CHAPTER-II
PERFORMANCE AUDIT

2.1 National Rural Health Mission

2.2 Implementation of National Food Security Mission

CHAPTER II

HEALTH AND FAMILY WELFARE DEPARTMENT

2.1 Performance audit on National Rural Health Mission

2.1.1 Introduction

Government of India (GoI) launched the National Rural Health Mission (NRHM) in April 2005 to provide accessible, affordable, accountable, effective and reliable health care facilities to the rural population. NRHM was aimed to help States to achieve goals set under NRHM framework for implementation during 2012-17 to reduce:

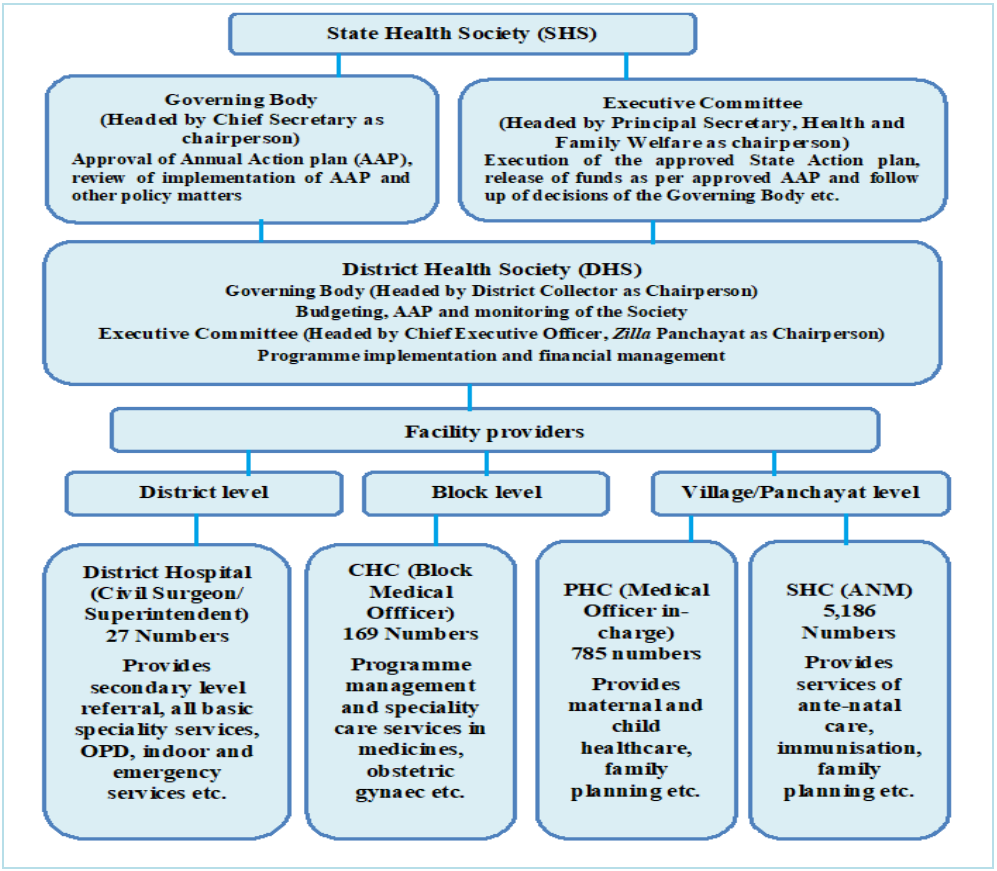
- Infant mortality rate (IMR) to less than 25 per 1,000 live births
- Maternal mortality rate (MMR) to 100 per lakh live births
- Total fertility rate (TFR) to 2.1 by 2017 and stabilising it.

The key strategy of the Mission was to bridge the gaps in health care facilities, facilitate decentralised planning in health sector, providing an umbrella to existing programmes of health and family welfare including reproductive and child health and various disease control programmes.

2.1.2 Organisational set up

NRHM is a mission mode programme carried out by State health society (SHS) as shown in **Chart 2.1.1** below:

Chart 2.1.1: Organisational chart



As on March 2017, there were 169 community health centres[1] (CHCs), 785 primary health centres[2] (PHCs) and 5,186 sub-health centres[3] (SHCs) functioning in the State for providing healthcare services to the rural population.

2.1.3 Audit objective

The objectives of performance audit were to assess the impact of NRHM on improving reproductive and child health in the State by test check of the:

- extent of availability of physical infrastructure;
- extent of availability of health care professionals; and
- quality of health care provided

2.1.4 Audit criteria

The audit criteria were derived from the following sources:

- NRHM framework for implementation 2005-12 and 2012-17
- NRHM operational guidelines for financial management
- Indian public health standards (IPHS) guidelines 2012 for SHCs, PHCs, CHCs and District Hospitals (DHs)
- Operational guidelines for quality assurance in public health facilities 2013 and
- Assessor's guidebooks for quality assurance in DHs 2013 and CHC (first referral unit) 2014

2.1.5 Scope and methodology

The PA on NRHM with special focus on reproductive and child health (RCH) for the period 2012-17 was conducted during April-July 2017 covering seven[4] out of 27 districts by sampling[5] method. In these sampled districts, seven DHSs, 14 CHCs (two from each district), 28 PHCs (four from each district with two under each CHC) and 84 SHCs (12 from each district with three under each PHC) were also selected by SRSWOR method. The details of districts and health centres selected are detailed in ***Appendix 2.1.1.***

Audit also scrutinised the records/ information collected from the office of the Mission Director and Directorate of health services to assess the overall position at the State. Apart from examination of documents, joint physical inspection of 133 health facilities, interview of 840 beneficiaries who had undergone child deliveries during 2014-17 (out of 16,383 registered beneficiaries under the selected SHCs) and cross verifications of records at various levels were also undertaken.

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1 For a population of 1.20 lakh in rural area and 0.80 lakh in tribal area, there should be one CHC with a minimum 30 bedded accommodation and one operation theatre. In addition to two regular Medical officers, there should be specialist services in surgery, gynaecology and paediatrics

2 For a population of 0.30 lakh in rural areas and 0.20 lakh in tribal areas, there should be one PHC with a minimum six bedded accommodation and one Medical officer

3 One SHC for a population of 5,000 in plain area and 3,000 for hilly and tribal area

4 Bilaspur, Jashpur, Kanker, Korea, Mahasamund, Raipur and Rajnandgaon

5 Adopting simple random sampling without replacement (SRSWOR) method, seven districts were selected, of which six (except Raipur) had rural population of more than 70 *per cent*. However, Raipur being part of selection by SRSWOR, and also the Capital district, is selected for examination.

An entry conference was held (April 2017) with the Principal Secretary (PS), Health and Family Welfare Department (Department), Government of Chhattisgarh, to discuss the objectives, scope and methodology of the performance audit. An exit conference was also held (March 2018) with the PS of the Department to discuss the audit findings. The views/replies of the Department have been suitably incorporated in the report.

Audit findings

2.1.6 Planning

The NRHM operational guidelines for financial management prescribe a bottom up approach to planning. Under this, block health action plan (BHAP) was to be prepared based on inputs from the implementing units (CHCs, PHCs and SHCs). The BHAPs would then be aggregated to form District health action plan (DHAP) which would be further aggregated at State level to form the State programme implementation plan (PIP). The State PIP is to be submitted to GoI by 31 December to facilitate approval of the plan by 28 February.

Audit observed that the State Government prepared the PIP on the basis of BHAP and DHAP. However, State PIP was submitted to GoI with a delay of 44 to 137 days on grounds of issue of revised guidelines/ instructions by GoI, addition of new components and formats by the Department, preparation of revised PIP and getting approval of governing body etc. Consequently, the approval of GoI was received with a delay of 85 to 224 days which resulted in delay in execution of new works such as appointment of human resources, new construction works and procurement of equipment etc., as commented in paragraph 2.1.8.1 (iv), 2.1.9.3, 2.1.9.6. Had the process of preparation of PIP been properly planned (i.e., the additional components/ formats been planned in the beginning etc.), the delays could have been avoided.

2.1.7 Financial management

2.1.7.1 Public spending on healthcare (NRHM and State budget)

At the national level, NRHM envisaged increasing public spending on health, with a focus on primary healthcare, from 0.9 *per cent* of gross domestic product (GDP) in 2004-05 to 2-3 *per cent* of the GDP by 2012, while the states were required to increase their spending on health sector by at least 10 *per cent* year on year (YOY) basis.

The public spending at national level was 1.05 to 1.18 *per cent* of GDP[6] during 2013-17. Although the State expenditure on public health increased by eight to 28 *per cent* during the period 2012-17, public spending on health remained at 0.85 to 1.13 *per cent* of gross State domestic product (GSDP[7]).

2.1.7.2 Fund allocation and expenditure

The resource envelope (RE) under NRHM for a financial year consists of (a) unspent balances of the previous years; (b) proposed allocation i.e., budgetary estimates (BE); and (c) State share contribution due for the year which was in the ratio of 75:25 during 2012-15 and 60:40 during 2015-17. Till 2013-14, GoI transferred its annual share based on the approved PIP directly

[6] Source: Ministry of Statistics and Programme Implementation, GoI.
[7] Source: Directorate of Economics and Statistics of Chhattisgarh State.

to the SHS, with the State Government transferring its share separately. The RE was to be supplemented by funds released by the State Government from its budget. From 2014-15 onwards, GoI share is released to the State Government, which thereafter, transfers its share along with the GoI share, to the SHS.

The receipt and expenditure under NRHM during 2012-17 is shown in **Table 2.1.1** below:

Table 2.1.1: Receipts and expenditure under NRHM

(₹in crore)

Year	PIP approved by GoI	Opening balance	Receipts		Interest & other receipts*	Total fund available	Expenditure/ refund/ adjustment	Closing balance
			GOI	State				
2012-13	858.75	455.63	214.07	135.00	33.39	838.08	391.23(47)	446.85
2013-14#	887.03	462.10	250.53	133.94	43.17	889.74	502.61 (56)	387.13
2014-15	797.22	387.13	306.29	158.23	45.73	897.39	555.97 (62)	341.42
2015-16	947.10	341.42	294.19	275.26	57.90	968.77	672.04 (69)	296.73
2016-17	971.47	296.73	355.27	356.40	93.54	1,101.93	802.34(73)	299.60
Total	**4,461.58**		**1,420.34**	**1,058.84**	**273.73**		**2,924.19**	

(Source: Information provided by SHS)

**Includes other grants received under emergency medical response system and mitanin[8] (ASHA) incentive States share.*

#Figures of non-communicable disease were also merged in the FY 2013-14 as the grants were received by the Directorate of Health Services and funds were received under NRHM from 2013-14. Hence there is a change in opening balance of 2013-14 from closing balance of 2012-13

NRHM intervention (₹ 2,924.19 crore) was 34.19 *per cent* of the total expenditure (₹ 8,552.66 crore) of the State Government under Health and Family Welfare Department during 2012-17.

Of the total allocation of funds for intervention through NRHM, the approved outlay and expenditure under the major components such as RCH flexible pool[9], NRHM flexible pool[10] and immunisation programme is depicted in **Table 2.1.2:**

Table 2.1.2: Funds provided and expenditure incurred under RCH, NRHM flexible pool and immunisation during 2012-17

(₹in crore)

Year	ROP[11]	Opening balance	Grant received			Interest/ other receipts	Total	Expenditure (percentage to ROP)	Closing balance
			Total[12]	GoI	State				
2012-13	654.83	184.97	485.49	201.85	283.64	-	670.46	363.03 (55)	307.43
2013-14	669.05	307.43	428.05	231.46	196.59	-	735.47	466.64 (70)	268.83
2014-15	610.70	268.83	440.35	271.06	169.29	62.79	771.97	519.66 (85)	252.31
2015-16	753.36	252.31	576.09	283.76	292.33	7.60	836.00	601.27 (80)	234.73
2016-17	769.21	234.73	625.64	338.96	286.68	10.55	870.92	696.75 (91)	174.17
Total	**3,457.15**		**2,555.62**	**1,327.08**	**1,228.54**	**80.94**		**2,647.35[13]**	

(Source: Data provided by SHS)

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8 Accredited social health activist (ASHA) is known as *Mitanin* in the State.

9 RCH flexible pool includes funds for RCH related components such as maternal health, child health, family planning, *Janani Suraksha Yojana*, compensation for sterilisation etc.

10 NRHM flexible pool includes additional activities such as for ASHAs, *Jeevan Deep Samiti*, Untied Fund, annual maintenance grants etc., essential for health activities which cannot be funded from any other programme are funded from this fund.

11 Record of proceedings (ROP) is approval given by the GoI on the State PIP.

12 OB comprises of committed expenditure of previous year and uncommitted balance. The ROP includes uncommitted balance of OB. Hence, ROP is at variance to OB plus total grants besides short release of fund vis-à-vis the approved PIP for the year.

13 Included ₹ 411.76 crore for construction, ₹ 127.32 crore on drugs and ₹ 6.04 crore on equipment.

The short receipt of funds vis-a-vis the ROP were mainly due failure of the SHS to spend the allotted fund which resulted from non-procurement of drugs and equipment (**paragraph 2.1.9.6 and 2.1.9.8**), incomplete construction activities (**paragraph 2.1.9.3**), less routine immunisation (**paragraph 2.1.10.4**), inadequate recruitment of human resources (**paragraph 2.1.8**), less expenditure under female sterilisation (**paragraph 2.1.10.5**) and trainings etc. This impaired the aim of the Mission to deliver uninterrupted and quality healthcare to the beneficiaries as discussed in subsequent paragraphs. As a result of under-spending and short allocation vis-à-vis ROP, the intervention of NRHM on these components ranged between 55 and 91 *per cent* of approved PIP during 2012-17.

In the exit conference (March 2018), the PS stated that the savings were due to large opening balance in 2011-12 and non-availability of human resources and expenditure on infrastructure was adjusted in subsequent years.

The reply is not correct as the savings were due to failure of the SHS to spend the grants on the approved works during the concerned years as mentioned above which is reflected in the form of CB for the current year and OB in the next plan year.

2.1.8 Human resource management

2.1.8.1 Non-availability of healthcare professionals

The position of deployment of manpower *vis-a-vis* sanctioned by the State Government and IPH standards in health centres (DHs, CHCs, PHCs and SHCs) is given in **Table 2.1.3.**

Table 2.1.3: Availability of doctors and paramedical staff in the State as on 31 March 2017

Health facilities	Cadre	Number of health centres	Manpower required as per IPHS for each health centre	Total Man power required as per IPHS	Posts sanctioned by the State Govern-ment	Person in position (as per Director of Health Services)	Shortage as per IPH standard (*per cent*)	Shortage vis a vis sanctioned post (*per cent*)
1	2	3	4	5	6	7	8	9
DHs	Specialists	26	15/18/36	420	391	102	318 (76)	289 (74)
	Medical officers		13/15/30	361	446	349	12 (3)	97 (22)
	Staff nurse		45/90/225	1,485	963	726	759 (51)	237 (25)
	Paramedical staff		30/41/99	882	800	719	163 (18)	81(10)
	Total		**103/162/390**[14]	**3,148**	**2,600**	**1,896**	**1,252(40)**	**704 (27)**
CHCs	Specialists	169	5	845	921	43	802 (95)	878 (95)
	Medical officers		3	507	427	380	127 (25)	47 (11)
	Staff nurse		10	1,690	1,570	1,125	565 (33)	445 (28)
	Paramedical staff		10[15]	1,690	819	664	1,026 (61)	155(19)
	Total		**28**	**4,732**	**3,737**	**2,212**	**2,520 (53)**	**1,525 (41)**
PHCs	Medical officers	785	1	785	767	328	457 (58)	439 (57)
	Staff nurse		3	2,355	1,070	527	1,828 (78)	543 (51)
	Paramedical staff		5	3,925	2,097	1,904	2,021 (51)	193 (9)
	Total		**9**	**7,065**	**3,934**	**2,759**	**4,306 (61)**	**1,175 (30)**
SHCs	ANM/health worker	5,186	**2**	**10,372**	**10,372**	**9,247**	**1,125(11)**	**1,125 (11)**

(Source: Director of Health Services)

[14] Sanctioned strength for 100 bedded-103 (22), 200 bedded-164 (3) and 500 bedded-390 (1)

[15] Pharmacist-1, laboratory technician-2, radiographer-1, ophthalmic assistant-1, dental assistant-1, cold chain and logistic assistant-1, multi rehabilitation community based health worker-1, councillor-1

The State was reeling under acute shortage of Specialists to the extent of 89 *per cent* and Medical officers to the extent of 36 *per cent*

To meet the gap of 1,602 doctors[16] (including Specialists) in 2012 which increased[17] to 1,744 during 2017, the Directorate of health services appointed 1,226 doctors in the post of MOs[18] during 2012-13 to 2017-18 (February 2018) but only 474 MOs (including 35 on contract basis) joined the Department as of February 2018. The reasons for reluctance of doctors to join the Department were not assessed by the Government. In addition, 1,637 staff nurses and paramedical staff were also appointed during 2016 and 2017 while approval of Finance Department was obtained (August 2018) for recruitment against 1,315 posts (208 MOs/ AMOs, 911 nurses and 196 other paramedical staff).

In the exit conference (March 2018), the PS of the Department admitted to the shortage of specialists and doctors and stated that steps were being taken to attract and retain healthcare professionals by providing best remuneration (up to ₹ 2.50 lakh per month) according to location. The PS also informed that walk in interviews are conducted every Monday to recruit doctors.

Audit reviewed the availability of doctors and paramedical staff in the sampled health centres as shown in table below and the following deficiencies were noticed:

Table: 2.1.4 Shortage of staff at State level and the selected health centres

Health facilities (number of health facilities)	Cadre (as per IPHS)	Shortage as per IPH standard (*per cent*)	Shortage vis a vis sanctioned post (*per cent*)	No. of health facilities test checked	Posts sanctioned by the State Government	PIP of the test checked units *	Shortage of staff as per IPHS (*per cent*)	Shortage of staff as per sanctioned strength (*per cent*)
State Position				**Selected health centers' position**				
DHs (26)	Specialists	318 (76)	289 (74)	**DH (7)**	101	58	53 (48)	43 (43)
	Medical officers	12 (3)	97 (22)		141	114	--	27 (19)
	Staff nurse	759 (51)	237 (25)		344	262	143 (35)	82 (24)
	Paramedical staff	163 (18)	81 (10)		151	101	138 (58)	50 (33)
	Total	**1,292(40)**	**704 (27)**		**737**	**535**	**322 (38)**	**202 (27)**
CHCs (169)	Specialists	802 (95)	878 (95)	**CHC (14)**	65	11	59 (84)	54 (83)
	Medical officers	127 (25)	47 (11)		38	59	--	--
	Staff nurse	565 (33)	445 (28)		140	113	27 (19)	27 (19)
	Paramedical staff	1,026 (61)	155 (19)		104	86	54 (39)	18 (17)
	Total	**2,520 (53)**	**1,525 (41)**		**347**	**269**	**123 (31)**	**78 (22)**
PHCs (785)	Medical officers	457 (58)	439 (57)	**PHC (28)**	28	9[19]	19 (68)	19 (68)
	Staff nurse	1,828 (78)	543 (51)		84	37	47 (56)	47 (56)
	Paramedical staff	2,021 (51)	193 (9)		96	91	49 (35)	5 (5)
	Total	**4,306 (61)**	**1,175 (30)**		**208**	**137**	**115 (46)**	**71 (34)**
SHCs (5,186)	ANM/ health worker	**1,125 (11)**	**1,125 (11)**	**SHC (84)**	**168**	**166**	**2(1)**	**2(1)**

**includes contractual appointments*

(i) District hospitals

In the seven sampled DHs, the shortage of specialists were in the major disciplines such as surgery (two), anesthesia (two), gynecology (one), ophthalmology (three), radiology (five), orthopedics (three), pathology (three), ENT (four) and dental (three). Resultantly, the patients were deprived of

[16] Total sanction of doctors (Specialists and MOs) in 2012-13 was 2,932 and working-1,330; Hence, shortage of doctors was1,602 in the State.
Total sanction of doctors (Specialists and MOs) in 2016-17 was 3,380 and working-1,636; Hence, shortage of doctors was 1,744.

[17] Due to net of sanction of additional posts, appointments made, retirement/ resignations etc.

[18] Specialists are appointed through promotion after fulfilling the required criteria.

[19] In PHCs, apart from MOs (MBBS), 32 AMOs/ RMAs (non MBBS) are posted against sanctioned posts of 30 AMOs.

necessary treatments for various illnesses and diagnostic services in these DHs and were referred to other hospitals (such as Dr. Bhim Rao Ambedkar Hospital, Raipur and Chhattisgarh Institute of Medical Sciences, Bilaspur etc.) with such facilities as observed from the indoor patient Department (IPD) registers.

There was huge shortage (37 *per cent*) of medical professionals

(ii) Community health centres

In the 14 sampled CHCs, only 70 medical professionals (63 *per cent*) were posted against the requirement of 112 medical professionals[20] whereas only 199 paramedical staffs (71 *per cent*) were deployed against the requirement of 280 paramedical[21] staff as shown in **Table 2.1.5.**

Table 2.1.5: Availability of medical and paramedical staff in test checked CHCs

Name of the post	Requirement as per IPHS norms	Sanctioned as per State Government	Person-in-position (regular plus contractual	Shortage (-) / Excess (+) as per IPHS	Shortage (-)/ excess (+) as per sanctioned strength
Specialists	70	65	11	- 59	- 54
Medical officers	42	38	59	+ 17	+ 21
Paramedical staff	280	244	199	- 81	- 45

(Source: data collected from CHCs)

As a result of the shortage of doctors/specialists, in 12 sampled CHCs, 817 women were referred to higher facilities during 2015-16 and 952 women in 2016-17. Further, in the test checked districts only 220 (2.3 *per cent*) out of 9,412 caesarian-section deliveries were conducted in nine CHCs (out of 47 CHCs) while in the 38 CHCs (in the sampled districts) no caesarian deliveries were conducted mainly due to non-availability of specialists such as gynecologists. Thus, desired healthcare services through these centres were compromised.

(iii) Primary health centres

As per IPH Standards, one doctor (Medical officer) and eight paramedical staff is required in each PHC.

Medical officers were not available in 68 *per cent* sampled PHCs

In the 28 test checked PHCs, Medical officers (MBBS) were not posted at 19 PHCs (68 *per cent*), while in 25 PHCs, 32 rural medical assistants/assistant Medical officers (Non-MBBS) were posted. Further, in the sampled PHCs, 128 paramedical staff were posted against the IPHS requirement of 224 staff. The details of staff available and shortage in the test checked PHCs are shown in **Table 2.1.6.**

Table 2.1.6: Medical and paramedical professionals at test checked PHCs

Name of the post	Requirement as per IPHS norms	Sanctioned as State Government per norms	Person-in-position (regular and contractual)	Shortage as per IPHS (percentage of shortage)	Shortage as per sanctioned strength
Medical officers	28	28	9	19 (68)	19
AMO/ RMA	-	30	32	--	+ 2
Paramedical staff	8[22]x28=224	180	128	96 (43)	52

(Source: data collected from PHCs)

[20] Anesthetist (1), Dental Surgeon (1), General Medical officer (2), General Surgeon (1), Obstetrician & Gynecologist (1), Pediatrician (1) and Physician (1).

[21] Paramedical- staff nurse (10), pharmacist, lab technician (2), radiographer, opthalmic assistant, dental assistant, cold chain and vaccine assistant, OT technician, multi rehabilitation worker, councillor.

[22] Medical officer-1, staff nurse-3, pharmacist-1, health worker male and female-1 each, lady health visitor-1, laboratory technician-1

Absence of Medical officers in 68 *per cent* of the sampled PHCs compounded with shortages of paramedical staff adversely affected the delivery of health services through these centres and forces the public to go to CHCs or DHs for treatments as the AMOs posted in the PHCs were permitted to treat and prescribe only limited number of diseases and drugs.

(iv) Sub health centres

IPHS provides for appointment of one auxiliary nurse midwifery (ANM) and one health worker (male) in each SHC.

In the 84 test checked SHCs, ANMs and health workers (male) were not posted in the three[23] and 14 SHCs respectively. Further, in 15[24] of the 84 SHCs, one extra ANM[25] were posted. Thus, in the absence of ANMs and health worker (male), the essential care for pregnant women, ANC, PNC check-up and assistance to carryout various health programmes were hampered.

The shortage of medical professionals was 15 *per cent* in DHs, 37 *per cent* in CHCs and 68 *per cent* in PHCs

Thus, there was shortage of 1,167 specialist doctors and 583 MOs in the State. In the sampled health centres, the shortage of medical professionals was 15 *per cent* in DHs, 37 *per cent* in CHCs and 68 *per cent* in PHCs. Similarly, the shortage of paramedical staff was 32 *per cent* at DHs, 29 and 43 *per cent* at CHCs and PHCs respectively. Shortage of medical professionals at all levels of health facilities led to denial of mandated health services at public health facilities. However, even where doctors were available[26], the patients were still deprived of necessary treatments for various illnesses and diagnostic services in these health centres due to shortages[27] of medical equipment, drugs and consumables, laboratory services **(also commented in paragraphs 2.1.9.6, 2.1.9.7 and 2.1.9.8)**, and were referred to other hospitals such as Dr. Bhim Rao Ambedkar Hospital, Raipur, Chhattisgarh Institute of Medical Sciences, Bilaspur etc., as observed from the indoor patient department (IPD) registers.

Further, in the State PIP, GoI sanctioned[28] appointment of 3,725 persons on contractual[29] basis. However, only 2,785[30] (74.76 *per cent*) persons could be appointed up to March 2017. Though every year, about 200 MBBS doctors are

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23 Komakhan, Kosrangi and Mangla

24 Asulkhar, Barvi, Birkondal, Bishunpur, Galonda, Gamhariya, Kelhari, Kere, Kewti, Kodabhat, Lokhandi, Makri Khauna, Pataud, Saraigahana and Vyaskongera

25 These are additional ANMs posted in the SHCs which are remotely located based on sanctions in the ROP. These extra ANMs conduct field work in those inaccebile areas.

26 Between 75 and 100 *per cent* in four out of seven sampled DHs, six out of 14 sampled CHCs and nine out of 28 sampled PHCs

27 Shortages of equipment were in the range of 27 to 41 *per cent* in DHs, 25 to 69 *per cent* in CHCs and 32 to 64 *per cent* in PHCs. Similarly, the shortage of drugs and consumables were in the range of 40 to 76 *per cent* in DHs, 52 to 75 *per cent* in CHCs and 45 to 67 *per cent* in PHCs and shortage of laboratory services was 45 to 63 *per cent* in DHs, 36 to 58 *per cent* in CHCs and 38 to 71 *per cent* in PHCs

28 In addition to the regular sanctioned set-up

29 For implementation of various health programmes under NRHM such as Rashtriya Bal Swasthya Karyakram (RBSK), Nutritional Rehabilitation Centre (NRC), Sick New Born Care Unit (SNCU), District Early Intervention Centre (DEIC), extra staff for 24x7 PHC and extra ANM in SHC with higher deliveries etc.

30 Medical officrs-163, Ayush doctor-59, staff nurse-515, ANM-1,123, paramedical staff-276 and other staff-649

produced by the State, yet in the absence of any concerted plan or policy to attract the fresh doctors to join the Health Department, the State continued to suffer from acute shortage of doctors in public sector. Thus, the support extended by GoI under the scheme could not be optimally utilised by the State to bridge the gaps.

In the exit conference (March 2018), the PS agreed with the Audit observation and stated that the State is trying to fill the vacancies of doctors by organising walk in interview.

Recommendation

The Department should prioritise the filling up of critical vacancies, especially those of specialist doctors and Medical officers and ensure availability of medical equipment, drugs, consumables, laboratory services so as to deliver the required health facilities at each level in line with the mandate of the Mission.

2.1.9 Physical infrastructure

2.1.9.1 Availability of health centres against IPHS norms

NRHM framework envisages service delivery by primary health care facilities (CHCs, PHCs and SHCs) based on population norms as per Indian Public Health Standards (IPHS). Scrutiny of records of SHS revealed shortage of health facilities in the State both as per IPHS norms and as determined by the State as shown in **Table 2.1.7:**

Table 2.1.7: Requirement of number of institutions at different level

Year	CHC			PHC			SHC		
	Requirement worked out by Department	Requirement[31] as per IPHS norms	Available (shortage *per cent*)	Requirement worked out by Department	Requirement as per IPHS norms	Available (shortage *per cent*)	Requirement worked out by Department	Requirement as per IPHS norms	Available (shortage *per cent*)
2012	200#	200	149 (26)	795#	795	755 (5)	5,043#	5,043	5,111 (26)
2017	200*	223	169 (24)	795*	884	785 (11)	5,043*	5,617	5,186 (8)

(Source: data provided by SHS, census and calculation by Audit)

 # Previously requirement worked out by the Department for CHC was 194, PHC-776 and SHC-4899

** The State has not calculated the requirement as per projected population for 2017.*

The State had shortage of 24 *per cent* CHCs, 11 *per cent* PHCs and eight *per cent* SHCs

Of the total shortages of CHCs, PHCs and SHCs in the State, the tribal areas[32] lacked 25 CHCs, 61 PHCs and 210 SHCs.

In the exit conference (March 2018), the PS stated that Government sanctions health institutions on population norms, topography and other factor like *Naxal* affected areas.

The reply is not convincing. Though the Department had followed the criteria

[31] As per IPHS norms, for a population of 1.20 lakh in rural area and 0.80 lakh in tribal area, there should be one CHC with a minimum 30 bedded accommodation and one operation theatre; for a population of 0.30 lakh in rural area and 0.20 lakh in tribal area, there should be one PHC with a minimum six bedded accommodation; and one SHC for a population of 5,000 in plain area and 3,000 for hilly and tribal area. The requirement has been calculated on the basis of census -2011 and projected population for 2017.

[32] Tribal areas are those which are notified as tribal area in the fifth Schedule. Against the requirement of 116 CHCs, 463 PHCs and 3,073 SHCs in Tribal areas, the availability of CHCs was 91, PHCs was 402 and SHCs was 2,863 respectively.

to work out the requirements of health centres, the sanctions were less vis-à-vis the IPHS/departmental requirements, particularly in the tribal areas for reasons not on record.

2.1.9.2 Location of health centres

IPHS norms stipulate that health centres should be centrally located and easily accessible to people and connected with all-weather motorable approach road. The norms also stipulate that a person should have access to a SHC within three kilometers (km) walking distance.

Audit visited the sampled health centres (14 CHCs, 28 PHCs and 84 SHCs) and observed that 13 (93 *per cent*) out of 14 CHCs were located at a distance of more than 30 km (30-90 km) from the farthest village. Likewise, four[33] out of 28 PHCs (14 *per cent*) were located at a distance of more than 30 km (35-50 km) from the remotest village and six[34] out of 28 PHCs (21 *per cent*) were not accessible by public transport. Further, 64 out of 84 SHCs (76 *per cent*) were located beyond three km from the remotest village while 37 out of 84 SHCs (44 *per cent*) were not accessible by public transport.

In the exit conference (March 2018), the PS stated that the health centres are established on the basis of population but due to non-availability of Government land, some of the SHCs are situated at more than three km from the farthest village. It was also stated that CHCs are established in the block headquarters and hence covers large distance.

Fact remains that failure to establish health centres within permissible distance stipulated under IPHS defeated the purpose of providing accessible health centres to the rural population.

2.1.9.3 Construction of health centres

NRHM aims to bridge the gaps in the existing capacity of the rural health infrastructure by establishing functional health facilities through revitalisation of the existing physical infrastructure such as health centres and new constructions or renovation, wherever required.

Chhattisgarh Medical Services Corporation Limited (Corporation) was set up in October 2010 (functional from May 2013) by the State Government for construction and renovation of health infrastructure facilities in the State. The Corporation is also responsible for procurement of drugs. In addition, the renovation/upgradation works were also awarded to Public Works Department, Rural Engineering Services besides the Corporation by the State Health Society (SHS). The construction activities are discussed below:

2.1.9.3 (i) Construction of new health facilities

There was shortage of 20 CHC, 88 PHC and 768 SHC Government designated buildings in the State

Audit noticed that 20 CHCs, 88 PHCs, 768 SHCs did not have designated Government buildings and were operational from private buildings, *panchayat* buildings, other Government buildings etc., as of March 2017. Due to unspecified design these buildings lacked space, infrastructure, delivery service, outdoor patient Department (OPD) facilities, labour rooms, beds, water connectivity, toilets etc. as was noticed in the test checked health

[33] Kelhari, Nagar, Pandadah and Pharphaud.

[34] Asta, Bodsara, Ghaghra, Hardikala, Hathibahra and Hatkarra.

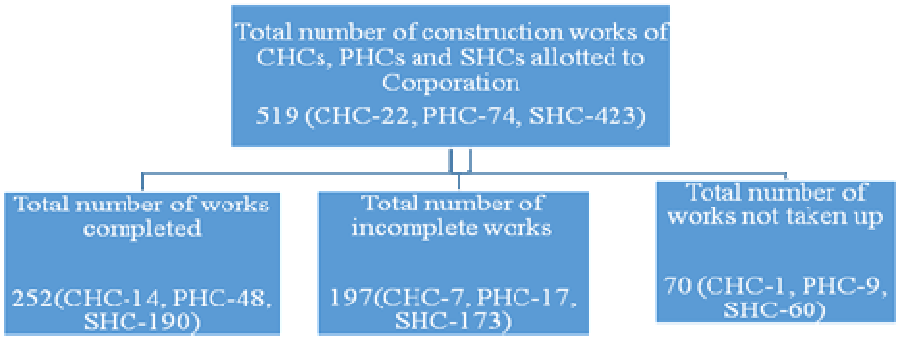
facilities. Resultantly, the mandated healthcare services could not be delivered as discussed under:

(a) State position

Director of Health Services and the SHS awarded (2012-17) construction of 519 health facilities (CHC/PHC/SHC) to the Corporation at a cost of ₹ 187.69 crore in the State. Of these, the Corporation completed construction of 252 health facilities at a cost of ₹ 97.68 crore while 197 health facilities could not be completed as of June 2018. Of these incomplete works, 186 works sanctioned during 2012-16 on which expenditure of ₹ 14.06 crore was incurred, remained incomplete despite lapse of 20 to 56 months from the year of sanction. The reasons, as examined from the files in the test-checked districts were due to non-participation of bidders in the tender for works located in sensitive areas, receipt of tender values more than the amount of administrative approvals, delay in identification and finalisation of availability of land. Though the Department had taken steps for re-tendering, revised technical sanction (TS) etc., and had completed 36 works (included in 252 completed works), further efforts by resolving the bottlenecks (retendering against high tender premiums, ensuring availability of land etc.) to complete the pending works were yet to be taken by the Department. Thus, the expenditure incurred on these works remained unfruitful till date (March 2018).

Further, the Corporation could not take up construction of 70 health facilities till December 2017 on grounds of change of place, delay in tender process due to non-receipt of tenders, delay in finalisation of tenders due to receipt of higher rates etc. These works were sanctioned during 2012-16 and were pending for more than one to four years[35].The details are shown in the **Chart 2.1.2.**

Chart 2.1.2: Construction of health centres by the Corporation



(b) Position in the test checked districts

In the seven test checked districts, 150 health centres (seven CHCs, 26 PHCs and 117 SHCs) costing ₹ 56.33 crore were taken up for construction during 2012-17. Of these, 103 health centres (six CHCs, 20 PHCs and 77 SHCs) were completed at a cost of ₹ 40.90 crore while 32 health centres could not be completed till June 2018 despite incurring expenditure of

[35] Sanctioned during 2012-13-(7 nos.), 2013-14-(17 nos.) 2014-15-(12 nos.) and 2015-16-(34 nos.)

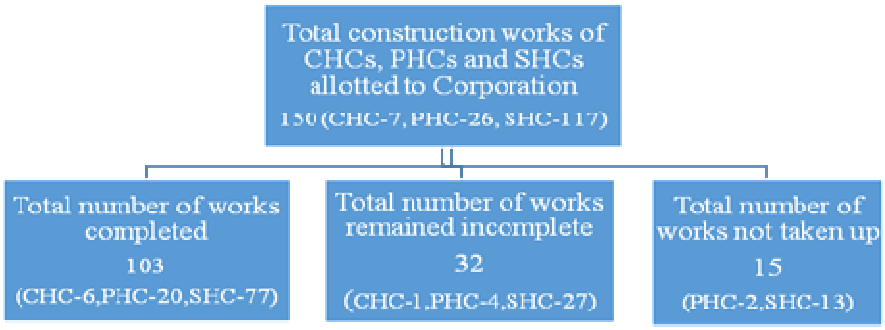
₹ 2.25 crore and delays between eight and 44 months from their completion dates. The major reasons for delays are shown in the **Table 2.1.8**.

Table 2.1.8: Reasons for delay in completion of Health centres in the test checked districts

Reasons for delay	Number of affected works
Delay in construction by contractors	6
Receipt of higher rate in tenders	1
Non availability of land or land dispute or hindrances	18
Non participation of tenderers and land problem	5
Delay in tendering process	2
Total incomplete works	**32**

The Department did not resolve the above project bottlenecks to complete the pending works of the health centres, especially ensuring the availability of land before commencement of the works as per Works Department manual. Further, the Corporation did not commence construction works of 15 health centres costing ₹ 4.31 crore till June 2018 on grounds of change in work sites, delays in providing layout, delays in finalising the tenders etc. The details are shown in the **Chart 2.1.3.**

Chart 2.1.3: Construction work of health centres sanctioned and undertaken by Corporation in the test checked districts



In the exit conference (March 2018), the PS agreed with the audit observations and stated that the major reason for delay was non-availability of land and non-receipt of adequate tenders in the *naxal* affected areas.

The reply is not acceptable, as construction was to be undertaken on Government land, and identification of such land before sanctioning the works is the responsibility of the Department. Further, the concerns of naxal problem was to be factored in before sanctioning the works and sending the PIP incorporating those works to GoI for approval.

2.1.9.3 (ii) Renovation of existing health facilities

During 2012-17, the Department sanctioned 295 renovation works of 10 bedded wards and labour rooms worth ₹ 50.82 crore in the State under NRHM. These works were allotted by the District Collectors to different construction agencies[36]. Of these, 254 works estimated at ₹ 44.12 crore were completed, eight works were incomplete after incurring expenditure of ₹ 1.36 crore, 22 works estimated at ₹ 3.78 crore were not taken up and 11 works were

[36] Public Works Department, Rural Engineering Services, Corporation etc. were selected by DC without any reasons on record.

cancelled/ surrendered. The main reasons for works remaining incomplete were construction delays by contractors, substandard works by contractors, cancellation of works and receipt of higher rate of tenders etc. The cancellations of works were due to location of work sites in sensitive areas, high cost of tenders, delays in selection of sites for construction of additional rooms of the 10 bedded wards etc.

In the seven test-checked districts, 111 renovation works were sanctioned for ₹ 19.65 crore during 2012-17. Of these, 93 works estimated at ₹ 16.61 crore were completed, eight works valued at ₹ 1.52 crore were not taken up on grounds of high cost of tenders, delays in selection of sites, inappropriate sites etc., eight works were cancelled and two works valued at ₹ 40 lakh remained incomplete.

In the exit conference (March 2018), the PS stated that the major reasons for delay was due to non-receipt of adequate tenders in the *naxal* affected areas.

The reply is not acceptable. Though contractors refrain from participating in the naxal-infested areas, these concerns should have been factored in before sanctioning the works in such areas and sending the PIP incorporating those works to GoI for approval. Failing to take up and complete the sanctioned works resulted in denial of required health infrastructure to the rural population.

2.1.9.4 Availability of staff quarters

There was shortage of 81 *per cent* residential quarters in DHs, 36 *per cent* in CHCs and 87 *per cent* in PHCs test checked

As per IPHS norms, availability of residential quarters near vicinity of health facility is required to make all the health facilities fully functional.

Scrutiny of sampled health facilities revealed shortage of 81 *per cent* residential quarters in seven DHs, 36 *per cent* in 14 CHCs and 87 *per cent* in 28 PHCs with respect to IPHS norms as shown in the **Table 2.1.9.** The availability of staff quarters was also short by 531 numbers with respect to persons in position.

Table 2.1.9: Staff quarters required and available in the test checked health centres

Health facility	Number of sampled health facilities	Staff quarters required as per sanctioned strength	PIP in the test checked health centres	Staff quarters required as per IPHS	Staff quarters available	Shortage of staff quarters as per IPHS norms
DH	7	737	535	881	166	715
CHC	14	347	197	266	171	95
PHC	28	238	176	336	45	291
SHC	84	84	84	84	79	5
Total	**133**	**1,406**	**992**	**1,567**	**461**	**1,106**

(Source: Data collected from the test checked health centres)

While shortages were not bridged, 22 quarters at CHCs and six quarters at PHCs remained vacant due to poor condition, lack of water and electric facility. Further, new staff quarters at CHC, Manendragarh and Bagbahra were not occupied due to failure of the Chief Medical and Health Officer (CMHO) to complete the water supply and electricity facility to these quarters as shown ahead.

 **(Date: 25/06/2017) Eight staff quarters constructed at Manendragarh at a cost of ₹ 68.47 lakh were lying unoccupied since their handing over in July and September 2016 due to remote area and lack of electricity, water and boundary wall.**	 **(Date:10/07/2017) Residential quarters at CHC Bagbahra lying vacant since October 2014 for want of electricity and water supply.**

Audit further observed that the root cause of shortages in the availability of staff quarters was failure of the Department to complete 159 quarters for medical and para-medical staff valued at ₹ 25.33 crore taken up during 2012-13 till March 2017. The major reasons for non-completion of these staff quarters was non participation of tenderers, naxal affected area and delay in availability of land for which the Department had not taken steps either to resolve the logjams or to fix accountability against the officials responsible for sanction of works in naxal areas without ensuring availability of land.

In the exit conference (March 2018), the PS *inter alia* stated that the construction works were earlier given to PWD but works not commenced by the PWD have now been transferred to the Corporation. The PS further stated that due to *naxal* area, non-receipt of tenders, non-availability of land, construction of some staff quarters were incomplete.

The reply is not acceptable. Though contractors reportedly refrain from participating in the naxal-infested areas, these concerns should have been factored in before sanctioning the works in such areas. Further, ensuring the availability of land is the responsibility of the Department. Moreover, the fact that shortage of staff quarters co-exists with idle quarters compound the problem, as the Department had not taken adequate measures to address the snags.

Recommendation

The Department should assess the gaps in availability of physical infrastructure and ensure that all civil works are completed at the earliest and address the project bottlenecks to put the completed buildings to use.

2.1.9.5 Quality of health infrastructure

As per IPHS, the State should establish one SHC for population of 3,000-5,000, one PHC for population of 20,000-30,000 and one CHC for population of 80,000-1,20,000. The violations noticed are discussed below:

(i) Quality of health infrastructure at sub-centres

During visit to 84 SHCs, Audit noticed that 50 SHCs had been providing health services to population of about 2,77,439. Of these, 29 SHCs were covering population of 5,000-10,000 and one SHC (Sardha) was covering

50 out of 84 sampled SHCs were covering population more than IPHS norms while all the 84 sampled SHCs had one or more infrastructural deficiencies

more than 10,000 population. Moreover, IPHS provide that the Medical officer of the PHC should visit each SHC in his/ her area once in a month not only to check the work of staff but also to provide curative service. However, 42 out of 84 SHCs were not visited by a doctor even once in a month due to which the medical services could not be made available to the public by the SHCs.

Further, IPHS guidelines also prohibit establishment of another health centre/ SHC where a PHC is already located to avoid wastage of human resources. In contravention, 11[37] SHCs were functioning either in PHC building or building adjoining to PHC due to which the staff of these SHCs perform the field work such as ANC registration and check-up, immunisation, home visit after delivery etc., and not involved in OPD service and delivery service. Resultantly, public were required to visit the PHCs to get the health services.

Thus, population norms for establishment of SHCs were not followed. Other major deficiencies in infrastructure at SHCs are summarised in **Table 2.1.10.**

Table 2.1.10: Major deficiencies in infrastructure in the test checked 84 SHCs

Sl. No	Deficiency	Number of SHCs	Percentage
1	No designated building	12[38]	14.29
2	No skilled birth attendant, trained ANM	58	69.05
3	No electricity supply	1[39]	1.19
4	No examination table	29	34.52
5	No functional toilet	16	19.05
6	No labour table	14	16.67
7	No compound wall	55	65.48
8	ANM quarter not available	12	14.29

(Source: Data collected from the test checked sub-health centres)

Absence of the above infrastructure denied the delivery service in the SHCs.

In the exit conference (March 2018), PS *inter alia* stated that the sanction of SHC / PHC is done as per population norms and more number of health centres are being sanctioned every year. The PS also stated that absence of functional toilet and labour tables etc., were due to non-availability of designated Government building, while the standard design of SHC did not provide for boundary walls. However, the PS assured to have these constructed in future.

The fact remains that Department could not get the desired number SHCs constructed or provide the other infrastructures as per IPHS norms due to which the public were deprived of the necessary health services at village level.

(ii) Quality of health infrastructure at PHCs

PHC is the first port of call to a qualified doctor of the public sector for the people in rural areas. As per IPHS norms, the PHCs should become functional for round the clock service with 24x7 nursing facilities. 24x7 PHC are health

[37] Bilaspur-Chapora, Hardikala Mahasamund-Birkoni, Hathibahara, Komakhan, Kanker-Kewti, Korea-Kelhari, Raipur-Farfoud, Manikchauri, Rajnandgaon-Mudhipar, Surgi

[38] Bilaspur- Chapora, Kanchanpur, Podi, Hardikala, Sardha, Mohda, Silpahri, Kanker-Baskund, Khadga, Raipur-Naara, Manikchauri, Rajnandgaon- Surgi.

[39] Korea- Bishunpur

centre where one Medical officer and at least three staff nurses are provided. Upgradation of PHCs as 24x7 PHCs was one of the goals of NRHM.

Against target of 492 PHCs, only 273 PHCs were upgraded to provide 24x7 services

Audit scrutiny revealed that 492 (62.68 *per cent*) out of 785 PHCs in the State were targeted for upgradation for rendering 24x7 services during 2012-17. However, only 273 PHCs (34.78 *per cent*) could be upgraded to function as 24x7 as of March 2017 while 219 PHCs could not be upgraded as a consequence of shortage of doctors and nurses.

During visit to 28 sampled PHCs in the test checked districts, the following deficiencies in infrastructure and facilities were noticed as shown in the **Table 2.1.11.**

Table 2.1.11: Major deficiencies noticed in the test checked 28 PHCs

Sl. No.	Infrastructure/ facility	Number of PHCs	Percentage of non-availability
1	Non- availability of medical termination of pregnancy (MTP[40]) service	28	100
2	Child care including immunisation not available	4	14.29
3	No laboratory service available (RBC, WBC, Bleeding time, clotting time etc.)	5	17.86
4	No emergency room available	21	75.00
5	No separate male and female ward available	8	28.57
6	No diet facility available under JSSK	8	28.57

(Source: Data collected from the test checked PHCs)

Of the 28 PHCs test checked, though 14 PHCs were upgraded to 24x7, MTP service was not available in any of the PHCs, child care and immunisation was not available in one PHC, emergency room in 11 PHCs and separate male and female wards in five PHCs were not available.

In the exit conference, the PS, while agreeing to the audit observation stated (March 2018) that due to shortage of doctors and nurses in the PHCs, the target of operationalising the 24x7 PHC was not achieved.

The reply is not acceptable as it is the responsibility of the Department to appoint doctors and nurses. Though efforts were made by the Department for appointment of doctors, staff nurses and other paramedical staff, the Department still could not fill up the critical vacancies in this regard as commented in **paragraph 2.1.8.1**, which prevented 24x7 PHC facilities. Further, the PS did not give any reply for shortage of infrastructure and non-availability of health services in the PHCs.

(iii) Quality of health infrastructure at CHCs

CHC is the secondary level of health care, designed to provide referral as well as specialist health care to the rural population. NRHM seeks to up-grade CHCs as first referral unit (FRUs), which would provide facilities for comprehensive management of all obstetric emergencies, caesarean sections and other surgical interventions, blood bank/ storage centre and management of all sick newborns.

Against target of 46 CHCs, only 28 CHCs could be upgraded as FRUs

Scrutiny revealed that 46 out of 169 CHCs in the State were targeted for upgradation to FRUs by SHS during 2012-17. Of these, only 28 CHCs could be upgraded as FRUs as of March 2017 and remaining 18 CHCs could not be

[40] MTP with manual vacuum aspiration (MVA) technique to be used at PHC

upgraded due to lack of doctors and specialists. Of the 169 CHCs in the State, C-section deliveries were conducted only in 24 CHCs, of which 92 *per cent* (22 CHCs) were FRUs.

In the test checked districts, 220 (2.3 *per cent*) out of total 9,412 C-section deliveries were conducted in the CHCs which were FRUs. This indicated that women had to depend mostly on district level hospitals for C-section deliveries as this facility was available only in four out of the 14 test checked CHCs.

During site visit to 14 sampled CHCs in seven test checked districts, Audit noticed lack of infrastructure and other facilities vis-a-vis the IPHS norms in these CHCs as summarised in **Table 2.1.12.**

Table 2.1.12: Facilities not available at 14 test checked CHCs

Sl. No.	Infrastructure/ facility	Number of CHCs	Percentage
1	Facility of surgery not available	10	71.43
2	Obstetrics and gynecology not available	9	64.29
3	No emergency services	5	35.71
4	Safe abortion service not available	4	28.57
5	No operation theatre	2	14.29
6	Operation theatre available but not in use	3	21.43
7	No new born stabilisation unit	1	7.14
8	No ultrasound facility available	13	92.86
9	Ultrasound facility available but not in use	1	7.14
10	No blood storage facility available	9	64.29

(Source: Data collected from the test checked CHCs)

In the exit conference (March 2018), the PS *inter alia* stated that operationalisation of FRU is dependent on availability of specialists (gynecologist and anesthetist) and other staff nurses, blood storage facilities. Due to shortage of doctors, the targeted number of CHCs could not be operationalised as FRUs. However, to provide caesarian section facilities, training of emergency obstetric care and life saving anesthesia skills training were being imparted to the Medical officers.

The reply is not acceptable as appointment of specialists, nurses, availability of blood storage and other facilities are the responsibility of the Department and failure to ensure these had prevented setting up of FRUs. Further, training in emergency obstetric care and life saving anesthesia would not be effective unless adequate infrastructure for conducting caesarian section deliveries are provided in the CHCs.

(iv) Quality of health infrastructure at district hospitals

District hospital (DH) is a secondary referral level for health care. During visit to seven DHs in the seven test-checked districts, Audit noticed lack of two-dimensional echo in six[41] DHs due to non-availability of trained Medical officer. Thus, the patients are deprived of the desired facility of cardiac checkup at these health centres and are referred to health facilities having such facilities.

[41] Jashpur, Kanker, Korea, Mahasamund, Raipur and Rajnandgaon

2.1.9.6 Equipment in health centres

IPHS prescribes a list of equipment to be available at each level of health facility.

Test check of records of the sampled health centres revealed that none of the DHs, CHCs, PHCs and SHCs had all the essential equipment in their centres as shown in the **Table 2.1.13**.

Table 2.1.13: Availability of essential equipment in the test checked health centres

Health centres test checked	Essential number of equipment to be available[42] at test checked health centres	Essential number of equipment available at health centres	Percentage of shortage
7 DHs	2,016	1,249	38
14 CHCs	3,710	1,751	53
28 PHCs	2,576	1,358	47
84 SHCs	5,628	3,180	43

(Source: Data collected from the selected health centres)

Shortage of essential equipment impaired the functioning of these health centres to deliver their mandates as the patients had to be referred to higher centres for diagnosis and advanced treatment.

In the exit conference (March 2018), the PS while agreeing to the audit observation, stated that the equipments were purchased as per requirement and availability of budget and gradually all the equipments would be made available as per IPHS.

Fact remains that the Department has not prepared a list of all the essential equipment that are not available at different health centres and are required to be purchased. Further, the purchase is centralised and the Corporation makes the purchase upon receiving the indents and supplies it to the health centres. However, the Corporation has not been able to supply the equipment on account of absence of rate contracts, non-receipt of tenders, delay in indents etc. The Corporation has not reported about shortage of fund to meet the demands of Director Health services to supply the equipments.

2.1.9.7 Laboratory service in health centres

IPHS has defined laboratory services for each level of health centres.

In the test checked DHs, numbers of available laboratory services ranged between 18 and 53 against the requirement of 97 while in the sampled CHCs, availability was between 10 and 23 against the requirement of 36 services. Likewise, in selected PHCs, availability ranged between two and 15 against the requirement of 21 services. Two sampled SHCs (Tarabahra and Ghaghra) did not provide any laboratory service.

Further, in three to 11 of the 14 sampled CHCs, important laboratory services recommended as per IPHS such as reticulocyte count, sputum cytology, blood urea, blood lipid profile, ECG and X-ray for chest were not available. In the absence of important laboratory services, patients are forced to go to higher level facilities or to private hospitals which contravenes the basic intent of the

[42] Number of equipment that should be available at each DH is 288, each CHC-265, each PHC-92 and each SHC-67

Mission. The main reasons for non-availability of the laboratory services were due to non-supply of equipment, Auto-analyser, reagents etc., by the Corporation, though indented by the health facilities. In addition, failure of the Department to provide laboratory technicians also resulted in denial of laboratory services by the health facilities.

In the exit conference, the PS while agreeing with the audit observations, stated (March 2018) that there was gap in providing laboratory services and for this, the State has brought out (December 2017) an order for the laboratory technicians to work for all the national programmes irrespective of their recruitment for any specific programme.

The reply is not convincing as instructing the laboratory technicians to work for all the national programmes would not be effective unless the Department prepares plans to bridge the shortage of equipment to deliver the laboratory services.

2.1.9.8 Drugs, consumables, laboratory reagents and disposables in the health centres

IPHS prescribes 493 drugs and consumables such as syringes, needles etc., for DH, 176 for CHC, 148 for PHC and 43 for SHC as essential.

Against the requirements, the sampled DHs had 121 (Bilaspur) to 294 (Raipur) drugs and consumables while the sampled CHCs had 44 (Manendragarh and Patna) to 118 (Khairagarh) drugs. Further, these CHCs had 18 to 49 emergency obstetric care drugs against the requirement of 71 and five to 22 drugs for sick newborn care against the requirement of 25 drugs. Likewise, in the sampled PHCs, 37 (Biharpur) to 81 (Hathibehra and Kewati) drugs were available while the sampled SHCs had 10 (Ghaghra) to 39 (Beerkondal) drugs in their stock.

Shortages of drugs and consumables were mainly due to failure of the Department to ensure that the Corporation supplies the drugs and consumables to the health centres after receiving funds from Government. It was noticed that the sampled DHs and CHCs placed demands for supply of 33,777 types of medicines in different test checked months covering the period 2013-17 (as shown in ***Appendix 2.1.2)*** but the Corporation supplied only 15,641 types of medicines resulting in short supply of 53.69 *per cent* medicines to these health facilities although ₹ 38.14 crore was lying unspent by the Corporation during the period. The short supplies ranged between 1.72 *per cent* (DH-Jashpur for September 2015) and 99.04 *per cent* (CHC Bagbahra for March 2017) as shown in the ***Appendix 2.1.2.*** This indicates that the Corporation could not supply all the desired drugs and consumables to the indented health facilities.

The Corporation informed Audit that supplies could not be made due to non-availability of rate contract for medicines, non- receipt of tenders, late receipt of annual demand from Directorate of Health Services. Resultantly, the patients have to purchase the drugs from outside such as *Jan aushadhi kendra* or local medicine shops etc., while seven DHs and 10 out of 14 CHCs incurred an expenditure of ₹ 2.54 crore from the *Jeevan deep samiti*[43] (JDS) funds to

[43] JDS is operated in every health centre, and funds received under untied funds, maintenance grant, JDS grant and other receipts are credited into the JDS account.

purchase required drugs and consumables from the local market during 2013-17.

Thus, procurement of drugs and consumables in the State was not systematic which deprived the health centres to keep the required drugs and consumables in their stock to deliver their mandates.

In the exit conference (March 2018), the PS stated that online indenting of essential drugs has been started to bring uniformity and quicker fulfilment of demands. The Corporation has initiated online drug distribution system which will ensure timely and adequate supply of drugs.

The reply is not acceptable as online drug distribution system will be effective only when the required drugs and equipment are available in stock, which at present is short as discussed above in the paragraph.

Recommendation

The Department should assess the gaps in equipment, medicines, diagnostic services etc., and take immediate measures to bridge these by coordinating with the Corporation. Concerted efforts may also be taken to upgrade CHCs to FRUs and all PHCs into 24x7 service providers.

2.1.10 Quality of healthcare services

2.1.10.1 Maternal healthcare services

(i) Ante natal care

Ante natal care (ANC) is the healthcare received by a woman during her pregnancy. Every pregnant woman should be registered during the first trimester (first 12 weeks) of her pregnancy and undergo three checkups during the pregnancy, at prescribed intervals for proper ANC. She is also to be immunised with tetanus toxoid (TT) and be provided iron folic acid (IFA) tablets.

Audit observed from records of SHS that 33.09 lakh pregnant women (PW) were registered for ANC of which, 20.73 lakh (62.65 *per cent*) were registered in the first trimester while 72.48 to 95.03 *per cent* PWs could get all three checkups during 2012-17. Further, 5.42 to 28.62 *per cent* women were not immunised during their pregnancy with both doses (TT-1 and TT-2) of TT vaccine during 2012-17 while full dose of IFA tablets were given to only 29.04 lakh (88.85 *per cent*) women.

Only 63.54 *per cent* women were registered for ANC in the first trimester in the test checked districts

In the test checked districts, of the total 11.52 lakh registered PW, 7.32 lakh (63.54 *per cent*) women were registered in the first trimester during 2012-17 and only 44.26 to 88.39 *per cent* PW got the ANC in the first trimester as shown in ***Appendix 2.1.3.*** Further, 2.07 lakh (18 *per cent*) PW could not receive all the three ANC checkups.

The main reasons of shortfall were, late disclosure of pregnancy by pregnant women, non-availability of transport facility due to inaccessible areas, abortion in some cases, migration of women to other districts or states after ANC registration and insufficient visits by the female health workers (commented in **paragraph 2.1.10.1 (iv) (b)**). Further, non-availability of sufficient IFA tablets restricted their distribution in required quantity as commented in **paragraph 2.1.10.1 (ii)**.

In the exit conference (March 2018), the PS *inter alia* stated that the State is trying to improve ANC registration and there is an increasing trend in ANC registration in the first trimester.

The reply is not convincing as the Department could not register 37.35 *per cent* PWs in the first trimester in the State for providing ANC while 18 *per cent* PWs, in the test checked districts, were not provided all the three ANC check-ups.

Recommendation

The Department should ensure that all the pregnant women are invariably registered in the first trimester with the help of ASHAs and their cases followed-up for complete ante natal care. Besides, TT vaccine to all pregnant women should be provided.

(ii) Shortage of IFA tablets

Daily dose of IFA tablets for 100 days is required for preventive treatment against nutritional anemia in PW.

Scrutiny of records collected from DHSs and Health Management Information Systems (HMIS) revealed that 71.26 to 97.64 *per cent* of registered PW were given IFA tablets for prophylaxis[44] against nutritional anemia during 2012-17 in the test checked districts.

There was shortage of IFA tablets for 55 *per cent* of registered pregnant women during 2012-16

Further, IFA tablets were shown to have been given to 7.66 lakh PW in the test checked districts as per the HMIS database against 9.33 lakh registered PW during 2012-16. However, audit cross-checked the availability of IFA tablets from the stock registers of Director health services, Chief Medical and Health Officers (CMHOs) and records of Corporation and observed that IFA for only 4.17 lakh[45] women were available in the stocks of the test-checked districts during the same period. Thus, distribution of IFA tablets to 7.66 lakh PWs seems doubtful and hence, 5.16 lakh (55 *per cent*) PW might have been denied IFA tablets valued at ₹ 1.06 crore which needed investigation. Details are shown in the ***Appendix 2.1.4.***

In the exit conference (March 2018), the PS stated that IFA tablets were being provided to the PW but its consumption is very less. The PS further stated that IFA tablets for 2015-16 were purchased during 2016-17.

The reply is not acceptable as the Department could not provide the required quantity of IFA tablets to the PW. Further, there was late indenting by Director Health services (January 2016 for 2015-16) and late procurement (last quarter of 2015-16) by the Corporation. Besides, the PS could not explain how 7.66 lakh PWs were reportedly given IFAs with stock balance for 4.17 lakh PWs.

Recommendation

The Department should ensure adequate distribution of IFA tablets to all pregnant women by each health facility.

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44 Prophylaxis-treatment given or action taken to prevent disease

45 Data compiled from the stock registers of Director health services, CMHOs and records of Corporation.

(iii) Maternal healthcare services in rural health centres

Desired maternal healthcare services could not be provided due to shortage of specialist doctors in the test checked CHCs

Assessment of availability of maternal healthcare services in the sampled health centres (14 CHCs) revealed that caesarean section (C-section) delivery service was available in only four[46] CHCs, ultra-sonography service was available in only one CHC (Manendragarh), comprehensive obstetric service was available in only five CHCs, round the clock blood storage service was available in only five CHCs and MTP service was available in only 10 CHCs resulting from shortages of specialist doctors in these centres.

This indicates that a large number of CHCs were not able to provide essential maternal healthcare services as well as facility of institutional delivery to cater the demand of rural community. Resultantly, the PWs were sent to higher centres for C- section delivery as noticed from some of the referral slips made available to Audit. However, numbers of cases referred to higher centres for C-section were not maintained by any of the CHCs test checked and visited.

In the exit conference (March 2018), the PS stated that due to shortage of specialists (gynecology and anesthesia), these services are not available in the CHCs.

The reply is not acceptable, as, it is the responsibility of the Department to fill up critical vacancies to upgrade the CHCs to FRUs, and failure to ensure this had resulted in non-delivery of maternal health care services to the PWs.

(iv) Institutional delivery

NRHM encouraged institutional deliveries for improving maternal healthcare through creating awareness among people.

(a) *Janani suraksha yojana* (JSY) was launched as a safe motherhood scheme which aims at reducing maternal and infant mortality through increased institutional deliveries. Under JSY, all pregnant women (PW) who delivered in health facilities were eligible for cash incentive of ₹ 1,400 in rural area and ₹ 1,000 in urban area towards institutional delivery[47]. Accredited social health activists (ASHA)[48] are engaged to encourage the PW for institutional deliveries and guide/facilitate the beneficiaries for opening of bank account.

31,765 (six *per cent*) women who delivered at PHIs in the test checked districts did not receive JSY payment

Scrutiny of HMIS data of the State revealed that 53,983 (3.77 *per cent*) out of 14.32 lakh women who delivered at public health institutions (PHI) during 2012-17 did not receive JSY incentive in the State. In the sampled districts, 31,765 (6.47 *per cent*) out of the 4.91 lakh women who delivered at PHIs did not receive JSY incentives. In the test checked health units under the sampled districts, 1.33 lakh deliveries took place and of this, 8,486 (6.38 *per cent*) PWs who delivered in these health centres did not receive JSY incentive mainly in the absence of bank accounts.

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46 Abhanpur, Bhanupratappur Bilha and Manendragarh

47 Institutional delivery at public health institutions and accredited private hospitals except delivered by APL in a private ward at PHCs.

48 ASHA is appointed to forge the linkage of hamlet to hospital for curative services, empowerment of women and universalisation of chid development services for every 1,000 population. There are 65,901 ASHAs (*Mitanins*) are working in rural areas in the State.

11,229 cheques relating to JSY incentive valuing ₹ 1.46 crore could not be encashed either due to non-deposition of cheques into beneficiary's bank account or non-availability of Bank account in the name of beneficiary

Audit further observed in three out of seven sampled DHs and nine out of 14 sampled CHCs that cheques for incentives were issued to 69,905 women under JSY but 11,229[49] cheques (pertaining to the period 2012-17) valued at ₹ 1.46 crore could not be encashed either on account of failure to deposit the cheques into beneficiary's bank accounts or non-availability of bank account in the name of beneficiary. Thus, the objective of providing incentive for institutional delivery could not be fully achieved.

In the exit conference (March 2018), the PS stated that earlier JSY incentive was paid through account payee cheques, but due to non-availability of bank account in the name of some beneficiaries, cheques were not collected or after collecting, these were not deposited in bank accounts which resulted in non-payment of the incentive to the beneficiaries. Now direct to bank payment system has been initiated by the State to provide incentive to all the beneficiaries under JSY.

The fact remains that no measures were taken to make payments to those PWs who do not own bank accounts.

(b) Analysis of deliveries

In seven test checked districts, 11.52 lakh PWs were registered for ANC during 2012-17. Against this, the Department fixed[50] a target of 8.79 lakh institutional deliveries. However, the institutional deliveries were 6.83 lakh and home deliveries were 1.84 lakh as given in ***Appendix 2.1.5.*** Further analysis of data relating to PWs registered for ANC revealed that:

✓ The percentage of institutional delivery against the total deliveries (home plus institutional deliveries) increased from 65.54 to 94.88 *per cent* over five years during 2012-17, however, the achievement against the target was 78 *per cent* (6.83 lakh out of 8.79 lakh).

✓ Further, test check of 84 SHCs revealed that out of 6,937 deliveries conducted at home during 2012-17, only 20.74 *per cent* home deliveries (1,439) were attended by doctor/ nurse/ANM and 30.20 *per cent* newborns (2,095) were not visited by health worker within 24 hours of home delivery. The reasons stated by the ANMs for not attending were lack of timely information of home delivery and home delivery undertaken outside the area of SHC.

Further, out of total home deliveries during 2012-17 in the State, deliveries ranging between 54.37 and 74.20 *per cent* were carried out by *dais*/relatives/others and 11.17 and 22.69 *per cent* newborns were not visited by a doctor/ANM/nurse within 24 hours of delivery as required under the norms. The reasons stated by the ANMs were lack of timely information of home delivery and home delivery outside the area of SHC.

Though the home deliveries have decreased from 34.46 to 5.12 *per cent* of the total delivery in the test checked districts, delivery by ANMs, who were not trained as skilled birth attendant (SBA), ranged between 44.83 and 77.78 *per cent*. Further, it was observed that only 31 *per cent* (26 out of 84 test checked

[49] 2012-13-₹ 8.95 lakh, 2013-14-₹ 34.70 lakh, 2014-15-₹ 38.74 lakh, 2015-16-₹ 33.89 lakh, 2016-17- ₹ 29.67 lakh

[50] Target was fixed according to decadal growth rate as per the census data 2011 and crude birth rate of annual health survey 2012-13

SHCs) ANMs were SBA trained and 1,731 (24 *per cent*) out of 7,145 ANMs working as on 31 March 2017 in the State were SBA trained.

The shortages in institutional deliveries were attributed to non-availability/ timely availability of vehicle due to remote area in some cases and inadequate human resources at 24x7 identified health centres.

Thus, the above deficiencies contributed to failure in achieving the target of reducing the IMR by providing healthcare to newborns within 24 hours of birth.

In the exit conference (March 2018), the PS stated that the State is promoting institutional deliveries which are increasing over the period of last five years 2012-17.

The reply is not acceptable as the Department had not been able to achieve the target for institutional deliveries. Further, the cases of short achievement against targets, home deliveries not attended by doctors/nurse/ANMs or not conducted by any SBA trained ANMs which were counterproductive to the objective of the Mission were not replied by the PS.

Recommendations

The Department should promote institutional delivery through awareness programme, motivating the pregnant women through ASHA and by providing transport services. Efforts should be made to minimise the home deliveries.

2.1.10.2 Janani shishu suraksha karyakram

Janani shishu suraksha karyakram (JSSK) was aimed at providing free and cashless services to PW including free drugs and consumables, free diagnostics, free diet during stay in the health institutions. The State Government also provided a smart card[51] with a medical insurance cover of ₹ 30,000 to a maximum of five members of an enrolled family by the Insurance Company either under *Rashtriya swasthya bima yojana* (RSBY) for below poverty line (BPL) family or under *Mukhyamantri swasthya bima yojana* (MSBY) for any family.

In the test checked health facilities, ₹ 1.60 crore (the package amount at the rate of ₹ 4,500 for normal delivery and ₹ 11,250 for caesarian delivery) were irregularly deducted from the smart card of 2,618 beneficiaries of delivery cases in contravention of the mandate to provide free service.

Thus, GoI guidelines on JSSK to provide free delivery service were not followed as package amount for delivery was deducted from the balance in the smart cards of the beneficiaries. This also deprived the families from availing of the service for diseases/ ailments other than delivery service within the limit of the smart card.

[51] A microchip based card issued to the beneficiaries under this scheme after taking photograph and thumb impression of the family members on computer system. This card is used at the time of admission as in-patient in the health facility. This card is pre-loaded with ₹ 30,000 as credit balance at the beginning of insurance period. Treatment cost is debited from the balance amount of the card.

In the exit conference (March 2018), the PS stated that by deducting the amount, the Government is getting the insured amount. However, the PS stated that necessary instructions would be issued in this regard.

The reply is not acceptable as the PWs are entitled to delivery services free of cost under JSSK and the Department has wrongfully charged the PWs for delivery services in violation of the JSSK.

2.1.10.3 Post-natal care

According to JSY, as part of post-natal care (PNC), a PW has to stay for minimum 48 hours after her delivery in the Health centre.

Thirty five *per cent* women were discharged within 48 hours in the test checked districts mainly due to lack of facility for meals, LAMA etc.

Out of 14.32 lakh public institutional deliveries conducted in the State during 2012-17, 5.05 lakh (35.27 *per cent*) women were discharged within 48 hours of delivery. In seven test-checked districts, 4.91 lakh institutional deliveries were conducted and of these, 1.72 lakh (35.02 *per cent*) women were discharged within 48 hours of delivery during 2012-17. Thus, postpartum care for 48 hours after delivery at health facilities could not be provided to these women.

Reasons for discharge within 48 hours of delivery, as noticed from the records and interviews, was mainly due to left against medical advice (LAMA), non-availability of diet facility in some of the PHCs (as mentioned in **Table no.2.1.11**) besides the fact that 512 (out of 785) PHCs did not have 24x7 facilities and 141 (out of 169) CHCs were not FRUs as commented in **paragraphs 2.1.9.5 (ii) and (iii)** to undertake PNC by retaining PWs after delivery**.**

In the exit conference, the PS, while agreeing to the audit observation stated (March 2018) that the State is trying to operationalise 492 PHCs on round the clock (24x7) basis to ensure 48 hour stay of women after delivery.

The reply lacks rationale as the PS had replied in paragraph 2.1.9.5 (ii) that the PHCs could not be made operational on 24x7 basis due to shortage of doctors and nurses and the shortages have not yet been bridged. Further, the reason for not making available diet in the PHCs, as noticed by Audit, was not replied to by the Department.

2.1.10.4 Immunisation

Routine immunisation is an important strategy for child survival, focusing on preventive care to reduce morbidity against seven preventable diseases. Accordingly, vaccinations for tuberculosis (BCG), diphtheria, pertussis, tetanus (DPT), polio (OPV) and measles are to be given in seven stages to the age group of zero-one year under universal immunisation programme. Pulse polio immunisation campaigns are also taken up for eradication of polio.

Audit observed from the RCH registers at SHCs and immunisation records of test checked PHCs, CHCs and DHs that immunisation[52] of children between zero and one year age group ranged between 80 and 86 *per cent* in the State and 77 *per cent* and 83 *per cent* in the test checked districts during the period 2012-17. The main reasons for not immunising all the children was lack of

[52] Carried out by ANMs of SHCs by visiting the villages to vaccine the eligible children and at other health facilities, these are administered to the children by making entries in the vaccination card

awareness, inaccessible area and migration of families along with children to other States etc.

In the exit conference (March 2018), the PS stated that immunisation services in Chhattisgarh are one of the best services among the States of India. During the last *Indradhanush* programme, Chhattisgarh has achieved around 90 *per cent* of target and GoI appreciated the effort of State and kept it in the list of Non-*Indradhanush* State. The PS also stated that immunisation session at left wing extremism (LWE) areas are being organised at *haat* bazaar etc.

The fact remains that 17 to 23 *per cent* targeted children in the sampled districts and 14 to 20 *per cent* targeted children in the entire State is yet to be immunised.

Recommendation

The Department should ensure that the PWs invariably stay for 48 hours in the health centres after delivery as part of post-natal care. Child immunisation should be ensured on priority basis to achieve the target.

2.1.10.5 Family planning

Family planning (FP) services were to be utilised as a key strategy to reduce maternal and child morbidity and mortality in addition to stabilising population by reducing total fertility rate (TFR). Implementing agencies were to encourage focusing on promotion of spacing methods, especially intra-uterine contraceptive devices (IUCD).

Against the estimated level of achievement (ELA) of 5.89 lakh female sterilisations for the State, the actual achievement was only 4.12 lakh (70 *per cent*) and against the target of 2.62 lakh in the test checked districts, the achievement was 1.36 lakh (52 *per cent*) during 2012-17. Further, the target/ ELA for sterilisation were reduced[53] during 2012-17.

Audit observed that IUCD insertions, though voluntary, increased from 90,562 in 2012-13 to 1,48,003 in 2016-17 in the State but the actual achievement against the ELA ranged between 59 and 67 *per cent* despite training given to 2,405 staff (doctors, staff nurses, LHV, RMA and ANMs) during 2012-17 by spending ₹ 4.90 crore. In the test checked districts, the achievement was 60.83 *per cent.* The reasons for shortfall were on account of shortage of OTs and doctors in the centres to conduct the sterilisation operations.

In the exit conference (March 2018), the PS stated that FP is a free programme and sterilisation operations are conducted in facilities having functional OT and surgeons.

The fact remains sterilisation against ELA is short by 30 *per cent* in the State and 48 *per cent* in the test checked districts and ensuring functional OTs and deputing surgeons in the health centres are the primary responsibility of the Department.

[53] Target for ELA for laproscopy and tubectomy was decreased from 1,50,100 in 2014-15 to 49,834 for the year 2015-16 and to 70,000 for the year 2016-17.

2.1.10.6 Quality assurance

(i) Quality assurance programme

As per the guidelines for quality assurance (QA) standards in public health facilities, organisation arrangements is to be ensured for strengthening the QA activities through State quality assurance committee (SQAC) with support of State quality assurance unit (SQAU), district quality assurance committee (DQAC) with support of district quality assurance unit (DQAU) and district quality team (DQT) at respective levels with defined roles and responsibilities.

The main activities of SQAC are to conduct six monthly independent/joint visits for assessment of health facilities, compile and collate monthly data on key performance indicators (KPIs) received from the district quality units, hold half-yearly review meetings and prepare reports.

Audit observed that neither prescribed meetings (only one meeting against four) were held during 2014-16[54] nor monthly data of KPIs was received from any of the districts and hence no action was taken on this. Further, DQAU was not formed in the test checked districts by the Health Department for reasons not on record but the field visits were made by Medical officers and RMNCH[55] consultant.

In the exit conference (March 2018), PS agreed that DQAU was not formed and stated that field visits to monitor the quality in the health facilities is done by the Medical officers and other staff to give necessary instructions to the facilities.

The reply is not acceptable. Though makeshift arrangement of sending the Medical officers to field was made a practice, it violates the objectives of the Mission as DQAU needs to be formed with separate set-up in every district as a part of QA standards. No justification was given by the Department for failure to establish the DQAU and how the QA is ensured in its absence.

(ii) Patient satisfaction survey

Under the guidelines, a quarterly feedback (for 30 OPD and 30 IPD patients separately in a month) is to be taken on a structured format by the hospital manager.

The quality assurance guidelines provide for constitution of DQT at the DHs. It was, noticed that DQT was constituted in all DHs but the patient satisfaction survey, to assess the gaps in the quality of service provided by the health facility, was conducted on 2,023 patients (20.07 *per cent*) against 10,080[56] patients who visited these seven DHs during 2015-17.

Though necessary instructions were given for improvement in the service delivery on the basis of conducted patient's satisfaction survey, in the absence of prescribed number of patients' satisfaction surveys, gaps in the quality of service provided by the health facility may not project true and fair assessment of service delivery.

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54 SQAC was formed in July 2014.

55 Reproductive maternal neonatal child and adolescent health

56 Patient satisfaction survey is to be conducted on 30 IPD and 30 OPD patients in a month

(iii) Maternal and infant death review

Maternal death review is an important strategy to improve the quality of obstetric care and reduce maternal mortality. Every health facility is required to conduct death audit for all deaths happening in the facility. The facility should also report the data relating to maternal and infant deaths to DQAC on monthly basis which will compile and collate the data received from facilities and send the report to SQAC.

In seven test checked districts, 1,027 maternal deaths occurred during 2012-17, of which 963 cases were audited and 851 cases were reported to SQAC by DQAC. Similarly, out of 9,720 infant deaths in the sampled districts, 6,200 cases were audited and only 2,740 cases were reported to SQAC.

In the exit conference, the PS while agreeing to audit observations, stated (March 2018) that death audit of mothers was being conducted but the death audit of children has been started from the year 2016-17.

Recommendation

The Department should establish DQAU in all the districts to ensure audit of all maternal and infant deaths, field visits to monitor the quality in the health facilities and its reporting to SQAU for remedial measures.

2.1.11 Status of ultimate goals

NRHM aims to reduce IMR to less than 25 per 1,000 live births, MMR to 100 per lakh live births and TFR to 2.1 by 2017. India is also a signatory to United Nations targets of millennium development goals (MDGs).

The State could not attain the goals of IMR, MMR and TFR and lagged far behind the achievements of other States. As per SRS bulletin of September 2017, IMR of the State was 39 per 1,000 live births while MMR was 173[57] per 1,00,000 live births. The State stands at 15th place in IMR and 12th place in MMR in the country. TFR stands at 2.2[58] (2015) against the goal of 2.1 by 2017.

Although the state parameters have improved since the implementation of NRHM scheme, the vital health indicators were still not close to the goals the programme had set. The audit findings in this report highlight and flag the key area of concerns which need to be addressed if the goals of NRHM are to be achieved.

In the exit conference (March 2018), the PS stated that there has been drastic change in the health care situation and the State has improved during the NHM period. The fact remains that the Department needs to address the key concerns flagged in the Audit Report, if the NRHM goals are to be achieved.

2.1.12 Conclusion

Ninety three *per cent* of sampled CHCs and 14 *per cent* of sampled PHCs were located beyond 30 km while 76 *per cent* of sampled SHCs were located beyond three km distance from the farthest villages in violation of IPH

[57] SRS special bulletin on MMR 2014-16 (May 2018)
[58] TFR of State was 2.2 as per NFHS -4

standards. Further, 21 *per cent* of sampled PHCs and 79 *per cent* of sampled SHCs were not accessible by public transport. In addition, 876 health centres did not have their own buildings and were functioning from private buildings or other Government buildings where facilities to deliver all the health services were not available.

There were shortages in human resources in critical positions in the DHs, CHCs and PHCs in the State which adversely affected the delivery of mandate of NRHM. These included shortages of specialist doctors (89 and 89 *per cent*), Medical officers (36 and 36 *per cent*), staff nurses (57 and 34 *per cent*) and paramedics (49 and 12 *per cent*) with respect to IPH standards and sanctioned strength respectively.

The Department failed to achieve the target of setting up FRU and to provide 24x7 services. Out of 169 CHCs, the Department planned to upgrade 46 CHCs into FRU but only 28 (61 *per cent)* CHCs could be upgraded. Similarly, 273 (55 *per cent)* out of targeted 492 PHCs could be made 24x7 service provider although the State had 785 functional PHCs.

The Department suffered from significant shortages of essential drugs, consumables and equipments. While shortages of equipment were 38 *per cent* at DHs, 53 *per cent* at CHCs, 47 *per cent* at PHCs, the deficit of essential medicines were to the extent of 40 to 75 *per cent* in DHs, 33 to 75 *per cent* in CHCs and 45 to 75 *per cent* in PHCs. In addition, shortages in availability of laboratory services were noticed at all levels.

Out of 33.09 lakh pregnant women registered in the State for ANC, 20.73 lakh (62.65 *per cent*) were registered in the first trimester. In the test checked districts, only 63.54 *per cent* PWs could be registered within first trimester of pregnancies while 18 *per cent* PWs could not receive three ANC check-ups. Hence, the Department lagged behind in extending the benefits of NRHM to all the PWs

Against the objective of promoting institutional delivery and 48 hours stay in hospital after child birth, only 79 *per cent* deliveries were performed in institutions while 21 *per cent* deliveries were performed in homes in the test checked districts during 2012-17. Further, 35.02 *per cent* women (1.72 lakh) were discharged within 48 hours of delivery in public health institutions while 69.59 *per cent* of total home deliveries (1.84 lakh) during 2012-17 were not attended by SBA trained health professionals.

The targets set for child immunisation against seven vaccine preventable diseases could not be achieved in 17 to 23 *per cent* cases during 2012-17.

In the absence of adequate improvement in health care facilities, the infant and maternal mortality rates (IMR: 39/1,000, MMR: 173/1,00,000) were far short of the NRHM goals (IMR: less than 25/1,000, MMR: less than 100/1,00,000) and MDG (IMR: 27/1,000 and MMR: 109/1,00,000). The total fertility rate was 2.2 against the NRHM target of 2.1.

AGRICULTURE DEPARTMENT

2.2 Performance Audit on implementation of National Food Security Mission

2.2.1 Introduction

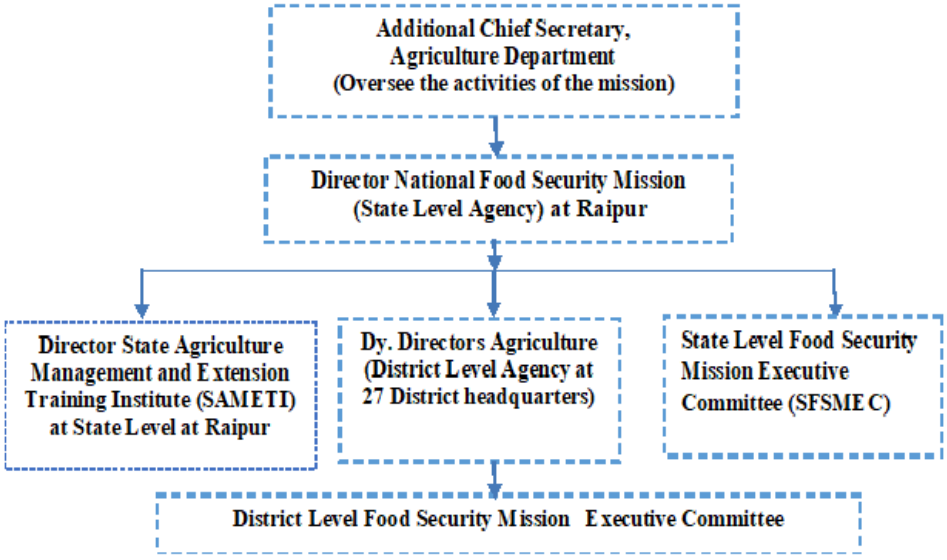
Government of India (GoI) launched (October 2007) the National Food Security Mission (NFSM), a centrally sponsored crop development scheme, in the 11th five year plan (FYP) to increase the production of rice, wheat and pulses. NFSM was continued in 12 FYP (2012-17) by including two more crops viz., coarse cereals and commercial crops.

Production of food grains was to be increased through area expansion, productivity enhancement in a sustainable manner, restoration of soil fertility and enhancing productivity at the individual farm levels. The NFSM guidelines provide for major interventions such as demonstration, need based inputs, i.e., seed distribution, integrated nutrient management (INM), soil ameliorants, integrated pest management (IPM) and plant protection measures (PPM), farm mechanisation and training, and local initiatives.

In Chhattisgarh, 13 districts were taken up (2012-17) under NFSM for rice, nine districts for coarse cereals and all the 27 districts for pulses.

2.2.2 Organisational set-up

The Mission is implemented by the Agriculture Department (Department) in the State. The organisational chart below depicts the key functionaries.



2.2.3 Audit Objectives

The objectives of the Performance Audit were to assess whether:

- NFSM interventions were properly planned and executed efficiently and effectively in compliance with the scheme guidelines;

- Funds were released, accounted for and utilised by the Department economically and efficiently as per the provisions of the scheme;
- Increase in production of food grains, restoration of soil fertility and productivity at the individual farm level were achieved;
- Monitoring and evaluation was done as per prescribed guidelines of NFSM.

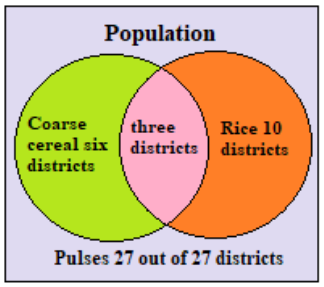
2.2.4 Audit criteria

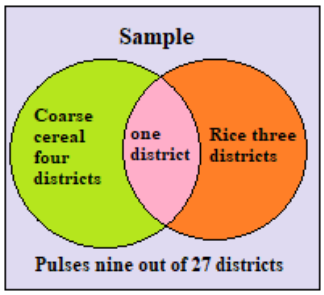
The audit criteria were derived from the following sources:

- NFSM Guidelines 2012
- Provisions of General Financial Rules, State Finance code, Treasury code and Budget Manual of Government of Chhattisgarh
- Instructions issued through Government orders from time to time
- Impact evaluation report and evaluation studies by the State level agencies
- State action plan for implementation of NFSM

2.2.5 Audit scope and methodology

The performance audit covered the period 2012-13 to 2016-17 by test check of records of nine[59] out of 27 districts in the State selected by the simple random sampling without replacement (SRSWOR) method. In these nine districts, four were NFSM-rice, five were NFSM-coarse cereals and all the nine were NFSM-pulses. Apart from this, records in the office of the Director, Agriculture, Director, SAMETI, and nine Deputy Directors, Agriculture (DDA) at district levels were also test-checked. Audit also conducted beneficiary survey of 720 farmers (80 farmers from each selected district) benefitting from the scheme. In addition, 200 demonstrations of which 120 demonstrations (40 each from Chhattisgarh plains, Northern hills and Bastar plateau) pertains to pulses, 60 demonstrations (20 each from Chhattisgarh plains, Northern hills and Bastar plateau) pertains to rice and 20 demonstrations (10 each from Northern hills and Bastar plateau) pertains to coarse cereals were also reviewed in audit to evaluate the extent of achievement of the scheme objectives.





An entry conference was held (July 2017) with the Additional Chief Secretary (ACS) of the Agriculture Department to discuss the objectives, scope and methodology of the performance audit. An exit conference was also held (March 2018) with the ACS of the Department to discuss the audit findings.

[59] Balrampur, Bemetara, Bilaspur, Dantewada, Jagdalpur, Kanker, Korea, Raipur and Surguja

The views/ replies of the Department have been suitably incorporated in the Report.

Audit findings

2.2.6 Planning

Preparation of annual action plans

NFSM guidelines stipulate that the Ministry of Agriculture and Cooperation, GoI would communicate component wise tentative annual outlay to each State for developing annual action plan (AAP). The district level food security mission executive committee (DFSMEC) would prepare the AAP at the district level keeping in view their priority and potential and submit the plan to the State Mission Director (SMD). The district action plans would be aggregated to prepare the State action plan by the SMD. The State action plan would be vetted by the SFSMEC and sent to the Ministry of Agriculture, GoI for consideration by the national food security mission executive committee (NFSMEC). Audit observed the following deficiencies in the preparation of AAP:

2.2.6.1 Preparation of perspective plan and conducting base line survey

The guidelines stipulate that State level agency (SLA) has to prepare perspective plan in consonance with the Mission's goals and objectives in close co-ordination with the State Agriculture Universities (SAUs) and Indian Council of Agriculture Research (ICAR). Further, the SLA has to organise/ conduct baseline survey and feasibility studies in the area of operation (districts, sub districts or a group of districts) to determine the status of crop production, its potential and demand.

The Directorate did not prepare perspective plan or ensure conduct of base line survey for implementation of NFSM

Scrutiny of records of Directorate, NFSM revealed that though the Director instructed (January 2008) the DDAs to conduct baseline surveys, there is no record of such surveys having been conducted. Consequently, the Directorate also failed to prepare the perspective plan.

In the absence of perspective plan and base line survey, status of crop production, its potential and demand could not be reflected in the AAP and use of correct strains of seeds/ correct crops suitable for maximum yield in specific areas where the crops were cultivated could not be ensured. Resultantly, targets set under different interventions were not achieved as mentioned in **paragraphs 2.2.9.1** (field demonstrations), **2.2.9.2 A (i)** (seed distribution), **2.2.9.2 C** (INM and Soil ameliorants), **2.2.9.2 D** (PPM and IPM), **2.2.9.2 E** (farm mechanisation), **2.2.9.2 F** (training) and **2.2.9.3** (local initiatives).

The ACS stated (December 2017) that instructions were issued (January 2008) to 12 district offices (NFSM implemented districts) to conduct base line survey. It is evident that the Department failed to ensure follow-up of its own orders, and this resulted in the shortcomings discussed above.

2.2.6.2 Participation of PRIs in the preparation of AAP

The guidelines stipulate that Panchayati Raj Institutions (PRIs) should be actively involved in selection of beneficiaries and local interventions in the identified districts. The guidelines further stipulate that 33 *per cent* of funds

are to be allocated to small and marginal farmers and 30 *per cent* to women farmers.

In violation of scheme guidelines PRIs were not involved in preparation of AAP for implementation of NFSM

Audit examination of records in the nine sampled districts revealed however, that PRIs were not involved in the selection of beneficiaries, and district offices prepared the AAPs by adding 10 *per cent* to 15 *per cent* to the previous year's achievement in the different categories. Further, funds were not earmarked for small and marginal farmers and for women farmers as required under the guidelines.

The reply (December 2017) of the ACS did not address the issues regarding preparation of the AAPs as discussed above. Regarding the involvement of PRIs, the ACS stated that the beneficiaries list was approved by three tiers of PRIs. This is not the same as ensuring that the PRIs should be involved in the selection of beneficiaries. Further, no justification was given for not earmarking specified proportion of funds for small and marginal farmers and for women farmers.

Recommendation

The Department should conduct base line surveys, prepare the perspective plan, involve PRIs in the selection of beneficiaries and ensure allocation of specified proportion of funds to small and medium farmers and women farmers in terms of the guidelines.

2.2.7 Financial Management

In terms of the guidelines, the GoI[60] share is transferred to State Governments, who in-turn release the funds to the State Level Agency (SLA), viz., the Directorate, NFSM, for further release to the District Level Agencies, viz., DDAs according to the approved programme of the districts, based on progress reports and submission of utilisation certificates (UCs).

Details of fund release and expenditure during 2012-17 are given in **Table 2.2.1**:

Table 2.2.1: Target, fund released and expenditure incurred on NFSM during 2012-17

(₹in crore)

Year	Financial target as per approved action plan	Opening balance	Release	Interest earned and other income	Total funds available	Expen diture	Closing balance
2012-13	61.73	23.82	52.58	1.59	77.99	50.47	27.52
2013-14	82.79	27.52	79.46	1.64	108.62	67.57	41.05
2014-15	95.89	41.05	47.94	5.95	94.94	53.11	41.83
2015-16	133.46	41.83	81.09	2.35	125.27	97.32	27.95
2016-17	126.49	27.95	88.96	6.08	122.99	77.71	45.28
Total	**500.36**		**350.03**	**17.61**		**346.18**	

(Source: Information given by Directorate)

As may be seen, works worth ₹ 154.18 crore[61] (31 *per cent* of approved AAP) were not executed which resulted in less achievement of target on demonstration (76 *per cent*), seed distribution (*48 per cent*), INM and soil ameliorants (54 *per cent*), IPM and PPM (58 *per cent*), and farm mechanism

[60] From 2012-2015 the scheme was totally centrally sponsored scheme; the central and State share in 2015-16 and 2016-17 were 50:50 and 60:40 respectively.

[61] Target ₹ 500.36 crore – expenditure ₹ 346.18 crore = ₹ 154.18 crore

(51 *per cent*), training (74 *per cent*) and local initiatives (42 *per cent*) as discussed in paragraph **2.2.9**.

2.2.7.1 Loss of interest due to parking of funds in current accounts

The Directorate maintained separate bank account (savings account) for implementation of NFSM scheme. However, three to six districts offices deposited NFSM funds in current accounts, resulting in loss of interest of ₹ 1.55 crore as detailed in **Table 2.2.2**:

Table 2.2.2: Parking of NFSM funds during 2012-17

(₹in crore)

Year	No. of districts in the State	No. of district parking funds in savings accounts	Interest earned from saving accounts	No. of districts parking funds in current accounts	Amount deposited in current account	Loss of interest at six *per cent* per annum
2012-13	27	21	1.60	6	9.40	0.56
2013-14	27	22	1.64	5	4.20	0.25
2014-15	27	23	1.58	4	6.28	0.38
2015-16	27	24	2.35	3	6.05	0.36
2016-17	27	24	0.69	3	0.00	0.00
Total			**7.86**		**25.93**	**1.55**

(Source: Information given by the Department and complied by Audit)

The ACS stated (December 2017) that guidelines envisage opening of separate bank account but do not specify whether it would be savings or current.

The reply is not acceptable as the Department has not developed any policy for keeping money in interest bearing accounts especially when it was aware that large sums of money are being kept in bank accounts for implementation of schemes.

Recommendation

It is recommended that Departmental offices maintain savings accounts with sweep facility to maximise returns on unutilised balances under NFSM.

2.2.8 Production performance

As on December 2014, Chhattisgarh had 37.36 lakh farmer families having 47.75 lakh hectares (ha) of cultivated land. During 2012-17, demonstration[62] was done in only 2.76 lakh ha (six *per cent*) of land of 1.38 lakh (four *per cent*) beneficiaries. The farmers also benefited through other NFSM interventions such as through seed distribution-23.89 lakh farmers (64 *per cent*), INM/soil ameliorants-2.11 lakh farmers (six *per cent*), PPM and IPM-1.26 lakh farmers (three *per cent*), farm mechanisation-2.27 lakh farmers (six *per cent*), training-0.16 lakh farmers (0.4 *per cent*) and local initiatives-0.01 lakh farmers (0.02 *per cent*).

The status of crop production in the State and selected districts and deficiencies noticed in implementation of different interventions of NFSM are mentioned below:

[62] Demonstrations were to be conducted in a contiguous block by dividing the fields in two blocks, one for improved practices and the other for farmer's practices in a cluster of 100 ha or more size

2.2.8 (i) Crop production status of the State

There was no increase in production of rice and course cereals even after implementation of NFSM

In terms of the guidelines, NFSM is aimed at increasing the production of rice, pulses and coarse cereals through area expansion and productivity enhancement in a sustainable manner. Further, NFSM guidelines provide focus on districts with low productivity but having high potential including cultivation of crops in rain fed areas. The Mission was implemented in 13 districts for rice, all 27 districts for pulses, and nine districts for coarse cereals in the State.

The area under cultivation of rice, pulses and coarse cereals and its production and yield in the State during 2012-17 is shown in the **Table 2.2.3:**

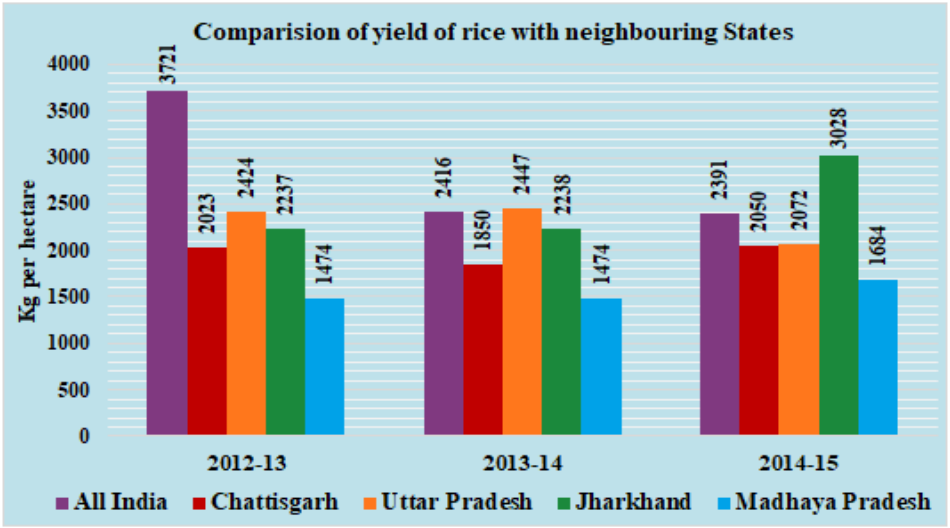
Table 2.2.3: Area, production and yield of rice, pulses and coarse cereals

Year	Area (in 000' Ha)			Production (in 000' MT)			Yield (in kg/ Ha)		
	Rice	Pulses	Coarse cereals	Rice	Pulses	Coarse cereals	Rice	Pulses	Coarse cereals
2012-13	3,901.13	1,211.60	331.70	7,893.43	823.52	485.95	2,023	680	1,465
2013-14	3,887.21	1,225.57	372.17	7,191.02	714.89	611.06	1,850	538	1,642
2014-15	3,990.24	1,170.36	380.79	8,176.67	809.51	583.22	2,050	691	1,532
2015-16	3,833.71	1,135.40	365.25	5,105.54	656.37	503.51	1,332	578	1,378
2016-17	3,923.98	1,211.23	352.74	6,425.03	839.46	480.90	1,637	693	1,363

(Source: Information given by Directorate Agriculture)

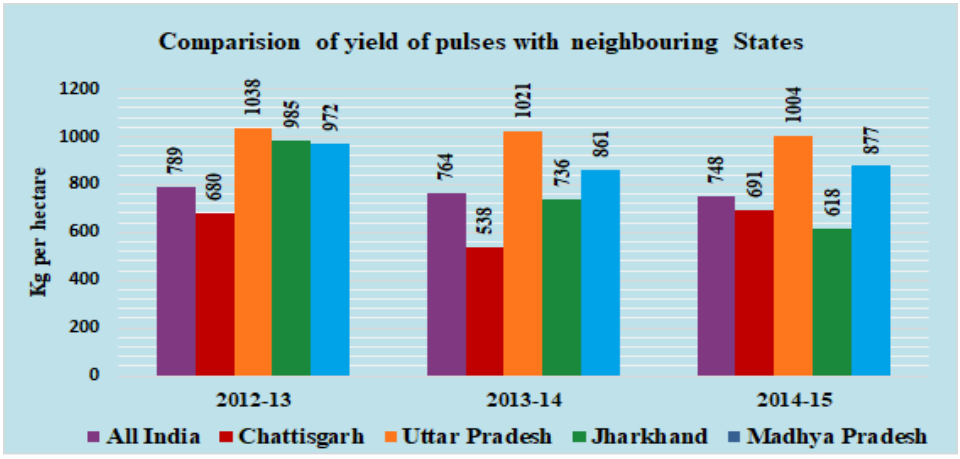
As may be seen, area under cultivation, production and yield of different crops remained range bound during 2012-17, and no dramatic increases attributable to NFSM could be found. Part of the lesser production and yield in respect of rice could be attributed to decrease in rainfall which ranged between 1,009 mm and 1,250 mm during this period, against an average of 1,317 mm in preceding periods.

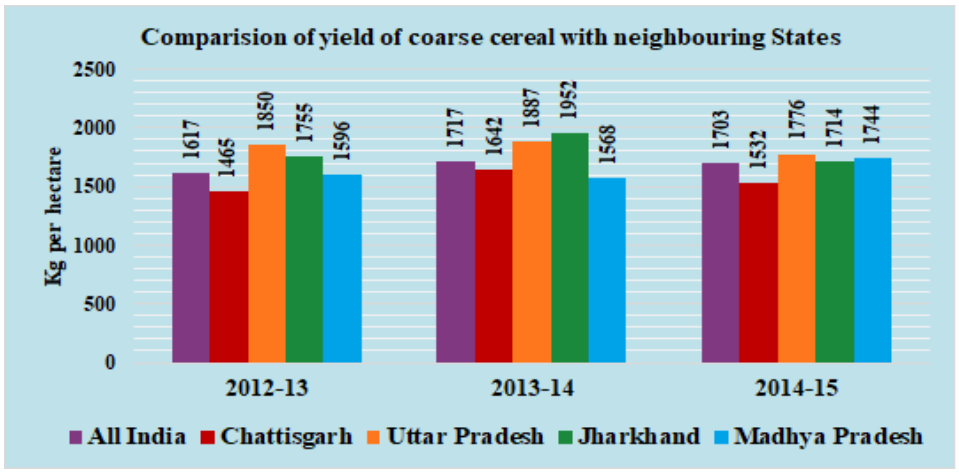
Further, the yield of rice, pulses and coarse cereals of Chhattisgarh was less[63] when compared with its neighbouring States and with the National yield for the period 2012-13 to 2014-15[64] as shown in the charts below:



[63] Except Madhya Pradesh for rice for 2012-15 and coarse cereals in 2013-14; and Jharkhand for pulses for 2014-15

[64] Only data for up to 2014-15 pertaining to yield of various crops of different States was available in the web site of NFSM, Ministry of Agriculture (GoI).





In reply to the audit observation, the ACS stated (December 2017) that production of the State depends on monsoons, but production had increased by 20 to 25 *per cent* through demonstration under NFSM.

The reply is not acceptable as increase in production by demonstration (one of the seven interventions which affects the production of crops) had negligible effect on the overall production of the crops as it was limited to six *per cent* (2.76 lakh ha) of cultivated land (47.75 lakh ha) of the State and had shown more of a diminishing trend (indicated in **Table 2.2.3**) than an increasing trend except pulses which showed a mere increase of sub two *per cent.*

2.2.8 (ii) Comparison of performance of NFSM and non-NFSM districts

A comparison of the average yield of rice and coarse cereal of NFSM and non-NFSM districts for the period 2012-17 is given in **Table 2.2.4 and Table 2.2.5** below:

Table 2.2.4: Comparison of average yield of rice

Year	State	NFSM (13 districts)	Non-NFSM districts (14 districts)
2012-13	2,023	1,957	2,055
2013-14	1,850	1,646	2,054
2014-15	2,050	1,815	2,285
2015-16	1,332	1,215	1,085
2016-17	1,637	1,455	1,750

(Source: Information produced by Directorate of Agriculture)

Table 2.2.5: Comparison of average yield of coarse cereals

Year	State	NFSM (nine districts)	Non-NFSM districts (18 districts)
2012-13	1,465	1,459	1,471
2013-14	1,642	1,620	1,664
2014-15	1,532	1,476	1,588
2015-16	1,378	1,407	1,349
2016-17	1,363	1,830	896

(Source: Information produced by Directorate of Agriculture)

The productivity of rice of NFSM districts could not be brought on par with non-NFSM districts in any of the last five years, an objective that the Mission strived to achieve. The Director, NFSM stated (September 2018) that irrigation facilities in non-NFSM districts are more (25 medium irrigation projects out of 33 in the State) as compared to the NFSM districts and this was one of the main reasons of comparatively better yield in non-NFSM districts. The reply is not acceptable, since there is no evidence that the Agriculture Department, though aware of the core problem areas, had coordinated with the Water Resources Department to address the issue by providing necessary infrastructure (such as check dams, anicuts etc.) for irrigation in the NFSM districts to achieve the objectives of the Mission.

Recommendation

The Department should make concerted efforts to increase the productivity of the food grains by extending irrigation facilities in the NFSM districts in coordination with Water Resources Department.

2.2.9 Implementation of NFSM

Details of expenditure in the State and in the districts selected for Audit under NFSM during 2012-17 are detailed in **Table 2.2.6**:

Table 2.2.6: Interventions wise expenditure during 2012-17

Sl. No.	Name of the interventions	State		Selected districts	
		Expenditure (₹ in crore)	Percentage of expenditure	Expenditure (₹ in crore)	Percentage of expenditure
1	Field demonstration	156.19	45	41.58	53
2	Seed distribution	49.87	14	10.90	14
3	Soil ameliorants and PPM	20.29	6	9.66	12
4	Farm mechanisation	45.46	13	12.26	16
5	Cropped based training programme	2.77	1	0.87	1
6	Local initiatives	12.18	4	2.26	3
7	Miscellaneous expenditure	59.52	17	1.46	1
	Total	**346.18**	**100**	**78.99**	**100**

(Source: Information given by Department and compiled by Audit)

2.2.9.1 Field demonstration

In terms of the guidelines, field demonstration is to be conducted by dividing the fields in two blocks, one for improved practices (demonstration plot) and the other for farmer's practices (control plot) in a cluster of 100 ha or more. District consultants/ technical assistants of NFSM monitor the demonstrations and report the outcome in prescribed format to the district level project management team (PMT). Results of demonstrations are to be compiled at

block, district and State levels. Display boards are to be put up on demonstration plots with information of the farmers and critical inputs applied on the plots. A field day[65] should be conducted and relevant extension literature like leaflets, pamphlets etc., are made available to participating farmers.

The crop wise targets and achievement of demonstration in the State and selected districts during 2012-17 are shown in the **Table 2.2.7** below:

Table 2.2.7: Target and achievement of demonstration of rice, pulses and coarse cereals

Name of the crop	State					Selected districts				
	Target (in lakh ha)	Achievement (in lakh ha)	Provision (₹ in crore)	Expenditure (₹ in crore)	Unutilised amount (₹ in crore)	Target (in lakh ha)	Achievement (in lakh ha)	Provision (₹ in crore)	Expenditure incurred (₹ in crore)	Unutilised amount (₹ in crore)
Rice	1.62	1.62 (100)	121.70	90.66	31.04 (26)	0.30	0.29 (97)	22.65	14.45 (64)	8.20 (36)
Pulses	1.05	1.05 (100)	80.26	62.67	17.59 (22)	0.52	0.47 (90)	35.77	26.14 (73)	9.63 (27)
Coarse cereals	0.09	0.09 (100)	4.60	2.86	1.74 (38)	0.05	0.04 (80)	2.38	0.99 (42)	1.39 (58)
Total	**2.76**	**2.76 (100)**	**206.56**	**156.19 (76)**	**50.37 (24)**	**0.87**	**0.80 (92)**	**60.80**	**41.58 (68)**	**19.22 (32)**

(Source: Information given by Department and compiled by Audit)
Note: Figures in bracket indicate percentage

Audit noticed as under:

✓ The variations between the State and sampled districts figures, as seen from the above table, were due to skewed[66] fixation of targets in the State and samples drawn in Audit based on such targets.

✓ The achievement of 100 *per cent* of target in the State with 76 *per cent* of the financial outlay was due to the fact that components of the programme such as field day/publicity material/visits of scientist/staff were partially executed (34 *per cent* of earmarked fund was spent in 74 clusters examined by Audit) during the demonstration work as mentioned in **paragraph 2.2.9.1 (iii)**.

✓ In the sampled districts, the achievement against target was less by eight *per cent* as the farmers in the Northern hills (Sarguja, Balrampur and Korea districts) and Bastar plateau (Jagdalpur, Dantewada and Kanker districts) did not part with their land for the demonstration activities as seen from the records of the DDAs of these districts.

To assess the actual benefits of demonstrations, Audit visited 200 demonstration sites including 60 demonstrations of rice, 120 demonstrations

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65 A meeting preferably at grain filling stage on a field where scientists from SAUs/ KVK interact with farmers of that locality to provide critical observations and find solution to the problems faced by farmers.

66 In 12 districts of Northern hills and Bastar plateau, targets set were less vis-à-vis the 15 districts of Chhattisgarh plains due to hilly areas and naxal problem. In the audit sample, six districts have been taken from Northern hills and Bastar plateau and three districts from Chhattisgarh plains which resulted in variance between State and sampled district's figures.

of pulses and 20 demonstrations of coarse cereals. Findings are discussed below:

2.2.9.1 (i) Area of cluster for demonstration

The guidelines require village *panchayats* to be involved in selection of beneficiary farmers. Further, the demonstrations should be conducted in a contiguous block by dividing the field in two blocks, one for improved practices and the other for farmer's practice in a cluster of 100 ha and more. The guidelines further provide that size of cluster for hill areas will be 10 ha.

Norms of area (100 ha or more) of cluster for demonstration was not adhered to

Scrutiny of records revealed that village *panchayats* were involved in selection of beneficiaries. Further, 44 out of 60 demonstrations for rice, 75 out of 120 demonstrations for pulses and 10 out of 20 demonstrations for coarse cereals had clusters of 100 ha and more. Thus, 71 clusters of demonstrations (16 clusters for rice, 45 clusters for pulses and 10 clusters for coarse cereals) had area less[67] than 100 ha. Of these, 36 clusters belonged to the selected districts of Northern hills area (Surguja, Korea and Balrampur) whereas the remaining 35 clusters belonged to the selected districts of Bastar plateau (Jagdalpur, Dantewada and Kanker). In the selected districts of Chhattisgarh plains area (Raipur, Bilaspur and Bemetara) no clusters having less than 100 ha for demonstration were noticed.

The main reasons for selection of cluster for demonstration having less than 100 ha in selected districts were non-willingness of farmers to part with their fields due to lack of confidence expressed by them on the new variety seeds to carry out the demonstration works as reported (2014) by the National Level Monitoring team.

The ACS stated (December 2017) that it is not possible to make a cluster of 100 ha in Northern hills and Baster plateau. The reply is not acceptable, since, the Department has not yet surveyed these areas to record the actual availability of land of farmers to take a policy decision in this regard.

2.2.9.1 (ii) Soil analysis, identification of demonstration technologies and inclusion of new varieties for demonstration

The guidelines stipulate that soil fertility status of the selected field should be known well in advance for deciding the use of fertilisers and soil ameliorants. Further, improved practices for the demonstration plots should be identified in consultation with State Agriculture University (SAU) through their regional research stations/ krishi vikas kendra (KVK) located in the area and the seed varieties to be included in the package should preferably be new varieties. Also, the results of the demonstrations should be compiled at block, district and State level. The contribution of various interventions such as seed distribution, distribution of INM, IPM etc., undertaken under cluster demonstrations and up-scaling of particular intervention should be analysed in the succeeding years.

Audit observed from files of the DDAs of sampled districts that plot wise soil health cards of the farmers were not prepared by the concerned DDAs as no such instructions have been given by the Department for reasons not on

[67] Rice-75 ha (four), 50 ha (12); pulses-50 ha (30), 25 ha (two), 20 ha (two), 10 ha (one), one ha (10); and coarse cereal –50 ha (three), 40 ha (one), 35 ha (six)

record. As a result, the Department had not examined the fertility status of selected fields before execution of demonstration work. Further, though required, regional research stations of SAU/KVK were not involved for improved practices. Rather, field level functionaries such as Senior Agriculture Development Officers (SADO)/Rural Agriculture Extension Officers (RAEO), who were not domain experts, were directly involved in conducting the demonstration.

Audit evaluated the production performance of 200 demonstration plots against their control plots in the selected districts and observed that 13 *per cent* demonstrations (26 out of 200) have shown improved productions by more than 50 *per cent* as indicated in **Table 2.2.8** below:

Table 2.2.8: Production performance of demonstration plots as compared to control plot for variety of seeds used in demonstration

Variety of seeds used in demonstration	No. of demonstration plots	Increase in production performance as compare to control plot		
		Up to 25 *per cent*	26 to 50 *per cent*	More than 50 *per cent*
Control Plots (Local variety) v/s Demonstration Plot (HYV/hybrid)	58	33	19	6
Increase percentage	*100*	*57*	*33*	*10*
Control Plots (HYV/hybrid) v/s Demonstration Plot (HYV/hybrid)	142	76	46	20
Increase percentage	*100*	*54*	*32*	*14*
Total	**200**	**109**	**65**	**26**
Increase percentage (Total)	***100***	***55***	***32***	***13***

(Source: Information given by Department and compiled by Audit)

Though production in demonstration plots have surged, the comparative rise remains almost the same even when the farmers in the control plots have used either local seeds or hybrid/ HYV seeds. This is probably the reason why the farmers are not very keen on using the hybrid/ HYV seeds as reported (2014) by National level monitoring team (NLMT) as commented in **paragraph 2.2.9.2A (i)**). However, such reservations of the farmers, though required to be dispelled by the Department through educating them or by awareness drives, were not carried out as commented in **paragraph 2.2.9.2A (ii)**. Further, the data on production of demonstrations plot and control plots up to district level were not compiled at State level. Hence, contribution of various interventions under demonstration could not be analysed and the Department failed to ensure up-scaling of particular interventions in the succeeding years, though stipulated in the guidelines.

The reply of the ACS (December 2017) did not address the audit observation.

2.2.9.1 (iii) Cost norms of demonstrations

Norms of cost of expenditure during demonstration was not adhered to

The guidelines indicate that cost of demonstrations for one ha area should be ₹ 7,500. Accordingly, Director NFSM issued cost norms of demonstrations which included ₹ 6,700 for purchase of seeds, INM, weedicide, IPM and ₹ 800 for field day/publicity material /visits of scientists/staff.

In the sampled districts, block wise details of expenditure incurred for purchase of seeds, INM, weedicide, IPM and other expenditure were maintained in ledgers. However, cluster wise expenditure details were not

maintained by the districts offices, in the absence of which, cluster wise expenditure of each demonstration, could not be worked out.

However, seven out of nine sampled district offices furnished details of cluster wise expenditure (2016-17) of 74 clusters to audit. The details are given in **Table 2.2.9**:

Table 2.2.9: Cluster wise expenditure

Name of the districts	No. of clusters (area in hectares)	Norms of expenditure for one ha *(in ₹)*		Total expenditure to be incurred on seed etc. *(₹ in lakh)*	Expenditure actually incurred *on seed etc. (₹ in lakh)*	(+) Excess expenditure / (-) unutilised *(₹ in lakh)*	Total other expenditure to be incurred *(₹ in lakh)*	Total other expenditure actually incurred *(₹ in lakh)*	(+) Excess expenditure/ (-) unutilised *(₹ in lakh)*
		Seed, INM, IPM, weedicide	Other expenditure						
Raipur	4 (400)	6,700	800	26.80	23.83 (89)	- 2.97 (11)	3.20	3.82 (119)	0.62 (zero)
Bilaspur	7 (700)	6,700	800	46.90	39.57 (84)	- 7.33 (16)	5.60	4.80 (86)	- 0.80 (14)
Bemetara	1 (100)	6,700	800	6.79	5.32 (78)	- 1.47 (22)	0.80	0.80 (100)	Nil (nil)
Korea	13 (1,300)	6,700	800	87.10	65.37 (75)	- 21.73 (25)	10.40	7.60 (73)	- 2.80 (27)
Surguja	8 (800)	6,700	800	53.60	51.41 (96)	- 2.19 (04)	6.40	0.10 (2)	- 6.30 (98)
Kanker	16 (1,600)	6,700	800	107.20	139.11 (130)	31.91 (nil)	12.80	Nil (nil)	- 12.80 (100)
Jagdalpur	25 (2,500)	6,700	800	167.50	140.92 (84)	- 26.58 (16)	20.00	2.97 (15)	- 17.03 (85)
Total	**74**			**495.89**	**465.53 (94)**	**- 30.36 (06)**	**59.20**	**20.09 (34)**	**- 39.11 (66)**

(Source: Information given by Department and compiled by Audit)
Note: Figures in bracket indicate percentage

As may be seen, the DDAs of the sampled districts did not spend the earmarked fund to promote the objectives of the Mission to undertake field days/ distribution of publicity materials/ visits of scientist/ staff for reasons not on record. The ACS stated (December 2017) that specified amount could not be incurred due to variation in cost of seeds and other inputs.

The reply is not acceptable as more than 10 years have been completed since the launching of NFSM and the Department should have by this time addressed the issue of variation in costs of seeds/other inputs.

Thus, the Department did not ensure publicity of demonstration of crop farming through field days, distribution of public materials and visits of scientists/GoI and State officials. The impact, though not evaluated by the Department, may have deprived the farmers the use of latest variety seeds, INM, PPM etc., as discussed in **paragraph 2.2.9.2 A (ii).** The conclusion is also drawn from the fact that 720 scheme beneficiaries reported to Audit during beneficiary survey that they were not aware of these interventions as commented in **paragraph 2.2.9.2 B**.

Recommendation

The Department should increase publicity of demonstration of crop farming through field days, distribution of public materials and visits of scientist and State officials by spending the money provided under this head.

2.2.9.2 Need based inputs

A Seed distribution

2.2.9.2A (i) Non-achievement of targets

The guidelines provide that seed producing agencies authorised by the State would distribute seeds to the farmers in selected districts. Further, DFSMEC would finalise the list of beneficiaries in consultation with village *panchayats*.

Scrutiny of records of DDAs of selected districts revealed, however, that DFSMEC did not consult village *panchayats* when finalising the list of beneficiaries. Rather, based[68] on targets set by the Directorate, NFSM for distribution of seeds to each district, DDAs issued orders to *Beej Nigam* for storage of seed in various offices of SADO/Large size *Adivasi* multipurpose societies (LAMPS) at block level, from where, farmers of the concerned blocks were to purchase required seeds at subsidised rates. The *Beej Nigam* claims reimbursement of subsidy amount from the DDA based on the quantity of seeds purchased.

The crop wise targets and achievement of seed distribution in the state and selected districts during 2012-13 to 2016-17 are given in **Table 2.2.10**:

Table 2.2.10: Targets and achievement of seed distribution

Name of the crop	State						Selected districts					
	Target in MT	Achievement in MT	(-) Excess/ (+) short achievement in MT	Provision in ₹ in crore	Expenditure ₹ in crore	Unutilised amount (₹ in crore)	Target in MT	Achievement in MT	(-) Excess/ (+) short achievement in MT	Provision in ₹ in crore	Expenditure incurred in ₹ crore	Unutilised amount ₹ in crore
Rice	80,891	56,520 (70)	24,371 (30)	58.54	28.08 (48)	30.46 (52)	14,544	11,122 (76)	3,422 (24)	12.23	5.92 (48)	6.31 (52)
Pulses	21,408	15,093 (71)	6315 (29)	43.92	21.62 (49)	23.30 (51)	6,821	3,671 (54)	3,150 (46)	11.83	4.77 (40)	7.06 (60)
Coarse cereals	319	58 (18)	261 (82)	1.80	0.17 (9)	1.63 (91)	232	44 (19)	188 (81)	0.91	0.21 (23)	0.70 (77)
	Total			**104.26**	**49.87 (48)**	**54.39 (52)**	**Total**			**24.97**	**10.90 (44)**	**14.07 (56)**

(Source: Information given by Department and compiled by Audit)
Note: Figures in bracket indicate percentage

The target of seed distribution could not be achieved by the Department as, for reasons not on record, DFSMEC failed to form district level seed committees (DLSC) to monitor seed distribution in the districts, its indent and ultimate distribution to end users. Further, NLMT reported (2014) that the farmers were not keen on using the hybrid/ HYV seeds which Audit also observed from examination of 200 demonstration activities in the sampled districts (commented in **paragraph 2.2.9.1 (ii)**) that though production of demonstration plots have improved, the percentage of increase in demonstration plots remained the same even when local seeds were used in control plots. In addition, the Department had also not bothered to take any feedback on the low purchase of seeds by farmers under such arrangement from the DDAs.

[68] Target for seed is arrived at by taking inputs from districts.

The Department did not factor in these causes to manage the distribution of seeds among farmers and this led to funds worth ₹ 54.39 crore earmarked for this intervention remaining unspent during 2012-17. This could also be one of the basic reasons for less productivity of rice, pulses and coarse cereals in the State as commented in **paragraph 2.2.8 (i)** when read with other observations in the report.

The ACS stated (December 2017) that quantity of seed was provided to each district as per the target of the district. Wherever additional quantity of seed was required by any district, the same had been fulfilled from the allotment of seed of other districts which had less achievement in seed distribution in the same year.

The reply is not acceptable as the Department had only ensured that seeds are stored in the offices of SADO/LAMPS for willing farmers to purchase voluntarily, instead of addressing the low purchase of seeds by educating the farmers, especially when the Department was informed by NLMT in 2014 that the farmers are not inclined to use such seeds.

2.2.9.2A (ii) Inadequate use of hybrid and high yield seeds

Department failed to promote the use of latest variety of seeds by educating the farmers through intervention under demonstration

The guidelines provide for promotion and extension of improved quality of seeds. The Performance Audit report of the Agriculture Department 2010-11, recommended promotion of latest varieties of seeds over local seeds and the Department had agreed to follow this.

However, the Department did not follow the recommendation and against the target of distributing 1,880 MT hybrid seeds valued at ₹ 9.03 crore and 79,011 MT high yield variety (HYV) seeds valued at ₹ 49.51 crore during 2012-17, only 311 MT hybrid seeds (16 *per cent*) worth ₹ 1.13 crore and 56,210 MT HYV seeds (71 *per cent*) worth ₹ 26.95 crore were distributed. The position in the sampled districts is shown in **Table 2.2.11** below.

Table 2.2.11: Target and achievement of distribution of hybrid and HYV Seed

(In quintal)

Name of the district	Hybrid seed			High yield variety seed		
	Target	Achieved	Not achieved	Target	Achieved	Not achieved
Balrampur	350	0 (nil)	350 (100)	3,350	2,222 (66)	1,128 (34)
Surguja	950	0 (nil)	950 (100)	15,000	10,727 (72)	4,273 (28)
Jagdalpur	2,500	751 (30)	1,749 (70)	1,400	0 (nil)	1,400 (100)
Dantewada	415	7 (2)	408 (98)	6,000	1,652 (28)	4,348 (72)
Korea	1,600	872 (55)	728 (45)	40,200	18,524 (46)	21,616 (54)
Raipur	1,250	122(10)	1,128 (90)	73,750	72,703 (99)	1,047 (01)
Bilaspur	50	0 (nil)	50 (100)	16,060	2,352 (15)	13,708 (85)
Total	**7,115**	**1,752 (25)**	**5,363 (75)**	**1,55,760**	**1,08,180 (69)**	**47,580 (31)**

(Source: Information given by Department and compiled by Audit)
Note: Figures in bracket indicate percentage of achievement/non-achievement

Audit observed that the Department had not adequately created awareness/interest and educated the farmers to use hybrid/HYV seeds over local variety seeds through field days, publicity materials and visits of scientist (commented in **paragraph 2.2.9.1 (iii)**). In addition, the farmers were also not keen on using the new variety seeds as reported by NLMT to the Department. However, Audit noticed that where efforts were made by the Department to educate the farmers, distribution of new varieties of seeds had increased**.**

For example, the Department spent 15 *per cent* of allocated funds on educating farmers for using these seeds in Jagdalpur district, 73 *per cent* in

Korea district and 73 *per cent* in Raipur district. These districts have shown better distribution of seeds as may be seen from the above table (up to 55 *per cent* for hybrid seed and 99 *per cent* for HYV). In contrast, only two *per cent* of earmarked fund was spent in Surguja district, and none of the farmers purchased hybrid seeds.

The ACS stated (December 2017) that hybrid seeds are costly in comparison to HYV seeds and could be used for one year only and hence, less quantity of hybrid seeds were purchased /used by small and marginal farmers.

The reply is not acceptable as the Department had not undertaken adequate awareness measures (spent between two and 73 *per cent* of allotted fund) to educate the farmers or taken any initiative such as subsidy etc., to facilitate farmers to use these seeds. Consequently, the Department failed to promote the mandate of NFSM for use of improved variety seeds, especially hybrid to augment production.

Recommendation

The Department should create awareness and educate farmers to ensure use of hybrid seeds/ HYV seeds to achieve the objective of the Mission.

2.2.9.2 B Application of INM, soil ameliorants, IPM and PPM

The guidelines stipulate development of strategies to promote and extend improved technologies such as seed, integrated nutrient management (INM) including micronutrients, soil ameliorants, integrated pest management (IPM) and plant protection measures (PPM).

23 to 92 *per cent* farmers in the sampled districts reported ignorance on use of INM, soil ameliorants, IPM and PPM to Audit in the beneficiary survey

Survey of 720 beneficiaries[69] in the selected districts revealed that 221 (92 *per cent*) out of 240 beneficiaries in three districts of Bastar plateau area (Jagdalpur, Dantewada and Kanker), 188 out of 240 (78 *per cent*) beneficiaries in three districts of Northern hills area (Surguja, Korea and Balrampur) and 55 (23 *per cent*) out of 240 beneficiaries in three districts of Chhattisgarh plains area (Raipur, Bilaspur and Bemetara) were unaware about the application of INM, soil ameliorants, IPM and PPM. This is despite the fact that the Department had spent ₹ 9.66 crore out of ₹ 18.24 crore (target) allotted for this purpose. Thus, the Department failed to educate the farmers on the use of these measures under the NFSM intervention of need based inputs.

The ACS accepted the audit findings and stated (December 2017) that Chhattisgarh is a tribal state and two training sessions were organised in *Rabi* and *Kharif* season to create awareness among the farmers on the use of these need based inputs.

The reply cannot be accepted since (i) the numbers of farmers attending such trainings were not provided to Audit; and (ii) 23 to 92 *per cent* beneficiaries have reported ignorance of these measures to Audit during beneficiary survey.

2.2.9.2 C Integrated nutrient management (INM)/ soil ameliorants

Under the guidelines, the Agriculture Department is required to implement INM/soil ameliorants. The DFSMEC is required to finalise the list of beneficiaries in consultation with village *panchayats*. Micro-nutrients/lime/ gypsum or other sulphur containing fertilisers such as phosphor-gypsum/

[69] Selected randomly in consultation with the RAEO/SADO posted in the village/block

bentonite sulphur are to be applied as a basal/foiler application[70] based on the recommendations of ICAR/ SAUs concerned. The farmers are to bear 50 *per cent* of the cost of these inputs, and the balance is to be borne by the Department subject to the financial limits[71].

Scrutiny of records in the selected districts revealed that the DFSMEC neither finalised the list of beneficiaries in consultation with village *panchayat;* nor did the Department follow the procedures and obtain recommendations of ICAR/ SAUs etc. Instead, assistance under INM initiative was provided after receiving farmer's demand and upon report by SADO/ RAEO of concerned block that it was necessary. Thus, the process was subverted. Consequently, 63 *per cent* of target set for bio-fertilisers could only be achieved whereas achievement of micronutrient was 91 *per cent*. The main reasons for better performance of micronutrient was due to the fact that it was used in plants as essential elements and required small quantity.

Details of physical and financial targets and achievements under the micronutrients and soil ameliorants interventions in the State and in selected districts during 2012-17 are shown in **Table 2.2.12**:

Table 2.2.12: Physical and financial target and achievement under various items implemented under INM

Name of the item	State						Selected districts					
	Target (in ha)	Achievement/percentage (in ha)	(-) Excess/ short achievement	Provision (₹ in crore)	Expenditure (₹ in crore)	Unutilised amount (₹ in crore)	Target (in ha)	Achievement (in ha)	(-) Excess/ (+) short achievement (in ha)	Provision (₹ in crore)	Expenditure incurred (₹ in crore)	Unutilised Amount (₹ in crore)
Micronutrient	1,00,009	91,439 (91)	8,571 (9)	5.00	3.65 (73)	1.35 (26)	80,255	57,605 (72)	22,650 (28)	4.05	2.41 (60)	1.63 (40)
Lime/gypsum	48,410	51,411 (106)	(-) 3,001 (-6)	3.83	1.02 (27)	2.81 (73)	24,495	7,635 (31)	16,860 (69)	1.87	0.50 (26)	1.38 (74)
Distribution of rhizobium culture /phosphate solubility/ microzium/ bio-fertilisers	4,41,596	2,80,293 (63)	1,61,303 (37)	6.05	3.41 (56)	2.64 (44)	1,25,725	1,05,723 (84)	20,002 (16)	1.52	0.81 (54)	0.70 (46)
Total	**5,90,015**	**4,23,143 (71)**	**1,66,872 (29)**	**14.88**	**8.08 (54)**	**6.80 (46)**	**2,30,475**	**1,70,963 (74)**	**59,512 (26)**	**7.44**	**3.72 (50)**	**3.72 (50)**

(Source: Information given by Department and compiled by Audit)
Note: Figures in bracket indicate percentage

The main reasons of failure to achieve the targets are:

✓ In Chhattisgarh, 80 *per cent* farmers belong to small and marginal category and are not willing to use INM, soil ameliorants etc., even with 50 *per cent* subsidy from the Government as noticed from records of DDAs. However, the Department has not yet addressed the issue. Hence, 46 *per cent* of the earmarked funds could not be spent.

[70] Basal applications are administered directly on the land prior to or at the time of sowing; foliar application are administered on standing crops

[71] Micro-nutrients-₹ 500/ha, liming or paper mud of acidic soil-₹ 1,000/ha, gypsum/other sources as sulphur-₹ 750/ha, bio fertilisers such as rhizobium, phosphate solubilising bacteria in pulses-₹ 100/ha

✓ The Department had not followed the prescribed procedure for the intervention such as obtaining recommendations of ICAR/SAUs and to educate the farmers about the use of these measures to improve production.

✓ Though the Department stated that efforts are being made to create awareness among farmers for these interventions, the fact remains that the Department has not assessed the purchasing capacity of the farmers to use these inputs for possible measures such as subsidy etc.

2.2.9.2 D Plant protection measures and integrated pest management (IPM)

The guidelines stipulate financial assistance of ₹ 500 per ha or 50 *per cent* of the cost, whichever is less, to farmers for IPM including plant protection chemicals, bio-pesticides and weedicides in the identified districts.

Audit found shortfalls in achieving the targets during 2012-17 to the extent of 12 *per cent* in IPM, 41 *per cent* in distribution of nucleo polyhedro virus (NPV), 30 *per cent* in plant protection chemicals and bio-fertilisers, 54 *per cent* in liming in acidic soil and 35 *per cent* in weedicides as detailed in ***Appendix 2.2.1***. In the selected districts the achievements against targets ranged between 41 and 100 *per cent* except in Balrampur, where no such activity was taken up, for reasons not on record.

The main reason of failure to achieve the targets is that in Chhattisgarh, 80 *per cent* farmers belong to small and marginal category and are not willing to use IPM measures even with 50 *per cent* subsidy from the Government. However, the Department has not yet addressed the issue of improving the purchasing capacity of the farmers with possible measures such as subsidy etc.

The ACS accepted (December 2017) the audit observations.

2.2.9.2 E Farm mechanisation

The guidelines provide for assistance of 50 *per cent* of the cost[72] of farming equipment such as pumps, pipes etc., to the selected farmers to facilitate timely completion of field operations, improving efficacy of field operations, increasing cropping intensity and economising the cost of cultivation. The list of beneficiaries is to be prepared by the DDA in consultation with the *Zila Parishad* and approved by the DFSMEC.

Audit observed that in none of the selected districts, did the DDAs prepare the list of beneficiaries in consultation[73] with the *Zila Parishad* for approval by the DFSMEC. Instead assistance under farm mechanisation was provided upon receiving demands from farmers which was less than the provisions made for extending the intervention under the Mission. Thus, the process was subverted at district levels by the DDAs.

Resultantly, the Department spent ₹ 12.26 crore to provide 3.11 lakh metres (37 *per cent*) of pipe and 0.44 lakh (63 *per cent*) equipments during 2012-17

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[72] Subject to their ceiling amount

[73] Though selection of beneficiaries by *Zila Parishad* in Demonstration activities has resulted in achievement of 100 *per cent* of physical target, in comparison to other interventions (seed distribution, Soil ameliorants/INM, PPM, Farm Mechanisation, local initiative) where the achievement was 18 to 71 *per cent* with beneficiaries not selected by the *Zila Parishad*

on demand basis against the provision of ₹ 23.93 crore for supply of 8.40 lakh metres of pipes and 0.70 lakh equipments for implementation of farm mechanisation under NFSM.

Audit also conducted survey with 720 scheme beneficiaries[74], and noticed that only 243 beneficiaries (34 *per cent*) have pumps and pipes for irrigation purpose, 358 beneficiaries (50 *per cent*) have only pumps, and 119 beneficiaries (16 *per cent*) did not have any pumps or pipes. These farmers informed Audit that in the absence of pumps and pipes they faced difficulties in irrigating their fields and had to depend on the pumps of the neighbouring farmers.

Thus, the purpose of NFSM to improve efficacy of field operations through farm mechanization was not achieved.

The ACS stated (December 2017) that farm equipments were used by special farmers and efforts were being made to convince farmers for increasing irrigation through use of pipe.

The reply is not acceptable as (i) the guideline provision was not adhered to in the selection of beneficiaries for extending the facility; (ii) the Department has not ascertained the number of farmers who do not own pumps and pipes to extend assistance under the intervention.

2.2.9.2 F Training

The guidelines state that training of farmers plays a crucial role in speedy dissemination of improved crop production practices. Further, the guidelines proposed to organise four sessions of each training i.e. one at the beginning of *Kharif* and *Rabi* season, one each during *Kharif* and *Rabi* season. There will be a group of 30 participants/farmers in each session and participants in all four sessions will be same.

The year wise details of target of training of farmers and achievement (both physical and financial) in the State and selected districts are given in **Table 2.2.13 and 2.2.14**:

Table 2.2.13: Physical and financial target and achievement of training in the State during 2012-17

Year	Physical target (no. of sessions)	No. of farmers to be imparted training	Physical achievement (no. of sessions)	No. of farmers imparted training	Financial target (₹ in crore)	Financial achievement (₹ in crore)
2012-13	460	3,450	380	2,850	0.64	0.44
2013-14	380	2,850	342	2,565	0.53	0.59
2014-15	250	1,875	196	1,470	0.35	0.32
2015-16	812	6,090	659	4,943	1.14	0.74
2016-17	754	5,655	631	4,732	1.06	0.68
Total	**2,656**	**19,920**	**2,208**	**16,560**	**3.72**	**2.77**

(Source: Information given by Department and compiled by Audit)

[74] Selected randomly in consultation with the RAEO/SADO posted in the village/block

Table 2.3.14: Physical and financial target and achievement of training in the selected districts during 2012-17

Year	Physical target (no. of sessions)	No. of farmers to be imparted training	Physical achievement (no. of sessions)	No. of farmers imparted training	Financial target (₹ in crore)	Financial achievement (₹ in crore)
2012-13	120	900	112	840	0.18	0.16
2013-14	120	900	108	810	0.16	0.14
2014-15	88	660	60	450	0.13	0.10
2015-16	248	1,860	200	1,500	0.34	0.21
2016-17	192	1,440	108	810	0.26	0.14
Total	**768**	**5,760**	**588**	**4,410**	**1.07**	**0.75**

(Source: Information given by Department and compiled by Audit)

Training targets have not been achieved

Audit observed that only 16,560 farmers (0.44 *per cent*) in the State were imparted training under NFSM out of 37.36 lakh farmer families and hence, the impact of training on productivity could not be seen at the State level. In the test checked districts also, the impact of training on productivity could not be assessed as the district wise farmer families were not maintained by the Director, NFSM. However, against the target for training in the nine test checked districts, two[75] had achieved 100 *per cent*, five[76] districts achieved between 60 and 91 *per cent* whereas the achievement of two[77] districts ranged between eight and 40 *per cent* of physical target.

Audit could not find any reasons in the files of the concerned DDA and the Department for not imparting training despite availability of funds. The Department stated (December 2017) that the trained farmers shared their knowledge with other farmers.

The reply is unacceptable. The ground of sharing of training experience among farmers cannot absolve the Department of its responsibility to impart training as per the targets set.

2.2.9.3 Local initiatives

The guidelines state that financial assistance of 50 *per cent* of the cost of each work (subject to a maximum ₹ 1.50 lakh) was to be provided to States to undertake location specific interventions (not covered under the normal activities of the Mission) for boosting the production of rice, wheat, pulses and coarse cereals. Augmentation of water resources, development of godowns for safe storage of critical inputs etc., were to be done under this intervention. These interventions were to be selected in consultation with *Zila Parishad* and were to be evaluated by a team of experts at the State level. Upon clearance of specific interventions by SFSMEC, funds were to be released to the DDA at the districts level.

The expenditure incurred on local initiatives during 2012-17 in the State and selected districts is detailed in **Tables 2.2.15 and 2.2.16**:

[75] Bemetra and Korea
[76] Bilaspur, Dantewada, Jagdalpur, Kanker and Raipur
[77] Balrampur and Surguga

Table 2.2.15: Physical and financial target and achievement of local initiative in the State during 2012-17

Year	Physical target	Physical achievement (Percentage)	Financial target (₹ in crore)	Financial achievement (Percentage) (₹ in crore)
2012-13	200	0 (0l)	1.94	0.11 (06)
2013-14	166	76 (46)	2.67	0.53 (20)
2014-15	352	280 (80)	3.86	1.51 (53)
2015-16	1,078	784 (73)	11.00	6.06 (55)
2016-17	806	404 (50)	9.50	3.97 (41)
Total	**2,602**	**1,544 (59)**	**28.97**	**12.18** (42)

(Source: Information given by Department and compiled by Audit)

Table 2.3.16: Physical and financial target and achievement of local initiative of selected districts during 2012-17

Year	Physical target	Physical achievement (percentage)	Financial target (₹ in crore)	Financial achievement (Percentage) (₹ in crore)
2012-13	200	50 (25)	0.61	0 (0)*
2013-14	40	20 (50)	0.30	0 (0)*
2014-15	80	51 (64)	0.92	0.35 (38)
2015-16	116	103 (89)	1.74	0.58 (33)
2016-17	167	120 (72)	2.23	1.50 (67)
Total	**603**	**344 (57)**	**5.80**	**2.43** (42)

(Source: Information given by Department and compiled by Audit)

* Although physical progress is seen during 2012-13 and 2013-14, no payment had been made by the DDAs of the selected districts for local initiatives for reasons not on record

The main reasons for under-utilisation of fund was failure of the Department to identify the works which would benefit the farmers in enhancing the production and yield of crops in consultation with *Zila Parishad* and involving experts at the State level by SFSMEC as stipulated in the guideline. This led to non-execution of local initiatives and this was especially when there was fall in the production of rice and coarse cereals.

The ACS stated (December 2017) that the farmers need to give applications to obtain the benefit of interventions and thereafter, benefit of the scheme are given on first come first serve basis (except demonstration).

The reply is not acceptable as the scheme guidelines nowhere stipulate that farmers have to give application to get benefit of the intervention. Rather, the interventions were to be selected in consultation with *Zila Parishad* as per the guidelines and were to be evaluated by a team of experts at the State level, which was not done. No reasons for not following the norms were furnished to audit.

Recommendation

The Department should resolve the bottlenecks under different interventions of NFSM (need based inputs, training and local initiative) to optimise achievements against targets.

2.2.10 Monitoring and evaluation

The project management team (PMT) was to monitor the implementation of each demonstration and record the data on crop yield in demonstration through crop-cutting experiments and concurrent evaluation of success of the programme. The results of each demonstration were to be compiled at block, district and State level in the form of a booklet with reference to some success stories. Close monitoring of achievement of physical and financial targets of

interventions was to be conducted and submitted quarterly/ annually to the district/State level. Concurrent evaluation of the Mission was to be done by the State Department of Agriculture/Department of Economics and Statistics/SAU to assess the performance of the Mission commensurate with AAP and its objectives.

Though the Department constituted (August 2012) the PMTs with one consultant[78] as required, only one technical assistant was appointed against the provision of 17 technical assistants at district level. Due to shortage of staff at monitoring level, results of demonstrations were not compiled in the form of booklet as required in the guidelines. Further, no evaluation of the scheme was done since inception by the Department except one yearly concurrent evaluation (2014-15) of implementation of the scheme by National team of GoI. This evaluation report stressed the need to select the beneficiaries carefully, expand the demonstration and use of technology for improved yield. However, the Department did not take action in any of these areas as mentioned in various paragraphs of this report.

The ACS stated (December 2017) that a monitoring team including a scientist of the agriculture university has been constituted at National level to monitor and evaluate implementation of the scheme twice a year. The AAP of the next year would be prepared as per their recommendation.

The reply is not convincing as PMT had only one technical assistant against the provision of 17 technical assistants at district level and this adversely impacted monitoring of the scheme. Further only one concurrent evaluation of the scheme was done in 2014-15 by the National team and no evaluation was done by the Department since inception of the scheme in the State.

2.2.10.1 Functioning of State food security mission executive committee

The guidelines stipulate constitution of the State food security mission executive committee (SFSMEC) under the chairmanship of Chief Secretary along with the Secretaries from various Government Departments including Department of Agriculture, Irrigation, Power, *Panchayati Raj*, Tribal Affairs and Social Welfare as its members. The main function of the committee was to oversee the activities of the Mission in the State.

The State Government constituted the SFSMEC in October 2007 to monitor the activities of the Mission.

The ACS stated (December 2017) that SFSMEC gives approval to State AAP before it is sent to GoI. NFSM scheme is being implemented as per decision taken in the meetings of the committee.

The reply is not acceptable as the Department failed to produce any evidence of meetings by the committee during 2012-17 except a solitary meeting in 2015-16. In the absence of meetings, the claim of the Department is not backed by documentary evidence.

2.2.10.2 Formation of district level seed committee

Paragraph 12.5 of operational guidelines stipulates that a district level seed committee (DLSC) will be constituted by the chairman of the DFSMEC which

[78] The consultant was paid ₹ 5.70 lakh during the period 2012-15

will be tasked to verify the list of beneficiaries for seeds, its indent and its ultimate distribution to end users.

Audit observed that seed committees were not constituted in the test checked districts on the ground that assessment of seed was done by the Department.

The ACS stated (December 2017) that assessment of variety of seed is done as per guidance of scientist of KVK.

The reply is not acceptable as failure to form the DLSC deprived preparation of list of beneficiaries for seeds, its indent and its ultimate distribution to end users etc.

Recommendation

The Department should strengthen the monitoring and supervision by ensuring concurrent evaluation of implementation of the scheme, form the DLSC and instruct the SFSMEC to conduct meetings for effective discharge of its functions. Appointments of consultants, technical assistants at State and districts level for streamlining the monitoring activities of the Mission should also be ensured.

2.2.11 Conclusion

NFSM was implemented in 13 districts for rice, nine districts for coarse cereals and all 27 districts for pulses while wheat and commercial crops were not taken up under NFSM. The baseline survey was not conducted and the perspective plan was not prepared before implementation of the interventions under NFSM.

Production and yield of rice and coarse cereals has decreased in 2016-17 over 2012-13 while for pulses, the production increased marginally by 1.94 *per cent* (15,940 MT) and yield by 1.91 *per cent* (13 kg/ha). The area expansion did not happen for pulses during 2012-17 while for rice it was 0.59 *per cent* (22,850 ha) and 6.34 *per cent* (21,040 ha) for coarse cereals. Thus, absence of increased production, yield capacity and area expansion defeated the objective of the Mission.

During 2012-17, NFSM benefits were provided to only four *per cent* farmers (1.38 lakh) owning six *per cent* (2.76 lakh ha) of cultivated land through demonstration, 64 *per cent* farmers (23.89 lakh) under seed distribution, six *per cent* farmers (2.11 lakh) under INM/soil ameliorants, three *per cent* farmers (1.26 lakh) under PPM and IPM, six *per cent* farmers (2.27 lakh) under farm mechanisation, 0.4 *per cent* farmers (0.16 lakh) in training and 0.02 *per cent* farmers (0.01 lakh) under local initiatives. These indicated the limited intervention of NFSM in the State.

NFSM had suffered from implementation deficits under important components. As a result, achievements under seed distribution was 70 *per cent* for rice, 71 *per cent* for pulses and only 18 *per cent* for coarse cereals while it was 71 *per cent* under INM and Soil ameliorants and 69 *per cent* under IPM and PPM. Further, the achievement under training was 83 *per cent* and 59 *per cent* under local initiatives during 2012-17. Resultantly, 31 *per cent* (₹ 154.18 crore out of ₹ 500.36 crore) of the total earmarked fund for these interventions under NFSM remained unutilised.

In the sampled districts, 75 *per cent* of the targeted hybrid seeds and 31 *per cent* of high yield variety seeds could not be distributed to the farmers while 23 to 92 *per cent* of 760 beneficiaries of NFSM interventions have reported to Audit their ignorance on application of INM, soil ameliorants, IPM and PPM. Further, the demonstration activity could raise the productivity of only 10 to 14 *per cent* of the 200 demonstration plots by more than 50 *per cent* in comparison to the control plots using local and improved variety of seeds. In addition, 58 *per cent* of the available fund under local initiatives could not be spent by the Department while 17 *per cent* (3,360 out of 19,920) of the farmers were not imparted any training despite availability of fund.

Monitoring and supervision was not effective as SFSMEC, though constituted in October 2007 to monitor the activities of the Mission, had met once[79] during 2015-16 while district level seed committee to monitor the distribution of seeds to farmers were not formed. Further, technical assistants were not appointed at district level to facilitate monitoring. In addition, concurrent evaluation of the Mission was done by the Department only once in 2014-15 against the requirement of yearly evaluation.

[79] Conclusion drawn on the basis of production of records of only one minute of its meeting during 2015-16 by the Directorate, NFSM