMC in 2009, the categorization of health facilities has been revised once in 2011 whereas the second revision is under process. For the first time in 2009, the facilities were categorized under CRMC in three; normal, difficult and most difficult. Out of the 18 DHs in the state, five were categorized as most difficult, two as difficult while the remaining 11 as normal. The 143 CHCs were categorized as, 67 most difficult, 31 difficult and 45 normal. Out of 719 total PHCs, 472 were categorized as most difficult and the rest 247 as normal. No PHC was categorized as difficult.

The grading done in 2011 was based on an Inaccessibility study that looked at various parameters like accessibility, social and natural environment, housing and family amenities and post vacancies (Study Format as Annexure 9). The revised list in 2011 consist of four categories of health facilities; accessible, difficult, most difficult and inaccessible. As per this categorization, three DHs were classified as most difficult, two as difficult and 15 as accessible. Among all the CHCs, 34 were categorized as difficult, 22 as most difficult and three as inaccessible. 200 PHCs were categorized as difficult, 106 as most difficult and 45 as inaccessible.

The number of facilities categorized under CRMC when compared for both rounds shows that in 2009, there were 92.5% facilities that were most difficult. This number decreased to 30.6% in 2011. The revised list that came in 2011 has 55.1% facilities categorized as difficult. Along with

this, 11.2% facilities were categorized as inaccessible in 2011, the category which was not included in the previous list of 2009.

Table 7: Categorization of public hospitals under CRMC

Categorization	2009	2011*
Normal/Accessible	1.7%	3.0%
Difficult	5.8%	55.1%
Most Difficult	92.5%	30.6%
Inaccessible	0.0%	11.2%

* *Based on the accessibility criteria of NHSRC*

a) District/Civil Hospitals

The categorization list of the year 2009 for district/civil hospital included 10 facilities as normal, 3 as difficult and 5 as most difficult. Whereas, the revised list of 2011 consists of 13 accessible district/civil hospitals, 2 difficult and 3 most difficult district/civil hospitals. The categorization of district/civil hospitals for the two years is same for most of the facilities except a few such as district/civil hospitals of Jashpur and Koriya have been categorized as Difficult in 2011 though they were earlier Most Difficult. Similarly, the district/civil hospitals of Kanker, Kawardha and Sarguja were earlier categorized as Difficult and then later changed to Accessible in 2011.

b) Community Health Centers

As per the CHC categorization in 2009, there were 31 and 67 CHCs categorized as difficult and most difficult respectively. Whereas the revised list consists of 34 CHCs categorized as difficult, 22 as most difficult and 3 as inaccessible. A significant decrease in the number of CHCs categorized as most difficult whereas the number of facilities under difficult category has not much changed. Along with this, two CHCs at Bijapur and one CHC at Narayanpur have been categorized as inaccessible in 2011. The decrease in the number of CHCs in districts considered under CRMC from the year 2009 to the year 2011 was seen such as in Sarguja there were 19 CHCs included under CRMC in 2009 whereas there are 13 CHCs in the revised list of 2011. Likewise, the number decreased from 10 to 7 in Bastar district.

c) Primary Health Centers

The 2009 list of categories for PHCs consist of 472 most difficult facilities. The 2011 list includes 200 difficult PHCs, 106 most difficult and 45 inaccessible PHCs. Along with the decrease in total number of PHCs included under CRMC, the number of facilities categorized as most difficult have also decreased significantly in 2011.

3.1.4 Agreement between the state and staff before joining CRMC

The staff has to sign an agreement with the department before joining CRMC. The agreement includes all the scheme related guidelines to be followed by the staff while working.

Salient points of the agreement:

- The agreement is for four years and the person signing the agreement is willing to serve CRMC areas.
- The duration of CRMC agreement is four years and attempts will be made to relocate the staff in difficult area for two years after he/she completes two years serving in most difficult area. However, the Commissioner of Health Services has the authority to take final decision on this.
- The staff signing the agreement would not be posted/ attached to any other facility during their service in the CRMC area.
- The staff signing the agreement would receive fixed monthly incentive for serving in CRMC area apart from their monthly salary or pension.
- The monthly incentives would be revised after every 2 years on the basis of performance evaluation of the staff.
- The doctors who have completed at least three years of their service in CRMC areas would then get benefit for admission in Post Graduation on the state government reserved seats. The necessary amendments would be done to the current admission rules for PG. The doctors benefitted through CRMC for PG have to necessarily serve two years in CRMC areas after completion of their course. During their study duration, doctors would not receive CRMC incentives.
- After completing four years of service in CRMC areas, staff can further extend their agreement for another two years.

- In order to maintain quality of services at the facilities included under CRMC, certain indicators have been decided. Any staff failing to achieve these indicators would continue to receive CRMC incentive but their incentives would not be increased for 3rd and 4th year of their service.
- Apart from this, the agreement of the staff failing to achieve the pre-decided indicators can also be terminated after two years as per the decision made by the State Health Society (NRHM).

3.1.5 Incentive Packages under CRMC

The monthly incentives for every cadre included under CRMC are fixed. However, they have been revised twice since the start of the scheme in 2009. The first government order related to the incentives to be given under CRMC was released on 16th November 2009. According to this order, following incentives were to be given to the staff working in difficult and most difficult areas of the state.

Table 8: CRMC incentive/month (in Rs.), 2009

Designation	Incentives to be given in first two years		Incentives to be given in third and fourth year	
	Most Difficult	Difficult	Most Difficult	Difficult
Specialists	15000	12000	18000	15000
PGMO	12000	10000	15000	12000
MO (LSAS/EMOC)	10000	9000	12000	11000
MO	8000	5000	10000	7000
RMA	3000	2000	4000	3000
Nursing Sister	2000	1500	3000	2500
Staff Nurse	2000	1500	3000	2500

Source: Government Order, 2009

The incentives were then revised in 2012 for which government order was released on 17th January 2012. The order mentions that no staff will be given incentives under CRMC for the month of February 2011. The reason for this was however, not mentioned.

According to the order, the revised incentives were to be given from April 2011 onwards as approved in the PIP/ROP 2011-12. The order when compared with the PIP 2011-12 shows

incentive for Specialists working in inaccessible area as Rs. 15000, which is given as Rs. 25000 in the PIP. Also, the staff nurse were excluded in this order which were earlier included under CRMC. In addition to this, all the staff posted in difficult area is not to be covered under CRMC as approved in the PIP. The order says that the state government would give instructions when to release funds for the same.

The order further mentions of transferring incentives for RMA and Staff Nurse after TDS deduction. However, for the incentives of doctors and specialists funds were transferred to the block NRHM account.

The next revision of incentives came in with the government order on 10th September 2012. The incentives for staff working in difficult areas were again added along with the inclusion of staff nurses. In addition to this, incentives for ANM working in most difficult and inaccessible CRMC areas were added.

Table 9: CRMC incentives/month (in Rs.), 2011 & 2012

Designation	Incentive/month (in Rs.), 2011			Incentive/month (in Rs.), 2012		
	Difficult	Most Difficult	Inaccessible	Difficult	Most Difficult	Inaccessible
Specialist	0	20000	25000	30000	40000	0
MO (PG)	0	15000	20000	25000	35000	0
MO (EMOC/LSAS)	0	15000	20000	22000	30000	0
MO	0	10000	12000	20000	25000	30000
RMA	0	8000	10000	3000	5000	10000
Staff Nurse	0	0	0	2000	3000	5000
ANM	0	0	0	0	1000	2000

Source: State PIP 2011-12, Government Order 2012

3.2 Implementation of CRMC

3.2.1 Publicity regarding CRMC

Primary interviews with CRMC beneficiaries show that most people, when they join the health department, are not aware of CRMC. CRMC as a scheme has not been advertised widely. At the state level, officials said that at the start of the scheme, they had informed the districts of it. However, no other steps were found to be taken for publicizing the scheme.

Analysis of the subsequent advertisements for Specialists, Medical officers, RMAs and Staff Nurses shows that only in the last two years information about CRMC has been included in the advertisements. Previous advertisements have no mention of CRMC (Table 10). Out of total 7 advertisements made, only 3 of them had mentioned about CRMC and incentives.

Table 10: Inclusion of CRMC information in advertisements for government recruitment

Date of Advertisement	Recruiting Body	Name of Post	Information about CRMC in the advertisement
17/06/2013	NRHM	Specialists	CRMC amount for Specialists to be posted in difficult and most difficult areas mentioned
10/04/2012	DHS	Medical Officers	Incentives to be given at different occasions
01/06/2011	NRHM	Staff Nurses	CRMC incentives to be given to eligible staff
December 2010	NRHM	Staff Nurses	No mention of CRMC
04/01/2011	NRHM	RMA (Female)	No mention of CRMC
October 2011	NRHM	RMA	No mention of CRMC
September 2010	NRHM	Staff Nurses	No mention of CRMC

The primary interviews revealed that people who had been part of the health department at the time CRMC was initiated said that they had got to know mostly through the DPM. For many of the respondents it was the DPM or other NRHM staff who had informed them about CRMC and that too after they joined. One respondent had got to know about CRMC through his senior.

All new entrants stated that they were not told of CRMC at the time of counseling for posting.

"I did not know about CRMC during counseling"- Staff Nurse

"Newly joined staff are not aware"- BMO

"I was not aware about CRMC at the time of joining as MO in 2012"

Therefore most of them had got to know of CRMC only after they joined their posting. Many respondents said that they got to know of CRMC once they joined and saw others receiving the incentive amount.

"I did not know about CRMC and got to know only after others started getting money" – Staff Nurse

"I am not much aware about CRMC and have not talked to any senior also about it"- MO who has joined 2 months back

"I was not aware about CRMC when I joined at CHC. I came to know through word of mouth" - RMA

"I came to know about the scheme from friends after joining. We were not given any information at the time of counseling"- RMA

In fact few of the staff nurses who had joined couple of months back learned of CRMC only when this research team asked them about it.

According to a BMO, "people are not aware of CRMC. There are no advertisements and staff have no knowledge about it".

3.2.2 Signing the Agreement

Out of 57 respondents interviewed, 41 respondents have signed the CRMC agreement, out of which 38 are receiving incentives. Eight of the respondents had submitted the agreement papers and another eight respondents have not tried to apply for CRMC for various reasons (Table 11).

Table 11: Signing CRMC agreement

Agreement details	Number of Respondents
Agreement submitted and formalized	41
Agreement submitted but not formalized	8
Agreement not done nor submitted	8
Total	57

Out of 41 respondents who have signed and submitted the CRMC agreement, 38 are receiving incentives. Two of the respondents reported that though they have signed the agreement but have not been receiving the incentives for the last five months as their performance is not as per the targets specified by the government. Another respondent, a staff-nurse who was previously contractual, said that soon after selection in the regular cadre, she had done a fresh agreement. However, even though her name has come in the district list, she is not receiving the incentives.

Eight of the respondents had submitted the agreement papers, however due to various reasons, their agreement has not been formalized and none of them are currently receiving any incentive at present. Out of these seven respondents, one of the respondents had submitted the agreement papers in September 2011 but has not received any CRMC incentive yet. When he tried to enquire about the delay, he was told by the district officials that they have sent his request to the state office and have not received any response from there. Another respondent said that he had submitted the agreement papers in the district office in 2012 and when asked the reason for delay in receiving the incentives, he was told that the submitted copy has been lost. Two of the newly joined respondents informed that they had submitted the agreement in January 2013. Other three respondents who had joined in October and January 2012 respectively have also submitted the agreement in the same year of joining but have not started receiving the incentives yet. One of the respondents, an anesthetist, had submitted the agreement papers, but his request was denied by the CMHO as the CHC already had an anesthetist.

There were eight respondents who had not submitted the papers nor had undertaken any formalities with respect to the agreement. The reasons for this were: not being aware about the scheme (four people); not wanting to join CRMC (1 person); planning to apply (1 person) and being posting in a PHC that was in the CRMC list before but no longer is, despite being quite remote.

3.2.3 Provision of financial incentives

a) Funds released vs. utilization

As per the data received from SPMU Chhattisgarh on CRMC funds utilization (Table 12), the utilization has been rapidly increasing with each subsequent year. Though this is a good sign, it goes to show the gaps in funds utilization from 2009-2011. As a result of this, there are many people who have still not received the incentives from that year.

Table 12: CRMC fund utilization

Year	Sanctioned Budget by the Centre (in Rs.)	Expenditure (in Rs.)	Percent Utilization
2009-10	73500000	19903500	27%
2010-11	108739000	54122000	50%

2011-12	50000000	49232000	98%
2012-13	183600000	158003000	86%

Source: Financial reports, SPMU Chhattisgarh

b) Fund Flow

Table no. 13 shows the periodicity of fund release for CRMC from the state level to the districts. Ideally, the districts need to receive funds in the beginning of the financial year in order to process timely payments. However, from the Table below, it is evident that other than in 2012-13, the funds have been much delayed in reaching the districts. The first installments have been as late October and November and the last installments as late as March, the last month of the financial year.

Table 13: Release of CRMC funds by NRHM SPMU to districts

Year/Month of fund release	Apr	May	June	July	Aug	Sept	Oct	Nov	Dec	Jan	Feb	Mar
2009-10												✓
2010-11							✓					✓
2011-12									✓			✓
2012-13	✓		✓					✓		✓		✓

✓ : Funds released

Source: Financial reports, SPMU Chhattisgarh

District level data on release of incentives, for the sample districts shows that payment of incentives has been delayed in all three districts. The installments do not seem to have a pattern. The delays are as high as 16 months both in Gariaband and Jashpur and upto 20 months in Kanker (Table 14). Funds for all CRMC beneficiaries in a block are not disbursed at the same time.

Table 14: CRMC Amount Release Details (District)

District	**Release Date**	**Amount (in Rs.)**	**Period for which Amount was released**	**Delay of months (number of months)**
Jashpur	26/04/2010	1800000	Jan. 2010 to March 2010	1 to 3 months
	19/11/2010	3600000	April 2010 to Sept. 2010	2 to 7 months
	13/05/2011	2729095	Oct. 2010 to Jan. 2011	4 to 7

	24/12/2011	1868000	March 2011 to April 2011	8 to 9
	28/07/2012	4829000	May2011 to Jan2012	6 to 14
	12/09/12	961447	May2011 to Jan2012 (Those who were left when last funds were released)	8 to 16
	20/12/2012	7538400	Feb. 2012 to Nov. 2012	1 to 10
	13/02/2013	657000	Feb. 2012 to Nov. 2012	3 to 12
Gariyaband	09/07/12	168300	March 2011 to March 2012	4 to 16
	03/01/13	1455000	April to August 2012 (for only 2 MOs)	5 to 9
	31/3/2013	661500	Sept. 2012 to Jan. 2013	2 to 6
	31/05/2013	661000	Feb-March 2013 (released only for 10 people)	2 to 3
Kanker	06/05/2010	81000	April 2009 to March 2010	2 to 14
	03/06/2010	248315	April 2009 to March 2010	3 to 15
	31/07/2010	276000	April 2009 to March 2010	4 to 16
	31/08/2010	75000	April 2009 to March 2010	5 to 17
	23/09/2010	45000	April 2009 to March 2010	6 to 18
	27/09/2010	39685	April 2009 to March 2010	6 to 18
	22/10/2010	78000	April 2009 to March 2010	7 to 19
	26/10/2010	173998	April 2009 to March 2010	7 to 19
	29/12/2010	1758630	April 2010 to September 2010	4 to 9
	31/12/2010	105000	April 2009 to March 2010	10 to 20
	03/03/2011	338000	April 2010 to September 2010	7 to 11
	03/03/2011	12000	April 2010 to September 2010	7 to 11
	25/05/2011	1344000	October 2010 to January 2011	5 to 8
	25/05/2011	8000	October 2010 to January 2011	5 to 8
	03/06/2011	312400	October 2010 to January 2011	6 to 9
	19/09/2011	660000	April 2011 to July 2011	1 to 6
	31/01/2012	1282000	April 2011 to December 2011	1 to 10
	31/03/2012	153500	March 2011	12
	31/03/2012	198000	January 2011	14
	17/05/12	543000	Up to January 2012	
	17/05/12	739666	July 2011 to January 2012	5 to 11
	31/05/12	332000	April 2011 to June 2011	10 to 12
	09/07/12	38000	March 2011 to June 2011	13 to 16
	16/07/12	854000	February 2012 & March 2012	3 to 4
	27/07/12	1677000	April 2012 to June 2012	1 to 3
	14/09/12	134926	Up to March 2012	
	14/09/12	58000	April 2012 to June 2012	3 to 5
	26/12/12	1600400	July 2012 to September 2012	4 to 6
	27/02/13	2284460	October 2012 to January 2013	1 to 5
	30/03/13	2234370	February 2013 & March 2013	0 to 1

Source: Financial reports, DPMU Gariaband, Kanker and Jashpur districts

The order of September 2012 states that CRMC incentives are to be given quarterly. As a result, the fund flow seems to improving.

c) Eligible staff versus CRMC beneficiaries

The complete data on the staff eligible for receiving CRMC benefits and those actually receiving them was not available from all the three sample districts. Only in Jashpur district, the complete information was available. In Jashpur, most of the doctors and RMAs are receiving CRMC incentives (Table 15). However, only 36 Staff Nurses out of 62 are receiving incentives. Thus, in total 142 staff is either receiving CRMC benefits out of 177.

For district Gariyaband, only the data of the staff posted at the facilities visited during the study is available. At Deobhog block, only two people are receiving CRMC benefits out of the total of six eligible people. Whereas, seven are receiving CRMC or have submitted CRMC contract out of nine at Mainpur block of Gariyaband. For Kanker district, block level information for the two blocks visited, is available. At Antagarh and Bhanupratappur blocks, six and 13 people are receiving CRMC/submitted CRMC contract out of the total of seven and 19 eligible staff respectively. In both these districts we find that there is a number of health staff who are eligible but are not currently receiving the benefits.

Table 15: Eligible staff versus CRMC beneficiaries

District/Block	Staff Eligible for CRMC	Staff Receiving CRMC/Submitted CRMC Contract
Jashpur District		
Specialist/PGMO/MO/LSAS-EMOC Trained	53	48
RMA	62	58
Staff Nurse	62	36
Total	**177**	**142**
Deobhog* (Gariyaband district)		
Specialist/PGMO/MO/LSAS-	1	1

EMOC Trained		
RMA	1	1
Staff Nurse	4	0
Total	**6**	**2**
Mainpur* (Gariyaband district)		
Specialist/PGMO/MO/LSAS-EMOC Trained	3	1
RMA	1	1
Staff Nurse	5	5
Total	**9**	**7**
Antagarh, Kanker#		
Specialist/PGMO/MO/LSAS-EMOC Trained	2	1
RMA	4	3
Staff Nurse	3	2
Total	**9**	**6**
Bhanupratappur, Kanker#		
Specialist/PGMO/MO/LSAS-EMOC Trained	5	3
RMA	8	7
Staff Nurse	6	3
Total	**19**	**13**

*Information only of the facilities visited, #Block level information

d) Regularity in receiving incentives

Primary interviews too revealed that irregular payments of incentives are one of the biggest gaps in the scheme. Most respondents reported a delay of 4-6 months. They stated that as the

time was not fixed for receiving the incentives, it was difficult to include it in their personal financial planning.

"Incentive should be given immediately, regularly, monthly. Its importance decreases if it is random" - MO

Along with the delay, respondents also stated that when receiving the incentives, they were not informed of the time period for which the incentives had been given. As a result, they are not sure whether they have received payments for all 12 months in a year.

"When installments come, one is not sure of the months" - MO

Many respondents felt that such irregularities in giving incentives defeated the purpose of CRMC. It also led to de-motivation as they felt that nothing was different for them despite working in difficult areas.

"CRMC benefit is going to people but it is not visible, not demonstrable due to the irregular payments"- MO

"Non-CRMC area people are not getting (incentives) and we are also not getting so what is the advantage for us?" - MO

In many instances, the problem of irregular incentives was much more serious.

"(I am) not getting CRMC even after filling bond. (I) went to meet State Nodal Officer who said come after one week. It (Raipur) is too far so I cannot go again whether I get it (incentive) or not"- RMA

e) Periodicity of incentives

In September 2012, the state government has decided that the incentives would be given quarterly. In the interviews, with regards to desired periodicity for the incentives, some respondents said that it should be added to their monthly salary payment. Few said that they did not mind if it were given quarterly, provided that there were no delays in that. Most were of the opinion, that whatever the periodicity, it should be made public and adhered to.

"No problem if consolidated amount for CRMC is given but it is to be ensured that payment for every month is done"- MO

f) Adequacy of incentives

Most respondents stated that the incentives were adequate, though few said that it should be increased.

An issue which came up in the interviews was the decrease in incentives for the RMAs. Since 2012 the CRMC incentives for RMA shave been reduced from Rs. 8000 in most difficult areas to Rs. 5000, though incentive of Rs. 3000 for RMAs in difficult areas has been added. The RMAs and many other staff brought up the issue of reduction of incentives during the interviews. They questioned the logic of decreasing incentives for the RMAs while increasing incentives for the rest of the categories.

The state level officer said that the decrease in incentives for RMA was undertaken as there is no longer any shortage of RMAs and their performance has been below expectations.

g) Incentives for ANMs

ANMs were supposed to start receiving incentives from 2012 however, in none of the three districts selected for the study it was found that ANM have started getting CRMC benefit. The DPM of one of the districts, who had joined in October 2012, was not aware of the order and neither was the CMHO.

3.2.4 Performance indicators

Providing incentives as per performance of the staff had been visualized in the initial design of the scheme. As per the guidelines and the agreement, it is clearly mentioned that the performance of the staff working under CRMC would be evaluated periodically in order to ensure quality of services are being provided at the facilities. The incentives were to be increased after two years of service in CRMC areas after performance evaluation of the staff. However, interviews with various officials suggest that this was never followed, neither they were informed about the indicators on which their performance would be judged nor the incentives would increase on the basis of that.

It was only in September 2012 that the State government fixed performance indicators and took out an order to that effect. The order enumerates a list of indicators and instructs the district to appraise the performance of the staff before giving the CRMC incentive.

The government order released on 10th September, 2012 emphasized on giving incentives to the staff only after evaluating their performance on the basis of certain indicators. As per this order, all the health facilities which have been identified as functional delivery point have to achieve targets every month. This would be further verified by the FMR and MCTS/HMIS reports. In case of any delay in submitting the reports to BPMU/DPMU, incentives would not be given to the staff posted at these facilities.

The type of services included for evaluating the performance of the staff working at CRMC areas include OPD, IPD, normal/cesarean deliveries, major surgeries performed at the facility excluding family planning cases, emergency and neo-natal child health services, safe abortion services and the other ancillary services like X-ray, ECG, lab tests, ultra sonography and blood bank. Targets have been fixed for facilities at different levels and in different areas of categorization. As per the order, every individual has to give detail about his/her work done against these parameters and submit a report to the facility in-charge who will further submit it to DPMU. Any staff who fails to achieve the targets would become ineligible for receiving CRMC incentives. Table 18 below shows the benchmark parameters for minimum performance in a PHC.

Table 16: Benchmark parameters under CRMC for minimum performance in Primary Health Centers (PHCs)

Sr. No.	Type of Service	Criteria for assessment	Difficult	Most Difficult	Inaccessible
1	Out Patient department	Average out patients per day	20	15	10
2	In Patient department	Average patients in a month (include deliveries)	15	12	10
3	Safe Motherhood services	Deliveries per month in 24*7 PHC	20	15	10
		Deliveries per month in normal PHC	12	10	7
4	Lab test	No. of lab tests per month	60	40	20

Findings from primary data collection show that even though this order has been given in September, only in Gariaband had the appraisal been done. In one of the districts, the DPM, who had joined in October, was not aware of such an order.

In Gariaband, DPM released incentive as per the performance of various staff. The appraisal was made only on the basis of number of deliveries, which is only one of the indicators. However, the implications of the appraisal were seen in the subsequent release of incentives and many of the staff did not receive the incentives for five months. For example BMO and RMA in Deobhog and RMA in Mainpur did not receive their incentives based on this appraisal.

The table of personnel and the incentives given for September 2012 to January 2013 is as follows:

Table 17: Personnel and incentives given in Gariaband from September 2012 to January 2013

Sr. No.	Name of Block	Designation	Type of institution	Place of posting	Deliveries done	Incentive given (based on performance)
1	Gariaband	PGMO	Difficult	CHC	33-35	Yes
2	Gariaband	MO (EMOC)	Difficult	CHC	33-35	Yes
3	Gariaband	MO	Difficult	CHC	33-35	Yes
4	Gariaband	MO	Most Difficult	PHC		Yes
5	Gariaband	RMA	Difficult	CHC	33-35	Yes
6	Gariaband	MO	Difficult	PHC	3-4	No
7	Gariaband	RMA	Most Difficult	PHC	3-4	No
8	Gariaband	RMA	Most Difficult	PHC	0	No
9	Gariaband	RMA	Most Difficult	SHC	4	No
10	Gariaband	RMA	Most Difficult	SHC	0	No
11	Gariaband	RMA	Most Difficult	SHC	0	No
12	Chhura	MO	Difficult	CHC	35-40	Yes
13	Chhura	MO	Difficult	CHC	35-40	Yes
14	Chhura	RMA	Difficult	CHC	35-40	Yes
15	Chhura	MO	Difficult	PHC	2-3	No
16	Chhura	RMA	Difficult	PHC	5-6	No
17	Chhura	RMA	Difficult	PHC	1-2	No
18	Mainpur	MO	Difficult	CHC	20-24	No
19	Mainpur	RMA	Difficult	PHC	6-7	No
20	Mainpur	RMA	Difficult	CHC	20-24	No
21	Mainpur	SN	Difficult	PHC	6-7	No
22	Mainpur	SN	Difficult	CHC	20-24	No

23	Deobhog	MO	Difficult	CHC	33-35	Yes
24	Deobhog	RMA	Difficult	CHC	33-35	Yes
25	Deobhog	SN	Difficult	CHC	33-35	Yes
26	Deobhog	RMA	Most Difficult	PHC	0	No

We find that while health personnel in CHCs Gariaband, Chhura and Deobhog fulfilled the criteria for the number of deliveries and thereby received the incentives, in the same block, health personnel posted at the PHCs and SHCs in those blocks did not receive the incentives due to low performance. This may be because most of the deliveries were referred by the staff to the CHC and thereby increasing the number of deliveries at the CHC while decreasing its number at the PHCs and SHCs. None of the staff in Mainpur block received incentives in January 2013 due to low performance.

Further, a detailing of the status of facilities shows that many of these facilities are lacking in human resource, regular supplies of medicines and peripherals and infrastructure. Description of the facilities visited is attached as Annexure 1.

For example, In Gariaband, there are three PHCs. While PHC Piparchedi has an old building and is functional, in PHC Kosmi building construction is going on, and in PHC Kochwaye, construction of a building has been sanctioned. As a result of this, the RMAs in these PHCs could not meet the performance parameters and therefore have not been given the incentives.

During the interviews, Block and district level leadership mostly said that performance based parameters should be there so that the people who are working well can be awarded. While the rest of the staff was ambiguous about their views on the need for such appraisals, however, there was some criticism by the respondents on the nature of indicators outlined.

"If no of deliveries are considered to give performance based incentives and the target is not achieved, then its programmatic fault not doctors. So why incentive to the doctor is not given? If target for no of deliveries is not achieved but at least some deliveries are conducted at the SHC, then this is to be considered good or bad?"- MO

The state level Official expressed the need to devise clear cut, well defined guidelines on performance based incentives for CRMC beneficiaries. He suggested that there may be two

kinds of assessment - one at facility level and the other at service provider level since the performance of provider is linked with functionality of a facility/institute (e.g. at ratio of 50:50 or 40:60).

3.2.5 Monitoring and Review

Interviews with the state level leadership and other respondents revealed that there are gaps in systems for monitoring the CRMC scheme. Much of the Data requested by the research team was also not made available in its complete form. At the state level there was a tendency to shift responsibilities.

At the district level too gaps were observed with respect to documentation and monitoring. In one district two staff members who left had been receiving payment that then had to be recovered. The district officials expressed their frustration at non-response of the state level officials.

According to the State officer, a dedicated officer or cell should be made to manage CRMC at state and district levels. This cell or person should be responsible for financial and physical tracking and monitoring of CRMC scheme on a regular basis.

3.2.6 Grievance Redressal Systems

The interviews revealed two types of grievances- one at the level of the district that relates to the CRMC policy, like issues related to grading of facilities. The other is at the level of the beneficiaries, which relates to issues like non-payment of incentives, irregularity of incentives etc. In both cases, the grievance was usually directed at the state. The interviews revealed that the state and district leadership for CRMC was quite non-responsive to any of the grievances. Many people who had sent letters repeatedly or had met senior officials regarding non-payment of incentives despite signing the bond keenly felt this.

The findings show that responses to grievances did not follow a system or guidelines and seemed to be decided on a case-to-case basis. For example, In Kanker district, there was a case of a PHC (Hatkarra), which is one of the most remote PHCs but had got graded as a non-CRMC PHC. Repeated attempts by the district, including representations sent by the Collector and CMHO did not elicit any response from the state level. However, in Jashpur the experience was different. Request by the Collector in July 2012 to include CHCs of Manora, Lodam and Duldula

as most difficult were accepted by the MD NRHM. The staff of those facilities has now come under CRMC.

In another case, in one district, a 2nd anesthetist at a CHC who had been refused incentives was able to convince the leadership to revert that decision. While in the same district, RMAs who have been posted in sub-centers (through no choice of theirs) had not been given incentives despite several appeals before the state leadership.

3.2.7 Outcome of CRMC

a) Attracting or retaining Staff

The main aim of CRMC was to attract and retain human resource in the difficult areas. Data from the respondents show that as high as 58% of them have joined after CRMC was introduced, i.e. after 2009. Significantly, from 2005 to 2009, even after introduction of NRHM, there seems to be a slump in joining the services in these areas. It is evident that CRMC has made a difference in the number of people joining the public health system in these underserved areas.

Table 18: Year of joining of Respondents

Year of joining present posting	Number of respondents	Percentage of respondents
Before 2005	20	35
2005-2008	2	4
2009-2013	33	58
NA	2	4
Total	**57**	**100**

b) Motivation for joining a CRMC area: findings from primary interviews

The respondents were asked their reason for joining CRMC area. It must be reiterated that most of the newly recruited staff had not been told of CRMC at the time of joining. The reasons enumerated by the respondents are the following:

Did not get a choice: Majority of the respondents, who had joined the department after CRMC was introduced, said that they were not given a choice between CRMC and Non-CRMC. Therefore they selected whichever area was available to them.

"During counseling I had to choose Kanker as all the posts had filled up in and around native district by girls"- RMA

Motivated by CRMC scheme at the time of joining/transfer: People who had been aware of CRMC at the time of joining or transfer said that it motivated them to join a CRMC area.

"I can get same salary in any private hospital in Raipur but CRMC makes the difference. Here I am getting CRMC benefit but in the city I would have to do private practice to get this amount"- MO

"I knew about CRMC and that is why I joined"- MO

"CRMC was one of the reasons to join" - RMA

"I was aware about CRMC at the time of joining (through word of mouth) and therefore joined here" - RMA

Motivated by CRMC to continue working in CRMC area: For majority of the respondents, CRMC acts as a motivation to continue working in the same area and not seek a transfer.

"CRMC gives mental satisfaction when working in such a difficult area"- MO

"CRMC is good and has a positive impact in difficult places. It works as a catalyst, encouragement, and motivation. I am an example of this" - MO

Wanting to take advantage of PG marks: Other than the financial incentives, few respondents also stated that they want to continue in CRMC areas because it will give an advantage in PG admissions.

"I am eager to take advantage of CRMC for PG and preparing for it"- MO

Personal desire to work in such areas: There were a very few respondents who said that they were personally motivated to work in CRMC areas.

"I want to stay here as always I had the desire to work for the people. Mother Teresa was my idol" - RMA

It is near to home: For some respondents, especially in Jashpur and for some in Kanker, their home being near to the work place was a motivation of working in the CRMC area.

"I wanted to stay here only therefore I signed the bond"- RMA

"This is not very far from home. There is also option for paying and getting out in case get transferred to more difficult place"- RMA

c) Motivation to remain in a CRMC area: findings from primary interviews

The respondents were asked whether they would want to shift to a non-CRMC area. There were people who said that they would like to shift and there were people who said that they would like to continue working in a CRMC area.

One of the main reasons for people wanting to shift was to be near family. The other reason was that the CRMC incentive did not seem to be a motivating enough factor to stay back. However, this was closely related to the irregular payments of incentive or non-payments of incentives.

"I would like to move out to a non-CRMC area. I am not receiving CRMC regularly, so why to stay in difficult area? - RMA

"CRMC gives satisfaction for working in difficult area only when received on time" - RMA

The main reasons for people wanting to continue in CRMC area were to keep getting CRMC benefits and to take advantage for Post Graduation.

"I don't want to go to a non-CRMC area. I want to prove myself and along with that I am also getting something extra" - RMA

"I would like to move to non-CRMC area or to home town but if CRMC benefits for PG then I would like to stay" - MO

Therefore we find that CRMC incentive and the advantage for Post Graduation are factors in people wanting to remain in CRMC area. Irregularity in payments or non-payments for many months came up as a reason for not wanting to continue in CRMC area, as it then does not provide the necessary incentive to stay. However, being able to stay near one's home also emerged as a significant factor in wanting to shift or not.

3.2.8 Other kinds of Support provided to staff in CRMC areas

The study explored the other types of support available to people working in CRMC areas that are essential for a good working environment. The study explored facilities like housing and transport. It also obtained information in the status of functioning of the various facilities in which the respondents were posted.

a) Housing: Only one-third of the respondents had been given government quarters.

b) Transport: Most people had not been given any means of transportation. They had to use their personal vehicle.

c) Status of Health Facilities: The status of Health facilities showed that these facilities are inadequately staff, including support staff leading to increased pressure on existing staff. There also emerged huge gaps in supply of medicines and other essentials compromising the services being provided. Details have been given in Annexure 1.

For example, in one CHC, the staff reported no supply of Anti-snake venom and Anti rabies vaccine which they said had to be bought by JDS or patients themselves. They reported that there has been no supply of cotton and oxytocin in the last two yrs. Along with this, staffs also reported inadequate supply of gloves, paracetamol, phenyl, flucanazole, diclofinac, septran, mesoprostol and antibiotics. In another block, out of the 33 SHCs, only seven were reported to be functional.

4. DISCUSSION/ANALYSIS

4.1 Positive impact of CRMC in attraction and retention of HR/work force in difficult areas

From the study it has emerged that CRMC has played a role in attraction and retention of staff in difficult areas. For most the extra financial incentive was an important reason for not wanting to shift out. More than half of the respondents had joined only after CRMC was introduced.

The CRMC areas are very challenging places to work in and the financial incentive has ensured that people are motivated to stay on. Receiving extra marks for PG is another motivational element that has helped in retention of staff in these areas.

However, as we will see below, there are a number of gaps in the implementation and management of the scheme that need to be corrected for the scheme to make a bigger impact.

4.2 Irregular payments and non-payments affecting morale of the beneficiaries and harming the purpose of the scheme

In order to be effective, any scheme has to adhere to timelines. However, we find in CRMC that delayed and irregular payment of incentives is the biggest problem faced by the beneficiaries. The study shows that there does not seem to be any functioning system to track the regularity of payments or respond to grievances related to it. It shows that many people are also not sure whether they have received incentives for all the months. Many cases of non-payments came up wherein the beneficiaries, after perusal, have given up the hope of receiving the amount. Any valid reason for non-payment has not been communicated to the beneficiary.

Therefore, receiving the money, which was meant to act as an incentive to work in difficult areas, has instead become one another challenge for the staff to deal with. Therefore there is resentment in not receiving what one is entitled to. This has led to de-motivation and defeats the purpose of the scheme.

In 2012, the state changed its guidelines and removed staff nurses from the CRMC list. It also changed the incentive pattern with staff in only the most difficult and the inaccessible areas getting the incentives. These modifications have led to a lot of confusion in payments.

The state has recently stipulated that the incentives will be paid quarterly so it is hoped that regularity of payments will be ensured in the future. However there is urgent need to address the current grievances and bring them to their logical conclusions. Otherwise this would keep overshadowing any benefits from the scheme and prevent entry of any interested staff into it.

4.3 The current Performance indicators for providing CRMC benefits do not adequately capture the performance of the health staff as the parameters are related more to functioning of a health facility, rather than of the individual staff member

The parameters laid down as performance indicators for CRMC benefits evaluate the individual through the functioning of the heath facility she/he is posted in and therefore it does not adequately capture the workload or performance of the health staff. It also does not take into account the support available for functioning of the facility. This is a concern as the study shows that there are huge gaps with regards to basic essentials needed for a facility to function. This includes inadequate staff, and irregular and inadequate supply of medicines and other essential supplies. Without providing the basic staff requirements and the medicines and equipment, it is not possible to expect that the facility will function up to the standards. For example, the parameters stipulate a certain number of X-Ray or diagnostic tests. However, in one of the CHCs visited (Deobhog), the lab technician who was a regular employee, had got himself transferred to Raipur and instead the JeevanDeep Samiti (JDS) had to employ a lab technician who was not trained. In the same CHC, though there is a radiographer, there is no X-ray machine.

There also seems to be some inconsistencies in the way the parameters are designed and the types of services that are supposed to be provided at the various levels. For example, there are parameters for deliveries at the HSC level whereas there is a lot of emphasis on deliveries being conducted in institutions, at least at the level of the PHC. In Gariaband, the district health administration looked at only one indicator; that of the number of deliveries conducted at the facility. The data on incentives and performance indicators from Gariaband shows that in Gariaband and Chhura blocks, CHC staff received incentives as the number of deliveries was as per criteria. On the other hand the staff in PHCs and HSCs did not receive the incentives, as the number of deliveries conducted in those facilities did not fulfill the performance criteria. It seems that in a way, the staff at the PHCs and SCs has been penalized for referring patients upwards.

Moreover, the HR available and planned to be made available at the various levels does not seem to go in tune with the parameters laid down. For example, many RMAs have been posted at the sub-centers whereas they are neither able to function as outreach workers nor able to undertake tasks like deliveries. In such cases, when the RMA has been posted at the HSC due to some compulsion by the department and the RMA is therefore not able to perform his/her role, the parameters laid down penalizes her/him.

Therefore the system of appraisal as it currently stands, seems to make the individual responsible for whole system, which seems to be unjust. This could lead to further resentment and de-motivation among the staff, which will undo any positive impact of CRMC.

4.4 Initial design made comprehensive but in implementation its scope was substantially decreased and limited to being a financial award scheme

The CRMC was visualized as a comprehensive scheme meant to attract and retain health staff in otherwise underserved areas. Along with financial incentives, the initial design included insurance, educational benefits for children, housing, leave etc. However, in its implementation the scheme was limited to providing financial incentives and certain advantage for entry into PG.

Housing, education facilities, transport and security are the basic essentials demanded by the staff working in any area. The CRMC considers their availability as parameters when grading health facilities and it is common knowledge that their availability is less in the more difficult areas. The study has also found this to be true. This then gives a rationale for providing these facilities as incentives for people to work in CRMC areas, which was included in the initial design. Though the financial incentives have led to retention of staff, non-provision of facilities like housing, education facilities for children, transport and insurance has affected the morale of the staff in the CRMC areas. This may also be one of the reasons for people not finding CRMC attractive enough to join.

The agreement, though is signed between the parties, seems to have become redundant as many of its provisions are not adhered to. There is need to revise and update it as per the current norms and operational possibilities.

4.5 Issues in Grading of facilities

The grading of facilities has been undertaken twice, once at the beginning of the scheme and then again in 2011. Though the number of facilities under CRMC decreased in the second round of grading, the facilities under CRMC were divided into three categories, difficult, most difficult and inaccessible. This increase in categories helped in more rigorous targeting of facilities. The study shows that there were few anomalies in grading, which were later pointed out by the districts. But in some cases, feedback from the district did not translate into modification of the list.

Inconsistencies in classification of facilities have also been seen based on accessibility criteria. Current facilities earlier graded as very difficult has been changed to "difficult area" and reasons were not known among the beneficiaries.

The other issue is that there is no periodicity fixed for modification of grading. The second round of grading was undertaken due to an initiative by the NHSRC.

4.6 Status of facilities and lack of support to the workers leading to demotivation and challenging work environment

The study shows that other than the financial incentives, the working environment still remains very challenging in most of the CRMC areas. This is related to a number of factors:

1. Lack of proper housing and transport- The study shows that most of the staff did not get residential or transport facilities from the department.

2. Inadequate staff (including support staff) leading to increased pressure on existing staff

3. Huge gaps in supply of medicines and other essentials compromising the services being provided

This is a serious concern for the state if it wants to reap the benefits of CRMC. Studies on retention of the health workers have shown that only financial incentives are inadequate (Lehmann *et al*, 2008) and "adequate supplies and appropriate infra-structure are factors that can significantly improve morale" (Willis-Shattuk *et al,* 2008).

4.7 Information about CRMC not publicized nor shared with people who are about to join

For a scheme like CRMC to be effective, the first thing is for people to be aware of it. New recruits need to be made aware of such a scheme. Any advertisements for recruitment of staff should also highlight the advantages of working in a CRMC area. A regular system of informing existing staff and encouraging them to join CRMC areas has to be put into place. Unfortunately, there doesn't seem to be any strategies planned for enabling this. In fact even during counseling of newly recruited staff they are not informed of CRMC and nor given any choice with regards to working in CRMC areas. This has hugely limited the impact of CRMC in increasing HR in difficult areas.

4.8 Monitoring and Grievance Redressal systems weak

The monitoring systems are weak. Though the district was abreast of some of the individual issues, at the state level, the nodal officer was not prepared to take responsibility for any of the problems.

Redressal of grievances with regards to CRMC seemed inconsistent and did not follow a system. Proximity to the district or state leadership and being in a position of power to negotiate seemed to be some of the factors for getting redressal for any complaints.

Unaddressed grievances have led to a lot of frustration for the staff. Most have given up any hope of their complaints being addressed. This is highly de-moralizing for them as

they are made to felt that no one is looking out for them. Being in a difficult area, this feeling becomes more intense and this is not at all conducive for a healthy work environment.

4.9 Reduced payments of RMAs demoralizing

The move of the government's to recruit the three-year medical course graduates as RMAs has been widely praised. It is considered that posting of the RMAs in the PHCs, many of which were without any medical staff, have led to better provision of health services. This has especially been the case in the more remote and underserved areas. In such a scenario, decreasing the amount of incentive is very demoralizing to the RMAs.

4.10 CRMC guidelines need to be made clearer

Some parts of the original guidelines and the subsequent ones seem ambiguous and open to interpretation based on the leadership. The state nodal officer, who would have been responsible for passing the guidelines, also expressed this concern. For standardized implementation of this scheme in all districts, the guidelines need to be made unambiguous. Periodic trainings and meetings on the scheme can go a long way in resolving this issue.

5. CONCLUSIONS AND RECOMMENDATIONS

The study has found that CRMC has been able to fulfil some of it purpose. It has positively impacted the retention and addition of human resource in difficult areas. However, the study also found certain gaps in implementation conditions that could reduce the gains due to this scheme. In order to make the scheme more effective, the gaps in management of the programme, monitoring, and grievance redressal need to be addressed by the department. Following are specific recommendations regarding improvement of the CRMC scheme:

5. 1Recommendations for Immediate Action

a) Establishment of functional CRMC Cells and Grievance Redressal Committees at all levels

The State Nodal office has to be made functional. A CRMC Cell along with a Grievance Redressal Committee may be established in order to provide support to her/him. The Nodal office/CRMC Cell at the State, and District levels should undertake regular and timely monitoring. It should also ensure review and timely grievance redressal. The implementation needs to be regularly reviewed by the state leadership. The existing Grievance Redressal system needs to be revamped and revitalized so that any kind of grievance is recorded and addressed to in a systematic manner. The grievances of individual staff with respect to non-signing of agreement, loss of agreement, non-receipt of incentives, etc need to be resolved at the earliest. A Grievance Redressal Committee may be constituted along with Sub-committees to look into important issues (i.e grading of facilities, performance based management etc) related to CRMC scheme.

b) Formulation of CRMC Operational Guidelines

An operational guidelines on CRMC needs to prepared, that puts together the strategies and outlines the pathways to solve the various problems being encountered by the beneficiary and the block or district health management team. The operational guidelines should explain about the scheme and its features explicitly. It should be made available on the web-site and this should be referred to for any kind of advertisement and recruitment.

c) Creation of a CRMC database and ensuring timely disbursal of incentives

A database needs to be created and maintained of all staff under CRMC along with regular updated information on their receiving the incentives. A system should be established for looking into any kinds of gaps in payment of incentives across various cadres of staffs, along with disbursal of incentives to staff who haven't received them.

5.1.1 Suggestions by respondents

Many of the respondents suggested that Incentives should be made regular. They could be added to monthly salary or could be given in a consolidated manner. Like one respondent said, "they can give for few months together but they need to GIVE it at least". They also suggested that details like information about the number of months and amount of incentives should be

given. In addition to this, funds should be transferred to the block so that the BMO can ensure timely disbursement of incentives.

5.2 Recommendations for CRMC policy

a) System of Grading of Facilities

The state should review the difficulty gradient of facilities at different levels every 3 years. The District Collector could lead the process and if changes are required to current lists, they could indicate the reasons for same. The principle should be that the state would specify from each district the percentage of facilities that could qualify for each of the three difficulty levels and it is left to the district to choose which facilities they would prioritize for each difficulty levels. Thus, in a moderately difficult district, 10% of the facilities could be considered inaccessible; 20% difficult and 40% most difficult. In an easy district, it could be just 10% as most difficult, 20% as difficult and none as inaccessible. In the most difficult district (e.g. Bijapur); even 20% could be inaccessible; 30% most difficult and remaining 50% difficult (exact detail to be finalized by the State). In the state as a whole, the ceiling could be 10% inaccessible; 20% most difficult and 40% most difficult so that budgetary request to central government remains consistent.

b) Revision of CRMC Contract and ensuring adherence to it

The Contract needs to be looked at once again and modified as per current situation and requirements. The clauses in the Contract need to be adhered to. It is important to ensure that the contracts of new joinees/renewal of contracts are done on time without any delay.

c) Increased support to health staff in CRMC areas

In addition to financial incentives, the staff needs to be provided with various supportive services such as housing and transport facilities, insurance and education in order to further keep them motivated for working in the difficult areas of the state. Along with this, the support structures for the health staff also needs to be strengthened in terms of improving human resource availability including the support staff, regular and adequate supply of medicines and other essential commodities.

d) Revision and operationalisation of the Performance management system

The performance management system needs to be revised and operationalised. The performance parameters should be based on the work-load and performance of the service provider and not only be based on facility based performance. The system needs to be sensitive enough to take into consideration the overall infrastructure and support available to the health staff when evaluating her/his performance.

e) Reconsider the change in incentives for RMAs

In 2012, when the incentives given under CRMC were revised, they were reduced for RMAs whereas for rest of the staff they were increased substantially. However, no supporting reasons could be found for this. In the state of Chhattisgarh where there is acute shortage of doctors, RMAs are the only point of contact at number of PHCs, especially in the most difficult areas.. Thus, the decision for reduction of incentives for the RMAs needs to be reconsidered.

f) Increased publicity and visibility for the scheme

Publicity of the CRMC scheme should be improved with availability of CRMC guidelines and related information on NRHM website. Publications in the form of brochures and pamphlets should be developed and distributed. Widespread publicity through advertisements, mass media and articles in national and regional papers and journals of medical colleges regarding the scheme so that people are well informed of the scheme prior to applying for posts, signing of agreement at the time of joining which will be beneficial to both parties.

5.2.1 Suggestions by respondents

- **CRMC coverage for entire staff**

CRMC benefits should not be limited for only service providers but should be extended for the entire staff including the supporting staff. It should include ANM, MPW, NRHM staff, lab technicians etc.

- **CRMC incentives and other supportive services**

The amount of incentives should be increased and not decreased. The other supportive benefits included under CRMC are to be ensured such as availability of staff quarter, water, and electricity. In addition to this, education benefits for children and insurance of family should also be included in CRMC.

- **Scope for further education and regular trainings**

Improvement in higher education facilities should be done in difficult areas. In addition, opportunities for further studies, scholarships, promotions, especially for RMAs should be increased. Regular training of staff posted at the hospital should be conducted and should be rationalized so as to make the most of the available resources. The people who are from such difficult areas need to be trained so as to retain them in local areas itself.

- **Compulsory service in rural and difficult areas**

It should be made compulsory for every doctor to serve in rural areas after Post Graduation and the time period should be fixed for all the staff to serve in conflict affected areas.

- **Grading of health facilities**

It has to be more sensitive, "Gap should be significant between normal and difficult". In addition to this, block level officials should also be involved in the process as they know better about the facilities.

- **Reduce/eliminate political pressure**

It is important to reduce/eliminate political pressure so that there is no political interference for staff posting/transfer.

- **Staff rotation under CRMC**

Staff rotation should be done at all the facilities so that everybody get a chance to work in difficult and most difficult area and no one feels like getting stuck to a particular place.

- **Performance based incentives**

Leadership at block/district are of the opinion that CRMC incentives should be performance based while the beneficiaries said that it should not be given like this as, if the performance of the health facility is being evaluated for disbursement of the incentives then the staff working hard will not get any additional reward.

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Annexure1: Status of facilities visited during the study

Kanker District

- **CHC Bhanupratappur (Most difficult)**

Staff availability: There are four doctors posted at the CHC including two Pediatricians and two LSAS trained Medical Officers. Two doctors posted at the facility have gone for Post graduation. 6 staff nurses are posted at the CHC at present.

Availability of medicines and supplies: One of the respondents stated that currently in terms of antibiotics, only septran was available at the CHC. The drugs are being supplied by the district but are not adequate for the facility. As a result, they have to purchase large quantity of drugs through JDS. Along with this, the quality of drugs, gloves etc. were also reported to be low.

Availability of diagnostics: X-ray facility is available at the CHC. Laboratory tests like TLC, DLC, ESR, blood grouping, Rh typing, Sickelling test (solubility and slide test), routine and microscopy urine analysis, Widal test are done at the facility.

- **PHC Korar (Inaccessible)**

Staff availability – There is one Medical Officer posted at the PHC along with one AYUSH Medical Officer and one RMA. No staff nurse is currently posted at the facility.

Availability of diagnostics – The tests which were being done are Haemoglobin Estimate, TLC, DLC, E.S.R., Malaria/Filaria Parasite, Blood grouping, Rh Typing, Sickelling test (solubility and slide test), Urine routine and microscopic (sugar, albumin, bile salt and bile pigment), WIDAL, Pregnancy test, HIV (strip method), and Blood Sugar estimation. Only X-ray and stool analysis were not being done. It isn't a designated RNTCP center so sputum was also not done.

Other health facilities – There are five Sub Health Centers under the PHC. One RMA is posted at one of the SHCs. ANM are posted at all the SHCs whereas MPWs are posted at all the facilities except one.

- **CHC Antagarh (Most Difficult)**

Staff availability - There is one MO who is the BMO, and another who is attached with the CHC, an AYUSH MO, and one RMA at the CHC. There are 2 staff nurses who are posted at the CHC.

Availability of medicines and supplies: The staff reported irregular and inadequate supply of drugs. According to them only basic medicines are being supplied and they have to purchase most medicines through JDS. They also need to supply medicines to the MMU from the CHC, which makes it difficult as they themselves don't get regular and adequate supplies.

Availability of diagnostics: The tests done at the CHC are Haemoglobin Estimate, TLC, DLC, E.S.R., Malaria/Filaria Parasite, Blood grouping, Rh Typing, Sickelling test (solubility and slide test), Urine routine and microscopic (sugar, albumin, bile salt and bile pigment), WIDAL, Pregnancy test, HIV (strip method), and Blood Sugar estimation. Only stool analysis was not being done and they sent the samples to Kanker. X-Ray was also being done. They will start the ICTC centre and HIV testing after training on the 21st March.

Other health facilities: There are 3 PHCs and 33 SHCs. However, one PHC is non-functional as there is no building. Out of the 33 SHCs, only 7 were reported to be functional.

Other issues: Being a conflict area, there are lots of emergencies, putting a lot of additional pressure on the limited staff. According to the respondents, non-availability of essential medicines and supplies also makes it more challenging to deal with such situations. However, despite these issues, CHC Antagarh has been awarded by the state for functioning well.

- **PHC Amabeda (Most Difficult)**

In Amabeda, there is one RMA and one staff nurse has joined recently. The staff reported inadequate medicines/ equipment etc at the PHC. They also said that OPD/IPD has increased after the posting of RMA.116 deliveries have been done since last one year while it was 24 the year before.

District Gariaband

- **CHC Deobhog (Most Difficult)**

Staff availability: There are two medical Officers posted at the CHC, one among them is posted at CHC Mainpur but made the facility in-charge and visits on few days of the week. Earlier in

the CHC there was 1 staff nurse and 1 ANM. Now three more staff nurses have joined. One RMA is also posted at the facility.

Availability of medicines and supplies: It was found that there is no supply of medicines for around 6 months and medicines had to be bought by patients who then incurred out of pocket expenditure. The staff reported no supply of Anti-snake venom and Anti rabies vaccine which they said had to be bought by JDS or patients themselves. They reported that there has been no supply of cotton and oxytocin in the last 2 yrs. Along with this staff also reported inadequate supply of gloves, paracetamol, phenyl, flucanazole, diclofinac, septran, mesoprostol and antibiotics. The drugs for malaria and TB were available.

Availability of diagnostics: 1 lab technician posted at CHC has been deployed to Raipur whereas 1 technician recruited from JDS is not well from last one month. Thus, there is no technician currently at the facility. 1 MPW is posted at CHC who performs basic tests such as for TB and malaria but currently no pathology tests are done. A radiographer has been posted at CHC however, there is no X-ray machine in the facility.

Other health facilities: There are 2 PHCs under CHC Deobhog. In PHC Jhakarpara, there is 1 RMA and 1 peon. PHC Diwanmuda has no building and functions from AWC. There is only an ophthalmic assistant, 1 ANM and 1 peon posted there. 21 SHCs come under the CHC. Currently there are 10 ANMs of whom 6 are experienced (5-10 yrs) while 4 have joined recently and may go to other districts if given an opportunity.

Other issues: RSBY is not functional as no machine has been installed. The staff reported that JSSK is not being implemented and women have to incur out of pocket expenditure for institutional delivery. The area faces electricity problem, however, solar panels are used at the CHC.

- **CHC Mainpur (Most Difficult)**

Staff availability: There are two doctors posted at the CHC. Five staff nurses currently posted at the facility out of which three have recently joined. In addition to this, one RMA and one LHV are also posted.

Availability of medicines and supplies: The respondents reported of inadequate drug supply at the facility. One of them mentioned of receiving small quantity of paracetamol which was not available for around 1 week.

Availability of diagnostics: At present there are 2 lab technicians working at the CHC, one for ICTC and the other for malaria. Tests that are done include LP, sugar, urine, DLC, TLC, ESR, Typhoid, Blood sugar, Albumin and Blood group. A Radiographer is posted and does x-rays.

Other health facilities: There are 50 SHCs under CHC. 35 ANMs are posted in the block at different SHCs along with 32 MPWs.

Other issues: The average number of deliveries conducted at the CHC is 25 per month. JSSK is not being implemented at present.

- **CHC Gariyaband (Difficult)**

Staff availability: 4 doctors are posted at the CHC which includes one Block Medical Officer. Apart from this, one Civil Surgeon and Chief Medical and Health Officer is also posted there. 6-7 new staff nurses have joined after formation of new district last year.

Availability of medicines and supplies: The staff reported of inadequate supply of drugs.

Availability of diagnostics: There is only 1 lab technician currently working at the CHC who joined 15 days back.

Other health facilities: There are 3 PHCs under CHC Gariyaband and 43 SHC. PHC Piparchedi has an old building and is functional, in PHC Kosmi construction is going on, and for PHC Kochwaye, construction has been sanctioned. ANM have been posted in all sub centers since last 1 month.

Other issues: Working as a CHC after formation of new district as facilities are not adequate to run DH. On 1st May 2013 CHC it is to be designated as DH. It is a 50 bedded facility with average OPD of 70-80 per day. The number of deliveries conducted at the CHC is around 40 in a month with no c-section. There is no blood storage unit and other required facilities not available for c-section. Very few MTPs are done and there is no SNCU.

District Jashpur

- **CHC Kansabel (Difficult)**

Staff availability: There are 3 MBBS doctors at the CHC, among them 1 joined 6 months back. There are 8 staff nurses at the CHC. There are a total of 5 RMAs in the block: 1 at CHC, 2 at 2 PHCs, 2 at SHCs (SHC Bataikela and the other at SHC Bagiya).

Availability of medicines and supplies: The staff interviewed reported of irregular supply of drugs for last 1 year which is then being purchased through JDS. They further mentioned of inadequate supply for oxytocin, antibiotics and gloves. One of the respondent even mentioned that the Mitanin drug kit is not refilled since April 2012.

Availability of diagnostics: There are 3 lab technicians currently working at the CHC, 1 is under regular posting whereas the other 2 are for AIDS and RNTCP respectively. A radiographer has been appointed 3-4 months back.

Other health facilities: There are 2 PHCs, both PHCs Bagiya and Dogda have 1 AYUSH MO and 1 RMA. There are 23 SHCs while there are 25 ANMs and 20 MPWs (10 new + 10 contractual). However, there are 2 SHCs where there is no ANM posted.

Other issues: The average OPD is 100-150 for a day. 1138 deliveries were conducted at the CHC from April 2012 to March 2013. There is no LSAS trained doctor posted at the CHC due to which cesarean deliveries are not performed. Enrolment under MSBY to start in June and meanwhile RSBY as per earlier guidelines is being implemented.

- **PHC Dokda (Most Difficult)**

The average OPD is 15-20 per day. There were 57 deliveries conducted at the CHC from April 2012 to March 2013. No medicine has been supplied to the facility from last 6 months. There is no lab technician posted at the PHC. For identification of malaria, slides are prepared and taken to the sector meeting for examination but either the report never comes or is delayed.

- **PHC Bagiya (Most Difficult)**

Per day OPD is 20. No delivery is conducted as there is no female staff at the PHC. The staff reported inadequate supply of drugs.

- **CHC Bagicha (Most Difficult)**

Staff availability: At CHC, 4 MBBS doctors are posted along with 1 RMA and 4 staff nurses.

Availability of medicines and supplies: The staff reported inadequate supply of drugs though Anti rabies vaccine and anti snake venom were found to be available at the CHC.

Availability of diagnostics: There are 2 lab technicians posted at the facility (1 regular + 1 contractual).

Other health facilities: There are 9 PHCs in the block with one RMA and one Ayush MO at every PHC. There are 62 SHCs under the CHC where 36 MPW and 18 ANM posts are vacant. In Six SHCs there is no staff and the adjoining SHC staff is attached.

Other issues: The average OPD is 150/day. The average number of deliveries is 60-80 per month. The patients are either referred to Ambikapur or Kunkuri.

- **PHC Sanna (Unclear)**

Staff availability: PHC Sanna has on MO, 2 RMAs, 1 LHV, 2 ANM, 1 Peon, 2 Ward boys, 2 Sweepers, 1 Pharmacist, 1 Dresser and 1 Driver posted at the facility.

Availability of medicines and supplies: The staff reported of inadequate supply of drugs.

Availability of diagnostics: 1 lab technician was attached to the PHC through Manora CHC but his contract ended 10 days back so at present there is no lab technician.

Other health facilities: There are 6 SHCs under this PHC. In SHC Dumarpani there is no staff. In SHCsMaina and Tora there is an ANM and MPW. In SHC Sonmudh there is MPW and the ANM is attached with CHC Bagicha. In Tamiya and MahuaSHCs there is only one MPW in each and no ANM.

Other issues: The average per day OPD is 20-25 with 15-20 deliveries per month. It was designated as CHC till 2010 then was made into a PHC. It has 4 ambulances but only 1 is in working condition. JSY is functional but not JSSK. MSBY enrolment is underway. The area faces major problems with regards to water and electricity. The staff said that they refer patients to Ambikapur for cesarean deliveries, as if they are referred to DH, Jashpur then they further refer them to Holy Cross, Kunkuri

- **District Hospital Jashpur (Difficult)**

Staff availability: At the DH, there are 11 MBBS doctors, four Specialists (2 in Medicine, 1 Orthopedic and 1 Gynecologist), one 1 Dentist and 1 AYUSH MO. One doctor is LSAS trained.

Availability of medicines and supplies: The staff interviewed reported of low quality drugs and other supplies. They further mentioned of inadequate supply of ASV and malaria drugs.

Other issues: Blood bank is not functional. RSBY and JSSK are functional. Two 108 vehicles are available for referral. Patients are generally referred to Ranchi more than Raipur as its nearer or even to Holy Cross, Kunkuri. The average OPD is 175/day. The average number of deliveries is 90-100 per month with 4 c-sections performed last year.

Annexure 2: Checklist for Desk Review

1. Government schemes to get health personnel for health facilities in remote areas
2. Start of CRMC and its objectives
3. Implementation of the scheme in the state since its start, along with its categorization
4. Process of grading of facilities- number of times done and how, problems faced.
5. Number of health personnel posted under CRMC since the start and the places they have served (disaggregated district wise/personnel wise.
6. Current status of recruitment under CRMC
7. Districts/ blocks/PHCs where health personnel are reluctant to work and how these areas are being managed
8. Hospitals where there has been no doctor/RMA/Nurse posted till date
9. Incentives being provided to the health personnel since the start of the scheme- detailed data.
10. Career development (higher studies) options being provided to the interested health personnel.
11. Increment in incentives of the staff after two years of their service
12. Group insurance scheme for all the staff
13. Compensation to staff in case of violent attacks
14. Any staff member extended her/his service under CRMC after completion of four years

Annexure 3: Check list for District/State level official's interview

1. How effective is the notion of providing incentives to the doctors serving in the difficult areas?
2. Do you think the incentives being provided to the doctors are sufficient enough to attract them to serve in the difficult and remote areas of the state? Any other factors that might further motivate them?
3. What have been the main difficulties on implementing this scheme?
4. Are there cases of doctors leaving because of their posting in remote areas? How such situations are dealt with?
5. Suggestions for improvement
6. Future plans

Annexure 4: Questionnaire for Doctor/RMA/Nurse who opted for CRMC (those previously residing in CRMC areas)

Personal and professional details

1. Name of respondent:
2. Age:
3. Sex (M/F):
4. Native place:
5. Educational qualifications (including place of study)
    a. MBBS
    b. MD (specialization)
    c. Practitioner in Modern and Holistic Medicine
    d. Nursing
    e. Others, please related specify:
6. Total work experience:
7. Districts where worked so far and duration:
8. Present Designation:
9. Any previous experience working in rural/ remote rural area - which area, when, in public/ private sector
10. How much time in present posting, since when?

Awareness about Government schemes

11. Are you aware of government schemes to get health personnel for health facilities in remote areas?
12. Are you aware about the incentives of the state government? What is your view about it – is it effective? If yes – why? If no- why not?

Experience of working under CRMC

13. Reasons for joining CRMC.
14. Are you receiving the incentives since the start of scheme/ or the time you joined? Give in detail the amount of incentives received and time lines. Specify any problems faced and causes of delay.

15. Place of residence during present posting:
16. Mode of transport to the health facility:
17. Was there any choice given in selecting area for posting / were your preferences accommodated?
18. Facilities provided for working in the present location
    a. Housing, transport
    b. List of medical duties and activities
    c. Remuneration
    d. Availability of support staff, supervisors, referral units, other facilities
    e. Any other-give details
19. Opportunities for personal development/ capacity-building:
20. Problems faced in discharging duties, problems at work:
21. Have you worked before under CRMC? If yes, then where and what was your experience there? Why did you leave that area and come here?

Feedback and suggestions

22. What difference has the CRMC made to your personal and professional life?
23. Given a choice, would you like to be posted at a non-CRMC mainstream area? Give reasons.
24. How can the scheme be made more effective?
25. What are your suggestions for other ways to get doctors posted in rural or difficult areas?

Annexure 5: Questionnaire for Doctor/RMA/Nurse who opted for CRMC (those who opted for CRMC areas)

Personal and professional details

1. Name of respondent:
2. Age:
3. Sex (M/F):
4. Native place:
5. Educational qualifications (including place of study)
    a. MBBS
    b. MD (specialization)
    c. Practitioner in Modern and Holistic Medicine
    d. Nursing
    e. Others, please related specify:
6. Total work experience:
7. Districts where worked so far and duration:
8. Present Designation:
9. Any previous experience working in rural/ remote rural area - which area, when, in public/ private sector
10. How much time in present posting, since when?

Awareness about Government schemes

11. Are you aware of government schemes to get health personnel for health facilities in remote areas?
12. Are you aware about the incentives of the state government? What is your view about it – is it effective? If yes – why? If no- why not?

Experience of working under CRMC

13. Reasons for joining CRMC.
14. Are you receiving the incentives since the start of scheme/ or the time you joined? Give in detail the amount of incentives received and time lines. Specify any problems faced and causes of delay.

15. Place of residence during present posting:
16. Mode of transport to the health facility:
17. Was there any choice given in selecting area for posting / were your preferences accommodated?
18. Were you relocated to join under CRMC or posted at the same facility?
19. Facilities provided for working in the present location
    a. Housing, transport
    b. List of medical duties and activities
    c. Remuneration
    d. Availability of support staff, supervisors, referral units, other facilities
    e. Any other-give details
    f. Opportunities for personal development / capacity-building:
    g. Problems faced in discharging duties, problems at work:
    h. Have you worked before under CRMC? If yes, then where and what was your experience there? Why did you leave that area and come here?

Feedback and suggestions

20. What difference has the CRMC made to your personal and professional life?
21. Given a choice, would you like to be posted at a non-CRMC mainstream area? Give reasons.
22. How can the scheme be made more effective?
23. What are your suggestions for other ways to get doctors posted in rural or difficult areas?

Annexure 6: Questionnaire for Doctor/RMA/Nurse who opted out of CRMC after joining

Personal and professional details

1. Name of respondent:
2. Age:
3. Sex (M/F):
4. Native place:
5. Educational qualifications (including places of study)
    a. MBBS
    b. Post Graduation
    c. Practitioner in Modern and Holistic Medicine
    d. Nursing
    e. Others, please related specify:
6. Total work experience:
7. Present Designation:
8. How much time in present posting, since when?
9. Previous experience of working under CRMC- district posted and duration served there

Awareness about Government schemes

10. Are you aware of government schemes to get health personnel for health facilities in remote areas?
11. Are you aware about the incentives of the state government? What is your view about it – is it effective? If yes – why? If no- why not?

Experience of working under CRMC

12. Experience of working under CRMC.
13. Experience of receiving incentives during the serving period.
14. Was there any choice given in selecting area for posting / were your preferences accommodated?
15. Were you relocated to join under CRMC or posted at the same facility?
16. Reasons for opting out of CRMC.

Feedback and suggestions

17. What difference did CRMC made to your personal and professional life?
18. Given a choice, would you like to be posted at a CRMC mainstream area again? Give reasons.
19. How can the scheme be made more effective?
20. What are your suggestions for other ways to get doctors posted in rural or difficult areas?

Annexure 7: Questionnaire for eligible Doctor/RMA/Nurse who did not opt for CRMC

Personal and professional details

1. Name of respondent:
2. Age:
3. Sex (M/F):
4. Native place:
5. Educational qualifications (including places of study)
    a. MBBS
    b. Post Graduation
    c. Practitioner in Modern and Holistic Medicine
    d. Nursing
    e. Others, please related specify:
6. Total work experience:
7. Present Designation:
8. How much time in present posting, since when?
9. Any previous experience working in rural/ remote rural area - which area, when, in public/ private sector

Awareness about Government schemes

10. Are you aware of government schemes to get health personnel for health facilities in remote areas?
11. Are you aware about the incentives of the state government? What is your view about it – is it effective? If yes – why? If no- why not?

Experience of CRMC

12. Was there any chance given to you for working under CRMC?
13. Was there any choice given in selecting area for posting?
14. Reasons for not joining.

Feedback and suggestions

15. Given a choice, would you like to be posted at a CRMC mainstream area in future? Give reasons.
16. How can the scheme be made more effective?
17. What are your suggestions for other ways to get doctors posted in rural or difficult areas?

Annexure 8: CRMC Categorization of Public Hospitals

CRMC categorization of District/Civil Hospital			
Sl. No.	**District**	**Category of District/Civil Hospital**	
		2009	**2011**
1	Bastar	Normal	Accessible
2	Bijapur	Most Difficult	Most Difficult
3	Bilaspur	Normal	Accessible
4	Durg	Normal	Accessible
5	Dantewada	Most Difficult	Most Difficult
6	Dhamtari	Normal	Accessible
7	Janjgir	Normal	Accessible
8	Jashpur	Most Difficult	Difficult
9	Kanker	Difficult	Accessible
10	Kawardha	Difficult	Accessible
11	Korba	Normal	Accessible
12	Koriya	Most Difficult	Difficult
13	Mahasamund	Normal	Accessible
14	Narayanpur	Most Difficult	Most Difficult
15	Raigarh	Normal	Accessible
16	Raipur	Normal	Accessible
17	Rajnandgaon	Normal	Accessible
18	Sarguja	Difficult	Accessible

CRMC categorization of Community Health Centers								
Sl. No	**District**	**No. of CHCs under CRMC**						
		2009			**2011**			
		Difficult	**Most Difficult**	**Total**	**Difficult**	**Most Difficult**	**Inaccessible**	**Total**
1	Bastar	0	10	10	6	1	0	7
2	Bijapur	0	4	4	0	1	2	3

3	Bilaspur	5	0	5	4	0	0	4
4	Durg	1	1	2	1	0	0	1
5	Dantewada	0	6	6	3	1	0	4
6	Dhamtari	0	1	1	1	0	0	1
7	Janjgir	4	0	4	1	0	0	1
8	Jashpur	0	8	8	4	1	0	5
9	Kanker	0	8	8	0	5	0	5
10	Kawardha	4	1	5	0	0	0	0
11	Korba	3	1	4	0	1	0	1
12	Koriya	0	4	4	1	1	0	2
13	Mahasamund	2	0	2	0	0	0	0
14	Narayanpur	0	1	1	0	0	1	1
15	Raigarh	5	0	5	2	1	0	3
16	Raipur	6	0	6	2	3	0	5
17	Rajnandgaon	1	3	4	0	3	0	3
18	Sarguja	0	19	19	9	4	0	13
	Total	**31**	**67**	**98**	**34**	**22**	**3**	**59**

CRMC categorization of Primary Health Centers

Sr. No.	District	**No. of PHCs under CRMC**						
		2009			**2011**			
		Difficult	**Most Difficult**	**Total**	**Difficult**	**Most Difficult**	**Inaccessible**	**Total**
1	Bastar	0	56	56	12	16	5	33
2	Bijapur	0	12	12	0	0	13	13
3	Bilaspur	0	36	36	33	2	0	35
4	Durg	0	9	9	21	0	1	22
5	Dantewada	0	24	24	1	8	7	16
6	Dhamtari	0	7	7	8	2	1	11
7	Janjgir	0	13	13	10	0	0	10
8	Jashpur	0	32	32	14	11	0	25
9	Kanker	0	28	28	1	11	5	17
10	Kawardha	0	23	23	8	4	0	12
11	Korba	0	37	37	11	7	0	18
12	Koriya	0	25	25	5	3	0	8
13	Mahasamund	0	20	20	15	2	0	17
14	Narayanpur	0	7	7	0	0	7	7
15	Raigarh	0	29	29	20	1	0	21
16	Raipur	0	20	20	7	13	0	20
17	Rajnandgaon	0	16	16	4	10	3	17
18	Sarguja	0	78	78	30	16	3	49
	Total	**0**	**472**	**472**	**200**	**106**	**45**	**351**

Annexure 9: Facility wise categorization

SCORING AND GRADING OF FACILITIES

All facilities would finally be graded and categorized in the following categories. There would be various combination of the A, E, H and V scores .A range of indicative scores from sample data sets are provided below:

1. Inaccessible
2. Most Difficult
3. Rural and difficult
4. Rural but not remote

Sl No	Grades	Inferences	Indicative Scores from sample data sets
1	Rural but not remote	Motorable road to facility (>60 Kms from DHQ and/or >60 Kms from nearest urban center); and one of the criterion (>30 kms from BHQ or >10 kms from nearest state/national highway) with public transport in place, housing available either in government /or rented building and no vacant position of doctors.	A1 E0H0V0 A0E1H0V0 A0E0H1V0 A0E0H0V1
2	Rural and difficult	• Motorable road to facility; >60 Kms from DHQ and/or >60 kms from nearest urban centres, two of the criterion >30 kms from BHQ, >10 kms from nearest state/national highway; with public transport in place, housing available either in government /or rented building and no vacant position of doctors. • No motorable road, road head over 2 to 15 Kms away or <3hrs walking distance and road cut off for over 1-6 months. Free movement affected, highly/forested and tribal, API<5 and MO/specialist position vacant • Along with these, if the facility is in desert/island/hilly/forest/tribal	A2E1H0V0 A2.5E1H0V0 A2E0H1V0 A2E1H0V1 etc
3	Most Difficult	• No motorable road, road head over 2 to 15Kms away or <3hrs walking distance and road cut off for over 6 months. Free movement affected, hilly/forested and tribal, API>5 and MO/specialist position vacant for more than a year • Any PHC which is in a rural area and more than 60 kilometres away from the district head quarters, or any urban area of more than 100000 more than at least 10 kilometres away from the national high way or any	A2E2H2V2 A2E2H2V1 A3E1H1V1 A3E1H2V0 A3E2H0V0 A3E0H0V0 A3E0H3V0 etc

		other busy highway will be considered most difficult. 1. More than 30 kilometres way from the district head quarters 2. Public transport for these places (lack of public transport less than once a day) can be used to lower the districts from distance of block or from national high way. 3. If the distance is less than 30 kilometres from the block headquarters or less than 10 kilometres from the national highway is also categorised as most difficult. These criteria apply irrespective of the environment, housing or vacancy factors. If a PHC is categorised as difficult but it has additionally other criteria of environment+housing+vacancy then it can be considered as most difficult. (E2 or V2) rest will be taken as difficult.	
4	Inaccessible	• Any primary health centre which is not on the road, and doctor/nurse/ staff member have to walk more than 1 or 2 kilometres to reach the facility is considered as inaccessible. Those who have to walk more than 3 hours to reach is a special subcategory of inaccessibility in it. • If it is on the road head, but the road is cut off for more than one month in a year and there is no public transport is also in the same category of inaccessible. • If the road is cut off for more than six months irrespective of the public transport it is classified as inaccessible. • Part of the LWE district, hilly/forest/tribal, API>5 and MO/specialist position vacant for more than a year	A3E2H1V0 A4E2H2V2 A4E3H0V0 A3E3H0V1 A0E3H0V0 A1E3H0V0 A2E3H0V0 etc

Note: All the sub centres belonging to a primary health centre which is inaccessible are also rated inaccessible. Sub centre which are inaccessible though the link PHC is accessible are not currently identified, they will continue to have same category of PHC as at this stage they are not considered.

Scoring of individual district sheets

1. **Criteria for Accessibility**

Sl no	Score	Criterion
1	A0	if distances from DHQ is <60, distance from nearest urban center is <60,

		distance from BHQ is <30 and distance to highway is <10 mortarable road, doest not get cut off regular public transport
2	A1	If distance from DHQ is >60 and/or distance from nearest urban center is >60, and other similar to above
3	A1.5	If distance from DHQ is >60 and/or distance from nearest urban center is >60, and/or distance from BHQ is >30 or distance from highway is >10 kms; other criterion similar to A0
4	A2	If distance from DHQ is >60 and/or distance from nearest urban center is >60, and distance from BHQ is >30 and distance from highway is >10 kms; other criterion Motorable road, does not not get cut off regular public transport
5	A3/A4/A5	Same as A2 add one point each for other criterion to get A3/A4/A5 If distance from DHQ is >60 and/or distance from nearest urban center is >60, and distance from BHQ is >30 and distance from highway is >10 kms; other criterion no mortarable road – one point get cut off for >6 months - one point no regular public transport – one point

2. Criteria for Environment: social and natural

Sl no	Score	Criterion
1	E1	Part of LWE district/block by definition **OR** Any Hilly over 3000 ft/ any tribal area or any desert area or within 3 km of any forest area- 1 pt. Or any island.
2	E2	Police stations managed as in LWE areas,, free movement not possible(in holding phase) **OR** Tribal and forested/hilly with Falciparum malaria and API>5
3	E3	Active conflict for most of the year, with armed special police forces placed there(in clearing phase).
4	E0	When there is favorable environment.

3. Criteria for Housing and Family Amenities

Sl no	Score	Criterion

1	H0	Housing in government building or rent available, with electricity > 8 hours per day and water.(tube well with hand pump at least). HS school within 30 km of the place, and primary school within 2 km of the place.
2	H1	One of three criteria above not available.
3	H2	Two of three criteria above not available.
4	H3	All three not available- available house is kutcha house and/or inadequate to keep family for four. And also if there is no housing facility either in government and rent.

4. Criteria for Vacancy Assessment:

Sl no	Score	Criterion
1	V0	If all MO posts sanctioned are filled in respective facilities
2	V1	If MO posts sanctioned are vacant for one year
3	V2	If MO posts sanctioned are vacant for two year
4	V3	If MO posts sanctioned are vacant for 3 or >3 years
Vacancy refers only to Medical Officers , MBBS (MO)		

Please note that in the data formats (A, E, H and V) ,wherever any codes are used (e.g.NA, Y, N etc.) , please explain what the code means as a foot note in that specific format.

Annexure 10: Inaccessibility scoring

Name of district		1. Data format for accessibility										
Name of CHC/PHC	**Category**	**Distances of PHC from urban centers**				**Road Access**				**Public Transport Availability**		**Score**
		Distance from DH- in km	Distance from Block HQ- in km	Distance to Nearest urban center with > 1 lakh population	Distance to Nat.highway or other busy highway	Is there a motorable road upto the village: Yes/No	If No: Distance of nearest road head in terms of km & walking time	Does it get cut-off by rains/snow for much of the year- Y/No	If yes – for how many months	Bus, Train, Boat, share taxi-taxi on hire	Frequency :1- 2/day :> 2 /day.	

2. Criteria for Environment: Social and Natural							
Type of Conflict	Level of Conflict- A/B/C#	Is it hilly /desert/ forest/ island area- indicate which it is (not just yes or no	Describing features of such areas	Is it a tribal block. Y/N	API for malaria of that block	Informant- name and mobile no	**Score**

3.Criteria for Housing and Family Amenities								
Is there Govt. housing available\ for doctors- state number of doctors for whom avail.	If No, is there at least three room rental available(including kitchen etc) for doctors	Is there Govt. housing available for nurses. State number of nurses for whom available	If No, is there at least three room rental available(including kitchen etc) for nurses	Is there water supply	Is there electricity supply for > 8 hours per day	Distance to nearest middle school(5 to 8th class)	Distance to nearest HS school.	**Score**

4. Criteria for Vacancy Assessment						
How long has the post been " effectively" vacant in yrs – (discount any appointments of less than two months			Nature of vacancy- A/B/C/D/E/F #			
M.B.B.S	RMA	AYUSH	M.B.B.S	RMA	AYUSH	**Score**