

Impact of Kayakalp Initiative on Healthcare Delivery in Selected Districts of Chhattisgarh



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Acknowledgement

Kayakalp initiative of Ministry of Health and Family Welfare began in 2015 with the aim of improving infrastructure upkeep, hygiene and sanitation, and infection control practices in Central Government institutions and public health facilities in all the states and UTs. Chhattisgarh state has also initiated kayakalp of its health facilities which are assessed and scored on a number of parameters, and every year the highest-scoring facilities at each level receive recognition through Kayakalp Awards. The present study makes an attempt to assess the functioning of Biomedical Waste Management and Infection Control two of the seven thematic areas of kayakalp. In this context I take this opportunity to express my sincere gratitude to all those who have contributed to this study. I express my sincere gratitude to MD NHM, State Programme Management Unit for National Health Mission Chhattisgarh, State Nodal Officer for Kayakalp and their team for extending all possible cooperation and information for facilitating this study. CMHOs and DPMs of the five districts Jangir-Champa Korba, Surguja, Raipur, and Durg provided local assistance without whose support the study would not have been possible. The MO in-charge of different health facilities and their health staff provided valuable information in the midst of OPDs. Last but not the least, I wish to thank the beneficiaries who extended their heartiest cooperation and provided valuable suggestions that are included in the study. We hope the findings of this study will serve the purpose of drawing the attention of the policy makers at the national and state level for evolving strategies for formulating an action plan for providing impetus to kayakalp programme in Chhattisgarh.

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List of Acronyms

ANC	Ante Natal Care
BPM	Block Programme Manager
ANM	Auxiliary Nurse Midwife
BMW	Bio-Medical Waste
C.G.	Chhattisgarh
CHC	Community Health Centre
CMHO	Chief Medical Health Officer
CPM	City Programme Manager
DH	District Hospital
DPM	District Programmer Manager
GoI	Government of India
ICU	Intensive Care Unit
IEC	Information, Education, Communication
IPD	Indoor Patient Department
JDS	Jeevan Deep Samiti
LWM	Liquid Waste Management
MAS	Mahila Aarogya Samiti
MO	Medical Officer
MoHFW	Ministry of Health and Family Welfare
NHM	National Health Mission
NRHM	National Rural Health Mission
NUHM	National Urban Health Mission
OPD	Outdoor Patients Department
OT	Operation Theatre
PHC	Primary Health Centre
PIP	Programme Implementation Plan
PPE	Personal Protection Equipment
PRC	Population Research Centre
RMNCH+A	Reproductive, Maternal, Newborn, Child Health & Adolescents
SNCU	Sick New born Care Unit
UPHC	Urban Primary Health Centre

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Impact of Kayakalp Initiative on Healthcare Delivery in Selected Districts of Chhattisgarh

Executive Summary

- Kayakalp is an innovative endeavour undertaken by the Government of India to encourage cleanliness, promote hygiene and sanitation, and ensure adoption of infection control practices. Kayakalp as a part of Swachh Bharat Abhiyan is a remarkable initiative by the Government of India.
- Chhattisgarh has starting working on the kayakalp scheme since 2015 and has gradually undertaken the task on augmenting the key components of hospital upkeep which included infrastructure maintenance, hospital/facility appearance, bio-medical waste management, Infection control, sanitation and hygiene.
- The primary objectives of the study were to assess the quality of biomedical waste management and infection control two of the seven domains of kayakalp in the selected DH, CHC, PHC of five districts of Chhattisgarh. The study ascertained the training and knowledge of staff in waste management and infection control. It studied the level of staffs' satisfaction and motivation towards achieving excellence in kayakalp initiative. Ascertained patient opinion about kayakalp initiative and satisfaction at services received. Identified readiness of the health facilities for continuous assessment of the kayakalp initiatives, sustainability issues, barriers and suggest course corrections as observed.
- Three districts Janjgir-Champa, Korba Surguja Ambikapur were assessed for kayakalp during field visits for PIP monitoring. Two more districts Raipur and Durg were subsequently taken up for assessment of kayakalp
- The assessment is done annually every year as per the instructions and guidelines received from the state authorities and not quarterly as conceived by MoHFW.
- All five districts had completed internal assessment but had not completed peer assessment.
- Korba district has received the maximum rewards in kayakalp 2018-19 for health facilities in comparison to Surguja and Raipur districts. Health facilities in Janjgir- Champa and Durg districts did not receive any award in kayakalp in 2018-19.

- All three assessments internal, peer and external are conducted only once every year in the month of October- November and no directions regarding quarterly assessment was given to the districts by the state.
- An assessment using checklists for different type of health facilities evaluated bio-medical waste management and infection control. These two thematic areas had ten subdomains each.
- Internal assessment scores obtained from the state website were compared with scores given by PRC.
- Results indicated that the performance of Korba district was commendable and it ranked first in comparison to others in both BMW management and infection control.
- Amongst three DHs, DH Korba scored the highest, followed by DH Raipur. DH Janjgir- Champa had minimum scores in both the domains.
- Among four CHCs, three CHC Kartala (Korba), CHC Dharsiwa (Raipur) and Patan (Durg) were maintaining most of the BMW protocols. CHC Malkharoda (Janjgir-Champa) scored hundred percent in internal assessment, but received very poor marks under PRC assessment.
- Among 11 PHCs assessed, Dondekalan(Raipur) and Tanki maroda (Durg) received low scores than other PHCs. PHC Korba (Korba) and PHC Mandir- Hasaud (Raipur) were the two best PHCs in BMW management and infection control.
- In general PPE kits were in short supply in all the PHCs and more kits should be made available.
- Lack of uniformity in use of checklists for assessment of health facilities in different districts was observed which needs correction.
- The staff in all the visited PHCs displayed extreme awareness and involvement in implementing Kayakalp. The reasons for motivation were more non- monetary, feeling of ownership, participation in innovative ideas, cleanliness of premises, hospital upkeep and overall a face lift of the hospital.
- However, Periodic sensitization programs for the health-care personnel for effective BMW management practices' implementation with a special focus on recent work schedule is essential.
- Beneficiaries expressed awareness about general waste but not much about bio-medical waste. Awareness generation by staff on hygiene issues was limited. However, they expressed satisfaction at cleanliness and general behaviour of the staff.

- The programme managers opined that after implementation of kayakalp, a visible change has been observed in the cleanliness and hygiene of different hospitals.
- The performance based incentivization approach and periodic checking by peer and then external evaluation teams have also led the hospital administration to be continuously alert towards the regular upkeep and maintenance of the facility. This approach of appreciation would result in better outcomes in comparison to the strategy of direct provision of funds for the same.
- A healthy competition among facilities was already observed during interviews with hospital staff in Chhattisgarh which will in turn lead to better delivery of quality health services.
- This study has few limitations too. First, Kayakalp is a new initiative, and it was done as a pilot study. Hence, there is not enough published literature available for comparison of the assessment in various public health facilities. Second, data for final internal assessment was not available, so some subjective bias may have come in the scoring.

Action Points

- The programme managers at the state level have stated that more capacity needs to be created in the health system to match the tempo of augmenting kayakalp in terms of staff training, manpower, and infrastructure.
- The standardized approach of the evaluation of public health facilities through Kayakalp tool would help in judging their performance on a uniform platform. Chhattisgarh needs to adopt this assessment on a continuous quarterly basis which would make hospital upkeep as part of daily routine.
- Staff training and sensitization for BMW management and infection control is crucial to success of sustainability of kayakalp.
- Community involvement as seen in Korba PHC which increases a sense of community involvement and ownership can be emulated by other health facilities in the state.

Impact of Kayakalp Initiative on Healthcare Delivery in Selected Districts of Chhattisgarh

1. Introduction

The Swachh Bharat Abhiyaan launched on 2nd October 2014, focuses on promoting cleanliness in public spaces. Cleanliness and hygiene promotion practices had always been a neglected area in purview of public health care services, demanding for deployment of strategies at its improvement. These practices affect the perception of the individual and influence their selection of healthcare facilities. Cleanliness and hygiene in hospitals are critical to preventing infections and also provide patients and visitors with a positive experience and encourages moulding behaviour related to clean environment. As the first principle of healthcare is “to do no harm” it is essential to have all health care facilities clean and to ensure adherence to infection control practices.

Kayakalp Initiatives

- Kayakalp Initiative of MoH&FW began in 2015 with the aim of improving infrastructure upkeep, hygiene and sanitation, and infection control practices in Central Government institutions and public health facilities in all the states and UTs.
- Health facilities are assessed and scored on a number of parameters, and every year the highest-scoring facilities at each level receive recognition through Kayakalp Awards.
- The scheme has resulted in significant improvement in the level of cleanliness, hygiene, and infection control practices at public healthcare facilities.
- It has also inculcated a culture of ongoing assessment and peer review to promote hygiene and sanitation. MoHFW has also used the platforms of Village Health Sanitation and Nutrition Committees under the National Health Mission and Mahila Arogya Samitis under the NUHM to promote sanitation in vulnerable urban communities.
- Not only healthcare professionals or health department, but MoHFW has also worked on inter-ministerial collaboration for hygiene and sanitation.
- MoHFW and Ministry of Jal Shakti started an integrated scheme, the “Swachh Swasth Sarvatra” in December 2016.

- Under the initiatives, resources have been provided to CHCs (Common Service Centres) located in Open Defecation Free blocks, which are yet to meet Kayakalp criteria. In 2019, the country's three best PHCs Under Kayakalp from Andhra Pradesh, Gujarat and Karnataka were also felicitated by Ministry of Jal Shakti.
- Swachh Bharat Abhiyan along with Kayakalp has given a thrust to the country's efforts to achieve Sustainable Development Goal 3 (Good Health and Well Being) and Goal 6 (Clean water and sanitation) respectively.
- Efforts are being made that overall activities to maintain hygiene developed into a habit, sustaining a Kayakalp certification which will motivate people to practising hygiene practices in their daily lives.

Ensuring Objective Assessment:

The Kayakalp assessment of facilities is done using checklists. These checklists comprise of six broad thematic areas, Criteria and checkpoints in a very explicit manner. Apart from these, a checklist provides assessment method and means of verifications against each checkpoint.

There are four types of checklists for four different levels of public health facilities: -

1. Tertiary care Level Checklist: - Applicable for Central Government Tertiary Care Institutions
2. Secondary care Level Checklist: - Applicable to District Hospitals, Sub District Hospitals, Area Hospital, Taluk Hospital and CHCs and UHCs.
3. Checklist for 24X7 PHC (with beds): - Applicable to PHC with indoor facilities and labour Room
4. Checklist for PHC (without beds): - Applicable to ambulatory setting such as Additional PHC & Urban PHCs.

The award is distributed based on the performance of the facility on the following parameters. hospital/facility upkeep, sanitation and hygiene, waste management, infection control, support services, hygiene promotion, kayakalp outside boundary/ Patient feedback in case of Tertiary facilities. For deciding and giving the awards to those facilities that perform well under this initiative, a State level Award Committee has been constituted under the chairpersonship of the Health Secretary/Mission Director. External assessment teams have been constituted and trained by the National Institute of Health and Family Welfare, New Delhi.

This scheme had shown that there is significant increase in cleanliness, hygiene and infection control practices in public healthcare facilities. The program has been able to inculcate a culture of ongoing assessment and peer review of performance to promote hygiene, cleanliness and sanitation. This scheme has also provided opportunities and incentives to bolster inter sectoral coordination for the improvement of health systems. Kayakalp has not only changed the face of Public Health Facilities but it has also been able to create the wave of awareness among communities. Many NGOs, Academic Institutions, colleges, schools, religious groups are actively participating and contributing to this noble cause.

Chhattisgarh has starting working on the kayakalp scheme since 2015 and has gradually undertaken the task on augmenting the key components of hospital upkeep which included infrastructure maintenance, hospital/facility appearance, pest and animal control, land scaping and gardening, maintenance of open areas maintenance of furniture and fixtures illumination and lighting, removal of junk material, water conversation and work place management in a target and planned manner. The present study is an attempt to assess the the quality of biomedical waste (BMW) management and infection control two of the seven domains of kayaklp in selected health facilities in five districts of Chhattisgarh.

2. Objectives of the Study.The primary objectives of the study were:

1. Assess the quality of biomedical waste management and infection control in the selected DH, CHC, PHC of five districts of CG.
2. Ascertain the training and knowledge of staff in waste management and infection control.
3. Study the level of staffs' satisfaction and motivation towards achieving excellence in kayakalp initiative.
4. Ascertain patient opinion about kayakalp initiative and satisfaction at services received.
5. Readiness of the health facilities for continuous assessment of the kayakalp initiatives, sustainability issues, barriers and suggest course corrections as observed.

3. Method and Study Tools

The study was conducted in five districts of Chhattisgarh after determining the operationalization of internal assessment scores in the districts. The study included quantitative tools to assess the impact of Kayakalp scheme in 18 health facilities including

three DHs, four CHCs and 11 PHCs of the state of Chhattisgarh (India) during year 2019-20, source of data being the open access reports of Kayakalp scheme available on the official website of the Department of Health & Family Welfare Chhattisgarh. This tool has a standardized protocol, and scoring for various parameters is done utilizing assessment checklists prepared for quality assessment. Methods used to assess the facility were direct observation, staff interview, and review of the documents.

In this study, we present the findings of a BMW management assessment, and infection control two of the seven domains of the tool. Scoring was done as fully compliant (2), partially compliant (1), and non-compliant (0). It was done as per the guidelines and checklist provided by the Kayakalp program. In this tool, there are ten criteria for the assessment of BMW management (C1–C10) and infection control (D1–D10), were each having a maximum score of 10. Therefore, the maximum total score for each of these domains is 100 for secondary health facilities. For primary health facilities assessment of BMW management (C1–C10) and infection control (D1–D10), were each having a maximum score of 6. Results were recorded as full, partial, and no compliance for the domain of waste management and infection control rules. Full compliance was given a score of '2' partial '1' and non-compliance received a score '0'. Descriptive statistics have been employed to analyze the data collected for secondary facilities at the district and sub district level and primary health care facilities.

Qualitative assessment was done through indepth interview of district nodal officer for kayakalp, and staff involved in the kayakalp initiative, on issues of training, capacity building, adequacy of staff and their awareness of kayakalp, viability of regular and continuous assessment, sustainability issues and barriers, action taken, financial budget, commendations and cash awards received.

From the selected DH, CHC, PHC/ UPHC exit interviews of 5-7 patients was conducted. Patients visiting for OPD and IPD services were interviewed to understand their perception and observation about the changes in the hospital upkeep, hygiene and cleanliness practices of hospital staff, cleanliness in different areas and wards of the hospital, availability of services, behaviour of staff, and quality of services.

Interviews were conducted with frontline workers (and ANMs), regarding IEC /communication carried out to create awareness in the community regarding 'kayakalp' to motivate community participation, resource mobilization and ownership of the upkeep of the hospital.

Field survey work was carried out during September-March 2019-20 in Jangir, Korba, Ambikapur, Raipur and Durg- Bhilai districts.

This report is presented in eight sections. The first section is the introductory section, whereas the second section outlines the objectives of the study. Section three highlights the method and study tools. The fourth section deals with operationalization of kayakalp in Chhattisgarh from the year 2015 onwards. The fifth section consists of results and key findings. Beneficiaries perspective is stated in section six and service providers' views are highlighted in section eight. The eighth section is the concluding section.

4. Operationalization of Kayakalp

Kayakalp initiatives have been introduced in the state since 2015 and more

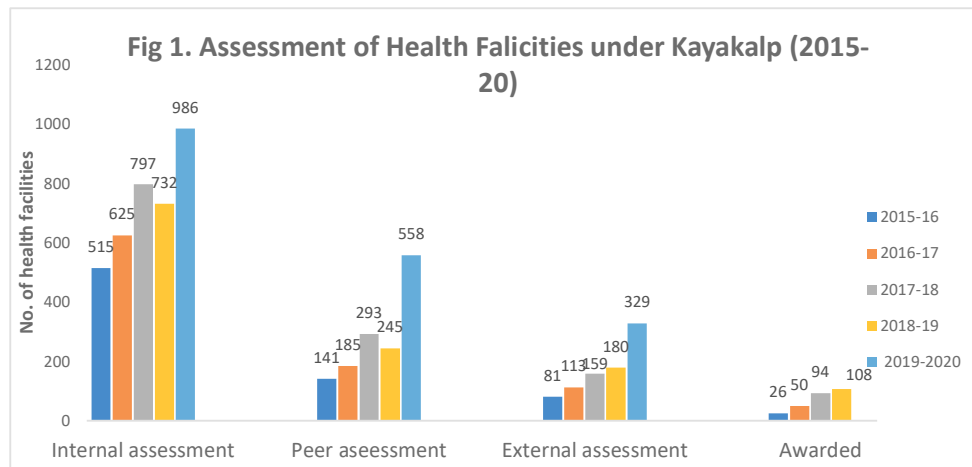
Assessment of Health Institutions for Kayakalp in Chhattisgarh

	2015-16	2016-17	2017-18	2018-19	2019-2020
Internal assessment	515	625	797	732	986
Peer Assessment	141	185	293	245	558
External assessment	81	113	159	180	329
Awarded	26	50	94	108	

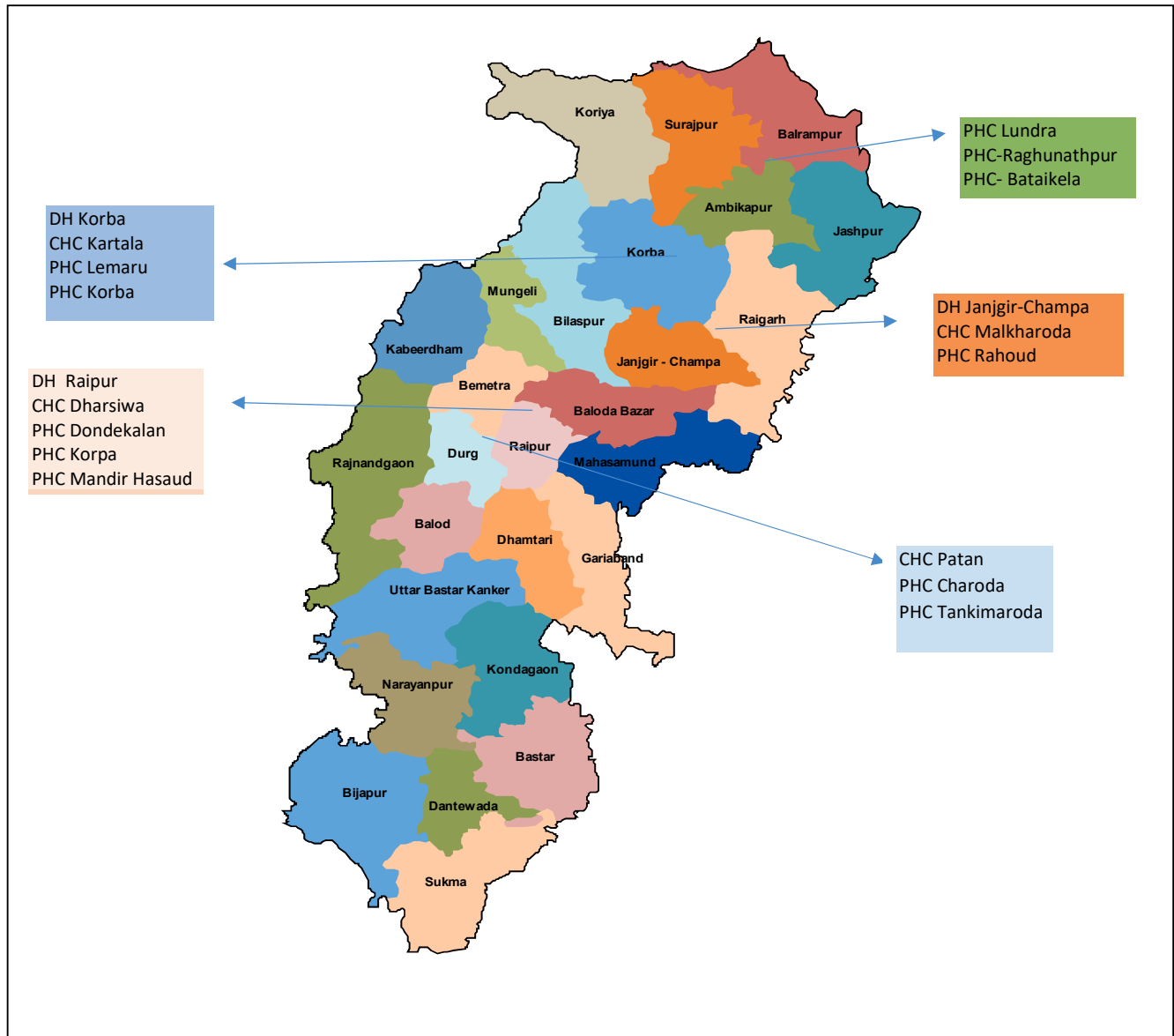
and more health facilities have been included for internal assessment. In the year 2019-20, 986 health facilities have conducted internal assessment, 558 completed peer assessment and 329 facilities faced external assessment. Overall, 108 health facilities received

S.no	Year	No of health facilities awarded			
		DH	CHC/CH	PHC/UPHC	Total awarded
1	2015	5	6	15	26
2	2016	5	11	34	50
3	2017	4	22	69	95
4	2018	5	18	85	108

commendations and cash awards in 2019-20. Total five districts were taken up for kayakalp study. Three districts Janjgir-Champa, Korba Surguja Ambikapur were assessed for kayakalp during field visits for PIP monitoring. Two additional districts Raipur and Durg were subsequently taken up for assessment of kayakalp (Map 1).

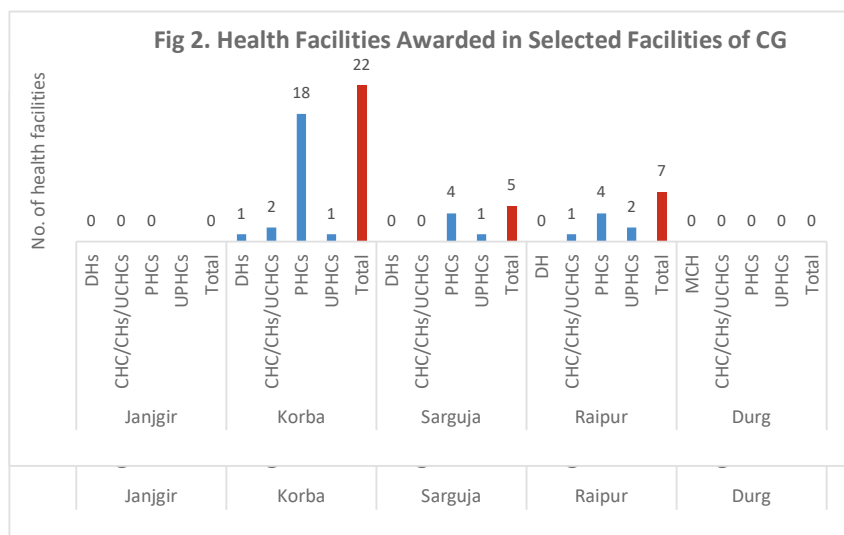


- All five districts had completed internal assessment but had not completed peer assessment. Therefore internal assessment scores were considered for comparison purposes.
- The assessment is done annually every year as per the instructions and guidelines received from the state authorities and not quarterly as conceived by MoHFW .
- All three assessments internal, peer and external are conducted only once every year in the month of October- November and directions regarding quarterly assessment was not provided by the state.
- Korba district has received the maximum rewards in kayakalp 2018-19 for health facilities in comparison to Surguja and Raipur districts. Health facilities in Janjgir- Champa and Durg districts did not receive any award in kayakalp in 2018-19.
- In the DH the, hospital consultant and a nodal officer incharge oversee the kayakalp programme in the hospital. Training of staff is carried out by the district and also hands on training is provided by the team already trained in different aspects of kayakalp
- At the CHC level the nodal officer an MO I/C from the CHC monitors kayakalp by forming teams to upgrade different thematic areas of kayakalp.
- At the PHC level the MO I/C monitors kayakalp with the total staff responsible for upgrading different sub domains of kayakalp.
- Special BMW training was proposed for the financial year 2019-20 with a budget of Rs. 50000 for this purpose. For training the Hospital Consultant, RMNCHA Consultant, Regional Quality Assurance Consultant, Environmental experts were engaged, who would train health staff including MO twice a year, in all subdomains of BMW management at the district level and BPMs for their respective facilities.

MAP 1. Health Facilities of CG (Kayakalp Assessment)

Districts selected for assessment of Kayakalp			
	Districts	Nos	Health Facilities
1	Janjgir-Champa	3	DH Janjgir, CHC Malkharoda, PHC Rahaud
2	Korba	4	DH Korba, PHC Korba, PHC Lemaru, CHC Kartala
3	Sarguja - Ambikapur	3	PHC Lundra, PHC Raghunathpur, PHC Bataikela
4	Raipur	5	DH Raipur, CHC Dharsiwa, PHC Dondekalan, PHC Khorpa, PHC Mandir Hasaud
5	Durg	3	CHC Patan, PHC Charoda, PHC Tanki Maroda
	Total	18	
DH-3, CHC-4, PHC-11			

Kayakalp Progress in visited districts of Chhattisgarh																		
Sn	District	Facility	Year 2015-16				Year 2016-17				Year 2017-18				Year 2018-19			
			IA	PA	EA	Awd	IA	PA	EA	Awd	IA	PA	EA	Awd	IA	PA	EA	Awd
1	Janjgir	DHs	1	0	0	0	1	0	0	0	1	0	0	0	1	0	0	0
		CHC/CHs/UCHCs	7	6	3	1	5	2	1	0	5	1	1	1	6	1	0	0
		PHCs	22	14	8	1	23	2	2	1	26	1	1	0	32	0	0	0
		UPHCs	0	0	0	0	0	0	0	0	0	0	0	0	0			
		Total	30	20	11	2	29	4	3	1	32	2	2	1	39	1	0	0
2	Korba	DHs	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1
		CHC/CHs/UCHCs	3	0	0	0	4	4	3	2	4	3	3	3	5	4	4	2
		PHCs	18	3	1	1	22	12	10	8	35	24	17	12	37	20	19	18
		UPHCs	0	0	0	0	0	0	0	0	1	1	1	1	3	1	1	1
		Total	22	4	2	2	27	17	14	11	41	29	22	17	46	26	25	22
3	Sarguja	DHs	1	1	1	1	0	0	0	0	0	0	0	0	0	0	0	0
		CHC/CHs/UCHCs	4	2	1	0	4	2	1	0	4	3	2	2	5	3	1	0
		PHCs	17	3	1	1	20	4	4	3	20	5	3	2	25	16	6	4
		UPHCs	0	0	0	0	0	0	0	0	1	1	1	1	1	1	1	1
		Total	22	6	3	2	24	6	5	3	25	9	6	5	31	20	8	5
4	Raipur	DH	1	1	1	0	1	1	1	0	1	1	1	0	1	0	0	0
		CHC/CHs/UCHCs	4	3	2	0	4	2	1	0	2	0	0	0	6	5	3	1
		PHCs	22	7	1	1	41	3	1	0	4	3	2	2	12	6	5	4
		UPHCs	0	0	0	0	0	0	0	0	0	0	0	0	10	8	7	2
		Total	27	11	4	1	46	6	3	0	7	4	3	2	29	19	15	7
5	Durg	MCH	1	1	0	0	1	1	0	0	1	1	1	0	1	0	0	0
		CHC/CHs/UCHCs	4	0	0	0	4	2	1	1	9	4	2	1	8	3	2	0
		PHCs	18	0	0	0	31	4	1	0	19	3	2	0	21	0	0	0
		UPHCs	0	0	0	0	0	0	0	0	9	9	4	2	9	5	3	0
		Total	23	1	0	0	36	7	2	1	38	17	9	3	39	8	5	0



Kayakalp Janjgir-Champa District



Waste management PHC Rahoud

DH Jangir -Champa



Poster of Infection Control PHC Rahoud



Items in PPE kit PHC Rahoud



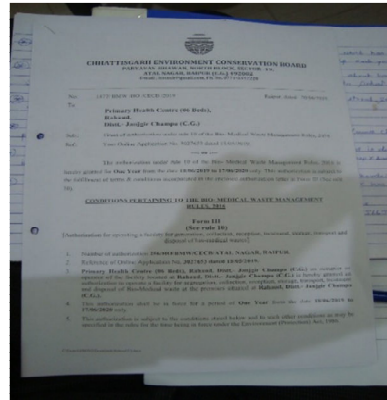
Bins of different colours for waste management PHC Rahoud



Store for storing cleaning material in PHC Rahaoud



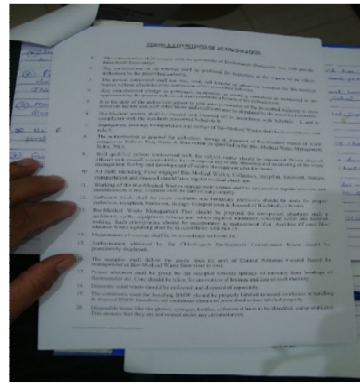
Unclean premises at CHC Malkharoda



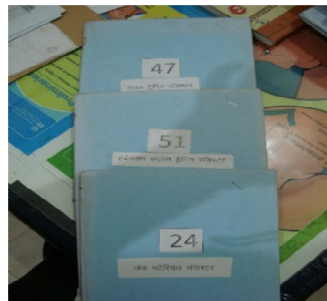
BMW authorization Rahoud



Open buckets at CHC Malkharoda



Mopping Buckets



Registers , PHC Rahoud



Health staff, PHC Rahoud



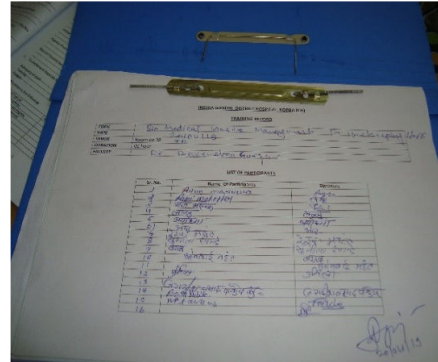
Discussions with nodal officer Kayakalp
DH Jangir -Champa

5 Results and Key Findings

5.1 Bio-Medical Waste management in DHs and CHCs

- Operational definition of BMW was taken as “any waste which is generated during the diagnosis, treatment or immunization of human beings or animals or research activities pertaining thereto or in the production or testing of biological or in health camps, including the categories mentioned in schedule I of the Government of India’s BMW (Management and Handling) Rules 2016.” Chattisgarh has also adopted these biomedical management and handling rules.
- Regarding implementation of Biomedical Waste Rules 2016, the hospital leadership is aware of Biomedical Waste Rules 2016, whether the facility has implemented Biomedical Waste Rules. An existing committee or newly constituted committee for review and monitoring of BMW management at DH/CHC level were mainly observed in all the health facilities except CHC Malkharoda and MCH hospital in DH Raipur. The nodal officer for kayakalp in Dharsiwa was overseeing all aspects of kayakalp.
- BMW waste management was observed at different points the OPD, IPD, OT, labour room, laboratory, ICU, pharmacy, ICU and SNCU (DH).
- The BMW scores for each of the 18 visited health facilities were calculated separately and aggregate scores of various criteria of biomedical waste
- Management in selected DH, and CHCs of CG are presented in Tables 1 and and Figure 3 below.
- Korba scored highest in its internal assessment as well assessment done by PRC in BMW management as seen in Figure 3 (IA :93 percent, PRC: 91). CHC Malkharoda had scored 100 percent in BMW management whereas its achievement in all the sub domains of BMW management was extremely poor. The nodal officer could not explain the basis of scoring.
- Complete segregation of BMW at the point of generation is the backbone of BMW management nothing short of 100 percent is acceptable. Even though the scores of segregations were 10 in DH Korba and CHC Dharsiwa , even slight mixing of the infectious waste will render whole of the hospital waste as hazardous. Most of the criteria were met like waste segregation in different color-coded bins, general and infectious waste was not mixed, and the staff was aware of segregation protocols, work instructions for segregation and handling of

DH Korba (District Korba)

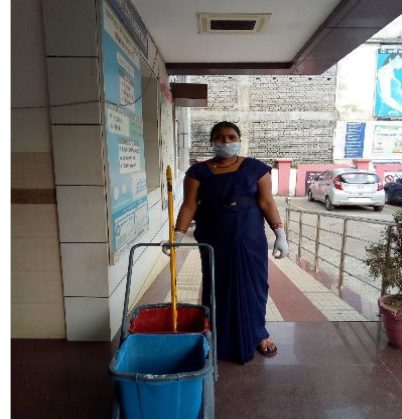


DH Korba

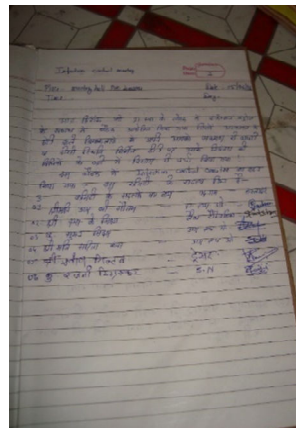
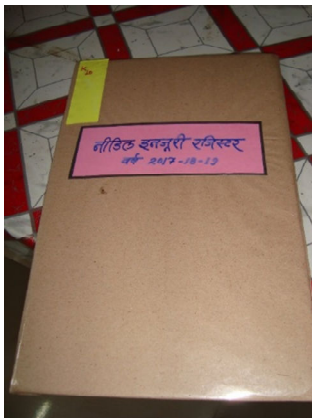
DH, Korba



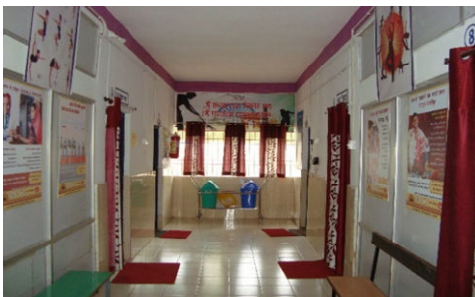
DH Korba



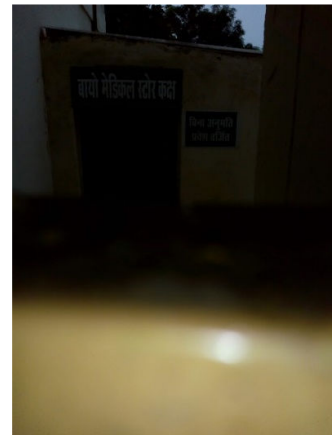
PHC Korba (Korba District)

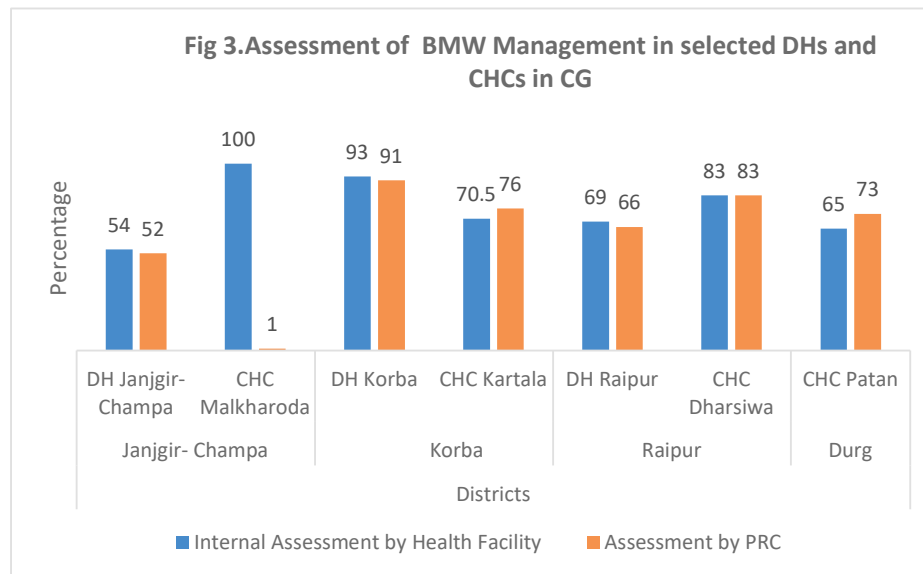


PHC Lemaru (District Korba)



CHC Kartala District Korba





- BMW were not displayed at all the points of use in a number of health facilities. Therefore other health facilities have to work on improving standards especially DH Janjgir- Champa and CHC Malkharoda.
- In DH Raipur all the protocols were being followed in the new hospital premises but not in the old MCH building which was under renovation. Segregated collection and transportation of biomedical waste was seen and that the waste bins were properly covered and not overfilled, i.e., less than two-thirds of the bin capacity.
- The scores for the subdomain of equipment and supplies for BMW management were satisfactory. Availability of bins for segregated collection of waste at point of use availability, needle/ hub cutter and puncture proof boxes were observed at different points, availability of colour coded liners for biomedical waste and general waste along with the adequate number of trolleys for collection and transportation of waste was observed at the health facilities except in DH Janjgir- Champa and CHC Malkharoda.
- A score of 10 was observed for storage of BMW in DH Korba. A dedicated room for storage of BMW was available in most of the visited facilities. It was secured and away from the patient area, and it was handed over to the CBMWTF every alternate day. The only drawback was that biohazard signs were not displayed at the storage sites of all the facilities.
- Liquid Waste Management in most of health facilities was extremely good as seen in Table 1 and 2. The laboratory has excellent functional protocol for managing discarded samples in DH

District Surguja -Ambikapur



PHC Lundra



PHC Lundra



PHC Lundra



PHC Raghunathpur

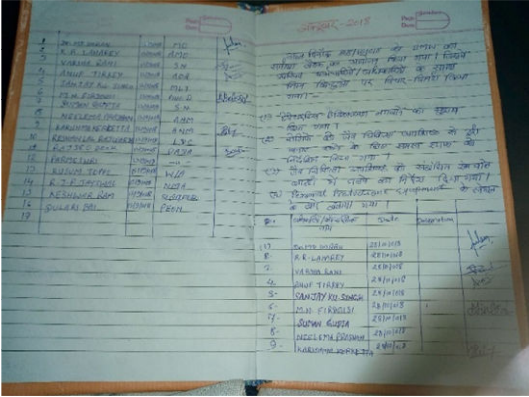


PHC Bataikela



PHC Bataikela

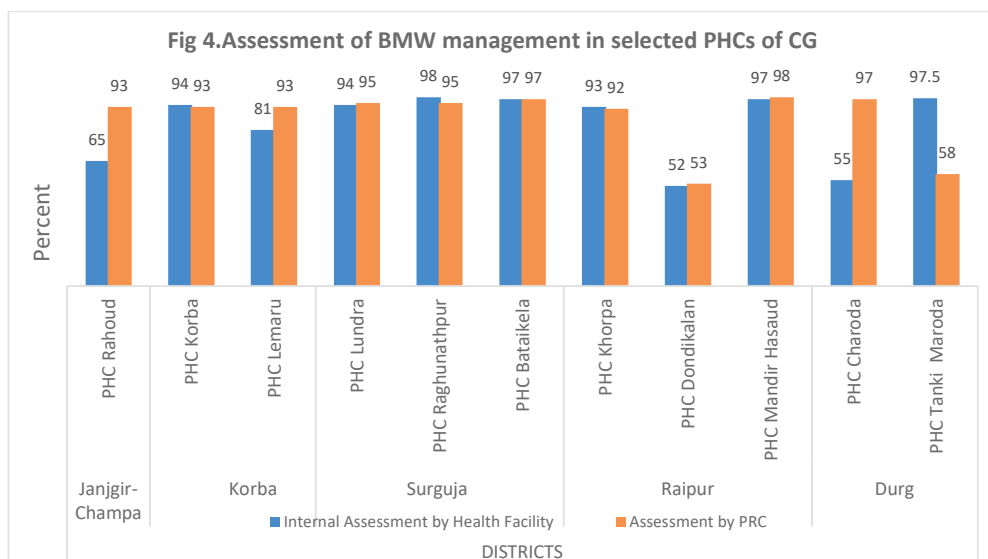


District Surguja- Ambikapur	
	
	
	
PHC Bataikela	PHC Raghunathpur

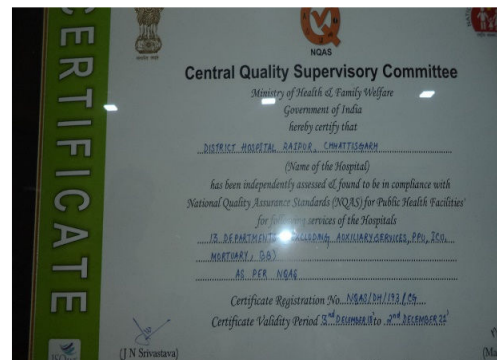
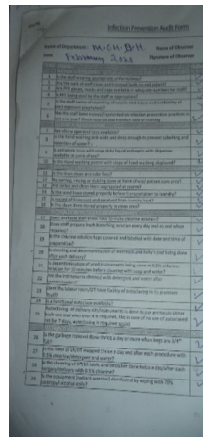
- Korba, CHC Dharsiwa and CHC Kartala. DH Raipur has a 24* 7 special laboratory facility which follows standard protocols as well. DH Janjgir-Champa and CHC Malkharoda have yet to develop liquid waste management according to the protocols.
- For statutory compliances the not all facilities had a valid authorization from the State Pollution Control Board (some were in process), but all the annual report on BMW management was being submitted annually to the Board. Records of waste generation were well maintained, and there was a designated person for the monitoring of BMW management in the facility. The only deficiency identified for this subdomain was nonavailability of the copy of BMW rules in all the facilities.

5.2 Bio-Medical Waste management in PCHs

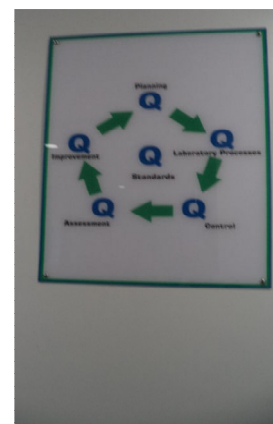
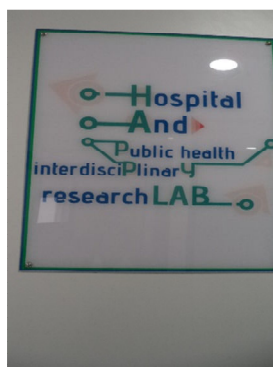
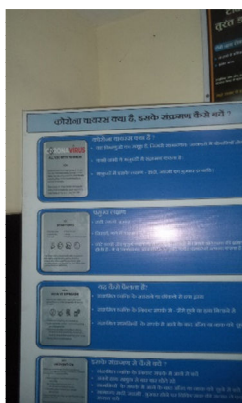
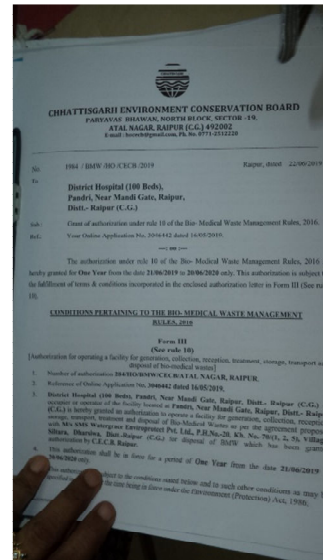
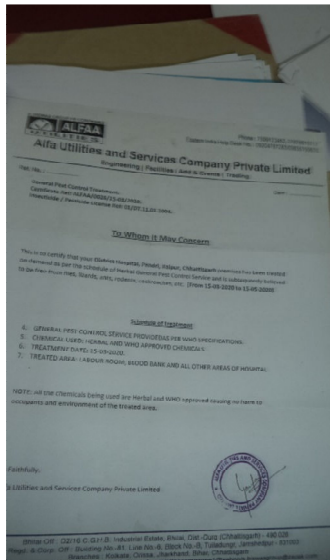
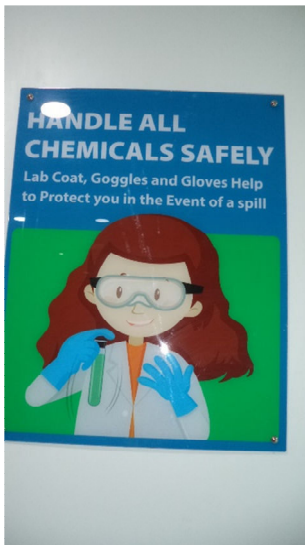
- Eleven PHCs in five districts Janjgir-Champa (1), Korba (3) Surguja(3),Raipur (3), Durg (2) were assessed for BMW management(Tables 3 and 4).
- Bio-Medical Waste management was observed at different points like labour room, laboratory and pharmacy injection room.
- Kayakalp scores indicate that PHC Mandira Hasaud scored highest in its internal assessment (IA :97 percent; PRC: 98) followed by PHC Bataikela (IA :97 percent; PRC: 97) as well assessment done by PRC in BMW management as seen in Figure 4. PHCs, Charoda, Lundra Raghunathpur have scored relatively high followed by Rahaoud and Korba and Khorpa PHC.



District Raipur



DH Raipur

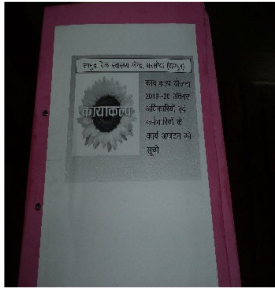


DH Raipur

comparatively two PHCs Donekalan and Tanki Maroda scored low in the assessment on BMW waste management by PRC, due to low scores in all the domains of BMW management was extremely poor.

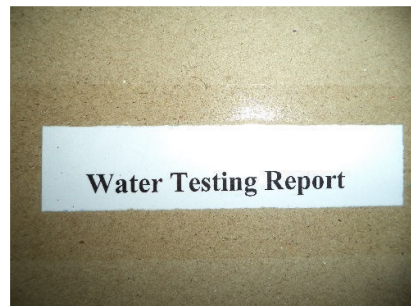
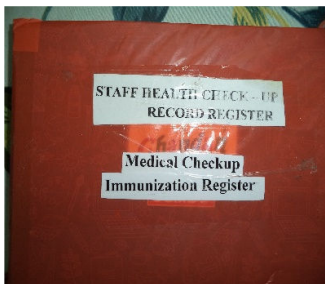
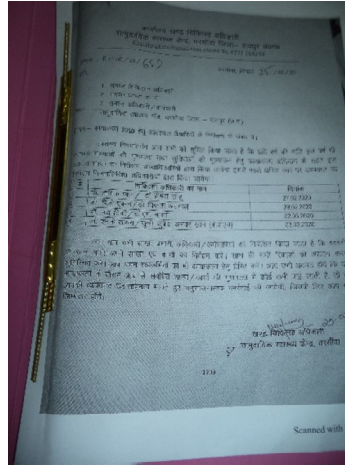
- Regarding implementation of Biomedical Waste Rules 2016, the PHC MOs are aware of Biomedical Waste Rules 2016, and the facility has implemented Biomedical Waste Rules. An existing committee or newly constituted committee for review and monitoring of BMW management at PHC level were mainly observed in all the health facilities, except in some like PHC Raghunathpur where this register has not been updated in 2019-20. Display of work instructions for segregation and handling of Biomedical waste is observed in most of the PHCs except Tanki maroda. Most staff are aware of segregation protocols.
- Segregated collection and transportation of biomedical waste was seen and that the waste bins were properly covered and not overfilled, i.e., less than two-thirds of the bin capacity. work instructions for segregation and handling of BMW were not displayed at all the points of use especially in PHC Tankimaroda.
- The scores for the subdomain of equipment and supplies for BMW management were excellent with all the PHCs scoring 100 percent in this subdomain. Availability of bins for segregated collection of waste at point of use availability, needle/ hub cutter and puncture proof boxes were observed at different points, availability of colour coded liners for biomedical waste and general waste.
- The scores for the subdomain, of sharp management disinfection of broken/discarded glassware are satisfactory and is done as per recommended procedure sharp waste is stored in puncture proof containers staff is aware of needle stick injury protocol. Staff awareness is high.
- The scores for the subdomain, management of hazardous waste mercury spill management kit were high in majority of the visited PHCs and staff is aware of mercury spill management disposal of used disinfectant solution like glutaraldehyde, disposal of expired or discarded medicine is sent to the district warehouse.
- Liquid Waste Management in most of health facilities was extremely good as seen in Table 4. The laboratory has excellent functional protocol for managing discarded samples in PHC Mandir Hasaud, Charoda, Korba and Lemaru, Lundra, Raghunathpur, Bataikalan and Rahoud.

CHC Dharsiwa (District Raipur)

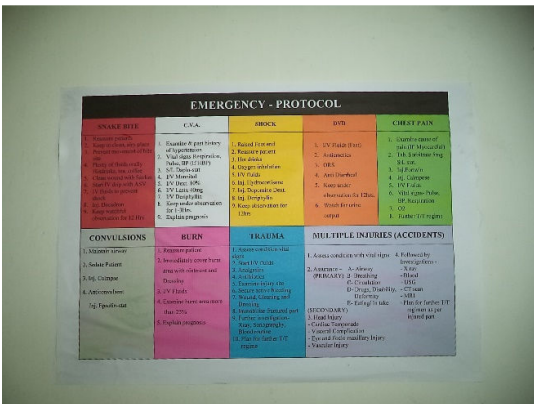
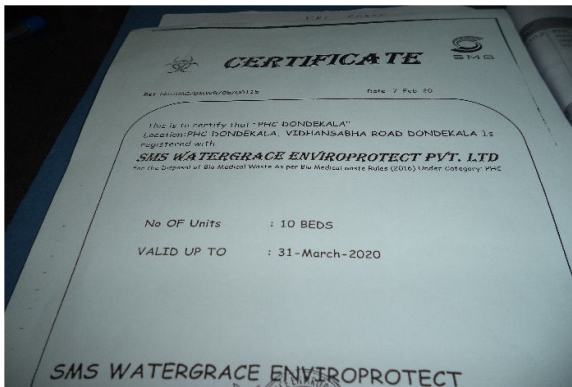
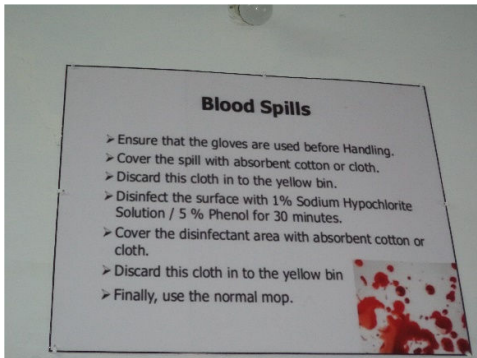


Components of PPE

- Gloves
- Gowns
- Aprons
- Masks
- Goggles
- Visors
- Caps
- Theatre footwear



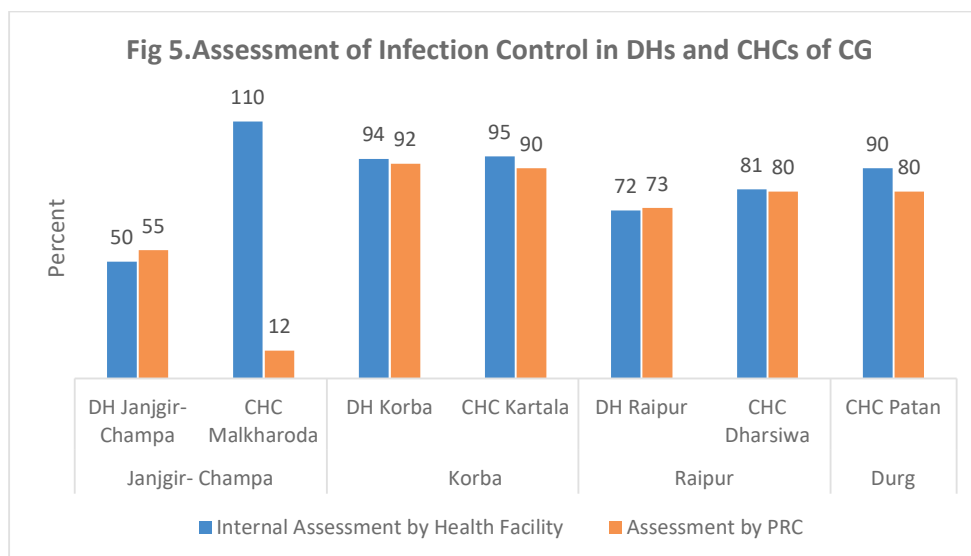
PHC Dondekalan (District Raipur)



- All the health facilities are which follows standard protocols as well. PHCs Tankimaroda and Dondekalan have to develop the complete protocols.
- Most of PHCs had a valid authorization for Bio-Medical waste Management from the prescribed authority and some were in the process, most of the PHCs submit Annual report to pollution control board, but only some PHCs like Korba, Lundra, Bataikela, Mandir-Hasaud maintain records, as required under the Biomedical waste rules 2016.

5.3 Infection Control in DH and CHCs of CG

- Infection control strategies and actions was observed at different points the OPD, OT, labour room, laboratory, ICU, IPD and pharmacy.
- The infection control scores for each of the seven visited health facilities were calculated separately and aggregate scores of various criteria of infection control in selected DH, and CHCs of CG are presented in Tables 5-6 and Figure 5.
- DH Korba scored highest in its internal assessment as well assessment done by PRC in infection control as seen in Figure 5 (IA :94 percent, PRC: 92). CHC Malkharoda scored 110 percent in infection control, whereas its achievement in all the sub domains of infection control was extremely poor.



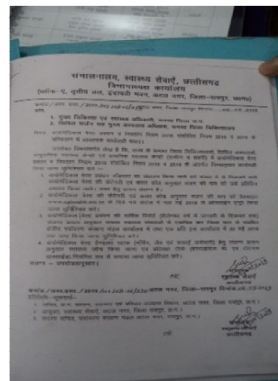
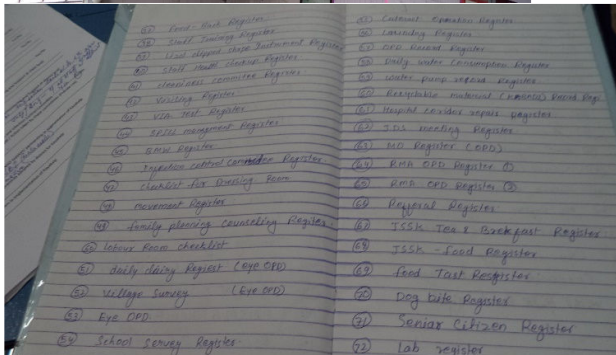
- Hand hygiene as a sub domain of infection control is very important and tremendous emphasis on had hygiene has been laid through IEC posters. Availability of sink and running

HC Khorpa (District Raipur)



- water at point of use was observed in all points of use like OPD, IPD, laboratory, injection room, display of hand washing instructions, adherence to six steps of hand washing availability of alcohol based hand rub, staff awareness of when to hand wash mainly in DH Korba, CHC Kartala, CHC Dharsiwa and CHC Patan (10 scores each). The new DH building in Raipur has sink and running water in all important points but old MCH building in Raipur does not have all the facilities. DH Janjgir- Champa, CHC Malkhroda do not have hand hygiene facilities at all crucial points.
- The sub domain personal protective equipment (PPE) use of gloves during procedures and examination masks and head cap heavy duty gloves and gumboot by waste handlers aprons/ lab coat by the clinical staff adequate supply of personal protective equipment (PPE) indicated that use of head cap and gum boot by waste handlers in short supply. Supply of personal protective equipment (PPE) was inadequate. DH Korba, CHC Kartala, CHC Dharsiwa and CHC Patan (8 scores) have relatively higher scores in PRC assessment. As such paucity of PPE was observed in DH Janjgir- Champa, CHC Malkhroda.
- Personal Protective Practices sub domain included awareness of use of gloves, when to use (occasion) and its type method of wearing and removing gloves, correct method of wearing mask and cap-use of disposable personal protective equipment. DH Korba, CHC Kartala, CHC Dharsiwa and CHC Patan have received full scores (10 scores each) and DH Raipur 9 scores. Staff awareness of standard precautions is high in all these health facilities is high.
- Decontamination and cleaning of instruments sub domain highlights that staff knows how to make chlorine solution decontamination of operating and surface examination table, dressing tables etc. after every procedure, decontamination of instruments after use cleaning of instruments done after decontamination adequate contact time for decontamination. DH Korba, CHC Kartala, CHC Dharsiwa, CHC Patan and DH Raipur have received full scores (10 scores each).
- DH Korba, CHC Kartala, CHC Dharsiwa and, CHC Patan have received full scores (10 scores each) in the subdomain disinfection & sterilization of instruments, adherence to protocols, protocol for autoclaving, adherence to for high level disinfection use of signal locks for sterilization, chemical sterilization of instruments done as per protocol, sterility of autoclaved pack maintained during storage.

PHC Mandir Hasaud (District Raipur)



PHC Mandir Hasaud (District Raipur)

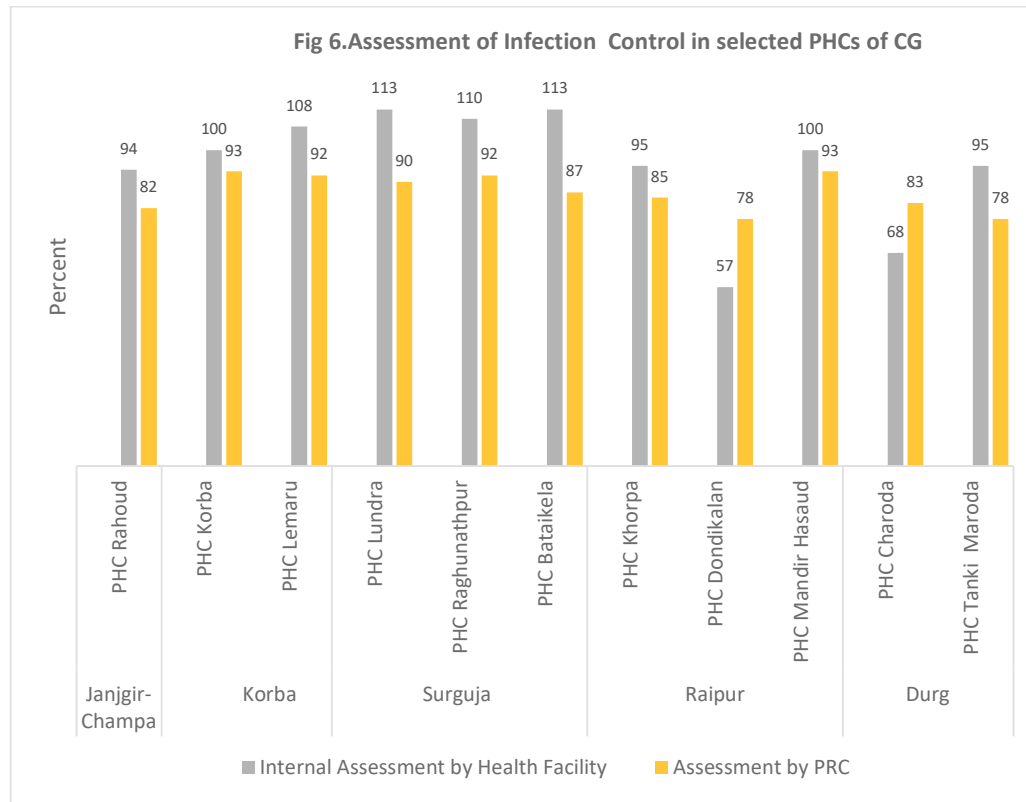


- DH Korba, CHC Kartala, CHC Dharsiwa, CHC Patan and DH Raipur have received full scores (10 scores each) in spill management sub domain. The staff of these health facilities are aware of how to manage small spills, spill management kit is available, staff has been trained for spill management, spill management protocols are displayed at points of use, and staff is aware of management of large spills.
- Isolation and barrier nursing subdomain assesses the provision of isolation ward where infectious patients are not mixed with general patients, maintenance of adequate bed to bed distance in wards, restriction of external foot wear in critical areas was observed, restriction of visitors to isolation area were observed DH Korba, and CHC Kartala (10 scores each). Majority of the protocols are observed in DH Raipur too.
- In the sub domain infection control program, infection control committee is constituted and functional in the hospital regular monitoring of infection control practices antibiotic policy is implemented at the facility. immunization of service providers, regular medical check-ups of food handlers and housekeeping staff. infection control committee, immunization of service providers has been mainly implemented in all the facilities
- In the subdomain hospital acquired infection (HAI) surveillance of regular microbiological surveillance of critical areas hospital measures surgical site infection rates hospital measures device related hai rates hospital, measures blood related and respiratory tract hai hospital takes corrective action on occurrence of hai, assessment found that the surveillance has to be implemented to a satisfactory level.
- Environment control maintenance of positive air pressure in OT and ICU maintenance of air exchanges in OT and ICU maintenance of layout in OT carbolization of OT and labour room, general and patient traffic are segregated in hospitals. General and patient traffic are not segregated in hospitals except DH Raipur and DH Jangir Champa.

5.4 Infection Control in PHCs

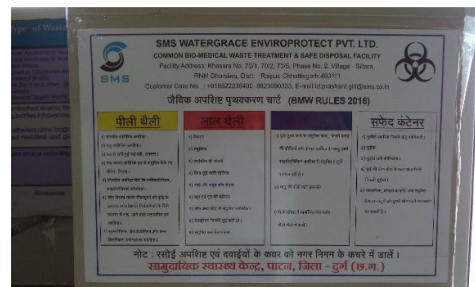
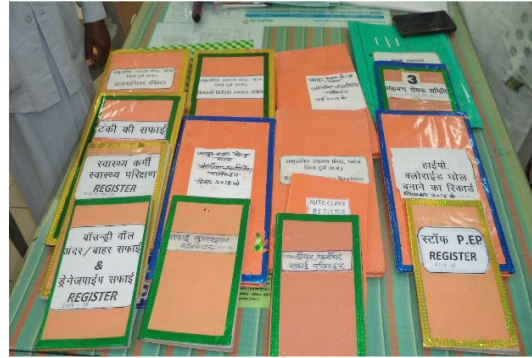
- Infection control strategies and actions was observed at different points the labour room, laboratory and pharmacy injection room.
- The infection control scores for each of the 11 visited health facilities in five districts were calculated separately and aggregate scores of various criteria of infection control in selected DH, and CHCs of CG are presented in Tables 5-6 and Figure 6.

- PHC Korba and Mandir Hasuad scored highest in its internal assessment as well assessment done by PRC in infection control as seen in Figure 6 (IA :100 percent, PRC: 93). PHC Dondekalan and Tankimaroda have the lowest percentage in infection control domain.

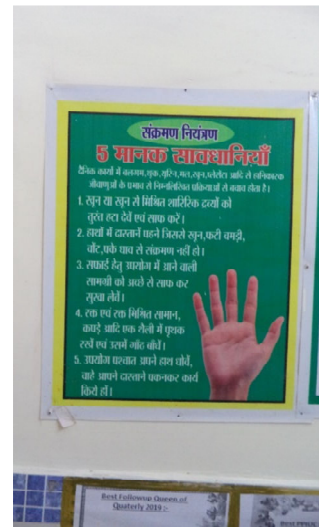


- In the sub domain hand hygiene, all the 11 PHCs had availability of sink and running water at point, display of hand washing instructions and staff is aware of standard hand washing protocol. All PHCs received 6 scores each.
- In the sub domain Personal Protective Equipment (ppe) use of gloves during procedures and examination use of masks head cap and lab coat, apron etc. was seen in all the facilities but use of heavy duty gloves and gumboot by waste handlers were in short supply most of the health facilities.
- In the sub domain personal protective practices, the staff at the PHCs is aware of use of gloves, when to use (occasion) and its type correct method of wearing and removing PPEs, no re-use of disposable personal protective equipment but during staff interview there were some gaps in explaining method of PPE use.

CHC Patan (District Durg)



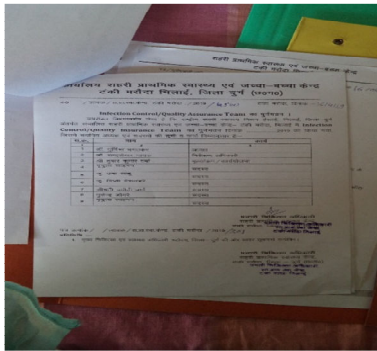
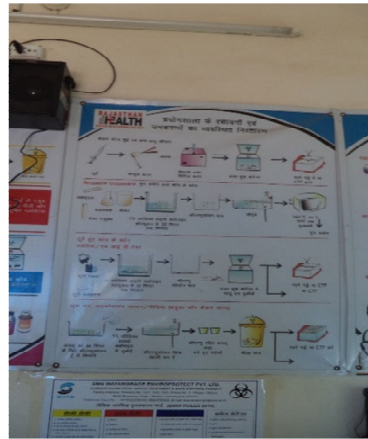
CHC Patan (District Durg)



PHC Tankimaroda



PHC Charoda

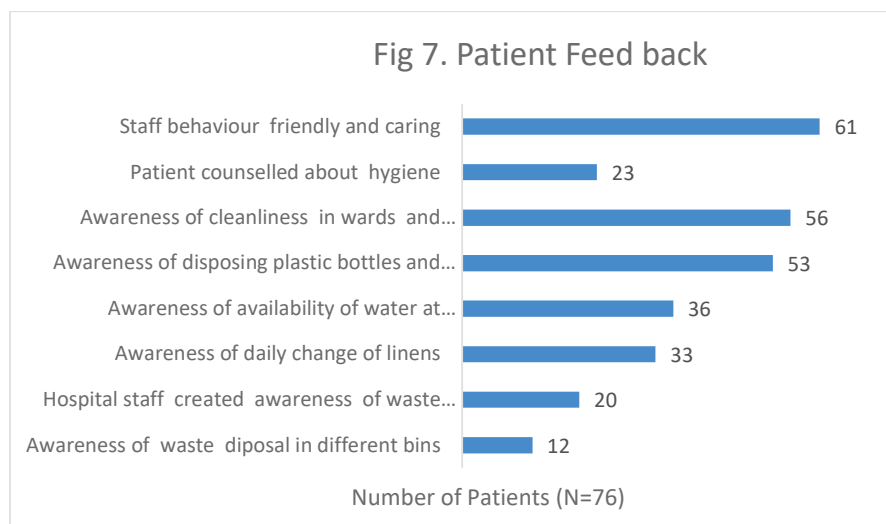


District Durg

- In the sub domain decontamination and cleaning of instruments staff of PHC Mandir- Hasaud and Charoda indepth how to make chlorine solution, decontamination of operating and surface examination table, dressing tables etc. after every procedure's decontamination and cleaning of instruments after use.
- In the sub domain disinfection & sterilization of instruments, adherence to protocols for sterilization, adherence to protocol for high level disinfection, use of autoclave tape for monitoring of sterilization seven PHCs Korba, Lundra, Raghunathpur, Bataikela, Khorpa, Mandir- Hasaud and Charoda have received 6 scores each.
- In the sub domain spill management staff of all the 11 PHCs are aware of spill management of how to manage spills availability of spill management kit spill management protocols are displayed at points if use.
- In the sub domain isolation and barrier nursing six PHCs Korba, Lundra, Raghunathpur, Bataikela Raghunathpur, and Mandir- Hasaud infectious patients are not mixed for general patients' maintenance of adequate bed to bed distance in wards restriction of external foot wear in critical areas. Footwear in general was left by patients outside the health facility as part of cleanliness practice.
- In the sub domain infection control in eight PHCs Korba, Lemaru, Lundra, Raghunathpur, Bataikela Raghunathpur, Khorpa and Mandir- Hasaud had complied with all crieteria of in infection control. In these PHCs program infection control committee is constituted and functional in the PHC antibiotic policy is implemented at the facility immunization and medical check-up of service providers is carried out. The other three PHCs have formed an infection control committee.
- In the sub domain hospital acquired infection surveillance all the 11 PHCs measures the health care associated infections facility reports all notifiable diseases and events and regular monitoring of infection control practices.
- In the sub domain environment control cross-ventilation at patient care areas (ward, labour room and dressing room) preventive measures for air borne infections has been taken adequate number of air-exchange in laboratory. All the PHCs need to work on implementing preventive measures for air borne infections.

6. Beneficiary Perspective

- Patients at 17 health facilities, had come to the visited facilities for treatment of general ailments, for ANC, delivery, immunization services and OPD services were interviewed and their observation regarding renovation, changes in landscape of the hospital, cleanliness of hospital and wards, availability of drinking/ water at all points of use, and staff behaviour after implementation of kayakalp as seen in Figure7.
- Seventy six respondents who had availed services from the 18 health facilities were interviewed (male: 33; female: 43) regarding the services received at the a particular health facility through a check list and patient feedback form (Table not presented).
- Majority, male respondents had come for treatment of general illness like fever, stomach problems, pain in the body, constipation whereas female respondents had come for ANC checkup (28), child immunization (8) and rest for treatment of general ailments.
- Amongst general observations respondents expressed satisfaction about internal branding, hospital timings being maintained, and IEC and details about the services being provided.
- Patient satisfaction was high amongst the respondents who visited different PHCs. Patients expressed satisfaction at the cleanliness of linens, and follow the discipline of leaving their foot wear outside while entering the hospital tests, and were satisfied with the behaviour of the staff and treatment provided.



- In district Korba patient awareness on different aspects of hospital functioning like cleanliness of wards and premises, satisfaction with services was the highest in DH Korba, CHC Kartala, PHC Lemaru, & PHC Korba. In Janjgir-Champa patient awareness and satisfaction was comparatively lower.
- In PHC Mandir-Hasaud patients expressed satisfaction with internal branding, expansion of services and availability of doctors and laboratory services, including cleanliness of wards.
- Respondents mainly were aware of disposal of general waste, also called residual waste, that cannot be recycled. It includes materials such as non-recyclable plastics, polythene, some packaging, wrappers which is disposed in black bins.
- Very few respondents had any awareness of waste segregation in yellow bin with barcoding (tissue organ parts, residual blood and blood components), blue bin (with infected broken glass, broken or unbroken glassware), white (waste sharp including needles), red bin (iv tubes syringe gloves).
- Respondents mainly appreciated the general behaviour of staff, the availability of services, the well-designed waiting area, with latest health information being shared on the television.
- Beneficiaries also compared the PHCs to private health facilities and stated that they are at par with them both in cleanliness and services. They emphasized that changes were visible in the past few years.

7. Programme Manager and Staff Perspective

- The programme managers were asked in details about the initiation of the kayakalp initiative and steps taken in facility upkeep, sanitation and hygiene, waste management, infection control, support services, hygiene promotion, beyond hospital boundary. Issues of adequacy of staff, staff training, budget, were discussed.
- The CS of the visited DHs and MO incharge of CHCs and PHCs informed that kayakalp initiative commenced since 2014 in a phased manner in the five districts. In the beginning DHs and CHCs begun renovations under kayakalp. In a phased manner during the years 2016-17, 2017-18, 2018-19, 2019-20.
- Depending upon the number of staff available all staff in secondary hospitals, DH Korba and DH Raipur, and subdivisional CHCs, Kartala, Dharsiwa and Patan were divided into different teams (team comprising of SNs, lab technicians and assistants, pharmacists, ward boys and ward ayahs). The teams were provided training in seven domains of kayakalp.

- In the PHCs the total staff received complete training in all aspects of kayakalp. The MOs who were either trained at the district or at the state level provided hospital level training. The class four staff were trained in all aspects of cleanliness and hygiene. The RMNCHA consultants also involved in training in different aspects of kayakalp for DH, CHC/PHC.
- Training was organized on regular basis and for BMW management and infection control the total staff in the health facility received a briefing.
- There is no separate budget for kayakalp but the state provides uniform IEC materials to all the health facilities throughout the state to maintain uniformity. The JDS receives separate funds for payment to contractual cleanliness staff and bar coding.
- In DH Korba fifty staff received training from the MO to the fourth class. At the PHC atleast 12-15 members received training in BMW.
- The programme managers opined that the health facilities received a facelift with painting and renovation and each section of newly built PHCs were designed and organised in a manner to attract more patients.
- NQAS forms are being filled by the DH/CHCs/ PHCs for internal quality assessment for instituting quality standards and ensuring use of treatment protocols.
- CS from DH Korba, strongly emphasized the positive side of kayakalp that it motivated patients to adopt cleanliness and hygiene as a regular practice.
- With improved sanitation the sense of increased dignity, self-respect and sense of ownership among patients and those accompanying them. Cleanliness had helped to control diseases such as diarrhoea, dysentery and malaria.
- Staff motivation and ownership was very high as many of them had contributed to pay from their pockets which later got refunded. They were also motivated to compete for cash prize of 50 lakhs.
- PHC Korba reported about support from NGO like World Vision which provided support in wall painting, IEC, and a cycle with an audio system to provide IEC in catchments.
- General public assisted in de-weeding of gardens in PHC Korba and keeping the garden area clean by picking up litters.

- The programme managers opined that a separate budget is essential to expedite the process of augmentation of kayakalp. PHC Bataikela expressed the urgent need of more cleanliness staff to maintain cleanliness and hygiene protocol.
- In PHC Lundra the MO stated that staff need more training in staff interviews. Although the activities carried out by them were as per standard protocols, they failed to explain these during external assessment.
- MO from Rahoud expressed about the importance of patient education which is essential, to stop them from spitting gutka and tobacco on the hospital walls.
- Paucity of staff especially cleaning staff for maintaining sanitation and hygiene in the premises was reported by the programme managers.
- Most of the health facilities had received cash awards and commendation certificate in the past three years and there was a spirit of motivation and competition amongst the staff perform and score than the other facility and win awards.
- The programme managers were not aware that kayakalp is a continuing process and internal assessment should take place quarterly for corrective actions.

8. Conclusion

- The programme managers at the state level are actively involved in implementing the kayakalp programme since 2015 in a phased manner. The secondary and primary health facilities supported by the state have attempted to improve all seven thematic areas like hospital upkeep, sanitation and hygiene, bio- medical waste management, infection control, hygiene promotion, support services and outside boundary.
- Kayakalp has introduced the concept of setting benchmark standards of performance of the health facility.
- At the facility level, major improvement was noticed in the district and subdistrict hospitals (DHs and CHCs) in Korba and Raipur districts in comparison to Janjgir- Champa, Surguja and Durg.
- High levels of motivation and willingness of the staffs to work for the betterment of the facilities were observed in Korba, Surguja, Raipur and Durg. Staff expressed readiness primarily due to intrinsic factors, need for recognition, than through monetary incentives particularly at the primary level of care in PHCs. A sense of achievement and pride in being ranked and rewarded.

- An award of Rs. 50 Lakh was received by DH Korba to Rs. 50,000 as commendation by PHC Bataikela showing high levels of cleanliness, hygiene and infection control and importance of performance-based incentives for health facilities to evolve with changing needs to provide standardized health services to the community.
- Lack of uniformity in use of checklists for assessment of health facilities in different districts was observed which needs correction.
- For sustained augmentation of kayakalp the health facilities need manpower, infrastructure and separate budget.
- This study has few limitations too. First, Kayakalp is a new initiative, and it was done as a pilot study. Hence, there is not enough published literature available for comparison of the assessment in various public health facilities. Second, data for final internal assessment was not available, so some subjective bias may have come in the scoring.

Table1: Kayakalp scores of Bio- Medical management waste assessment in selected DHs and CHCs of CG.								
SN	Biomedical Waste Management	1	2	3	4	5	6	7
1	Implementation of Biomedical Waste Rules 2016							
	The Hospital leadership is aware of Biomedical Waste Rules 2016	2	0	2	2	1	2	2
	The facility has implemented Biomedical Waste Rules	2	0	2	2	1	2	1
	The facility has started undertaking actions, which are to be complied by March 2017	0	0	2	1	1	2	1
	The facility has started undertaking actions, which are to be complied by March 2018	0	0	2	1	1	1	1
	An existing committee or newly constituted committee for review and monitoring of BMW management at DH/CHC level	0	0	2	1	1	1	2
2	Segregated Collection and Transportation of Biomedical Waste							
	Segregation of BMW is done as per BMW management rule, 2016	2	0	2	2	1	2	1
	Work instructions for segregation and handling of Biomedical waste has been displayed prominently	1	0	2	2	1	2	1
	The facility has linkage with a CWTF Operator or has deep burial pit (with prior approval of the prescribed authority)	2	0	2	2	2	2	2
	Biomedical waste bins are covered	2	0	2	2	2	2	2
	Transportation of biomedical waste is done in closed container/trolley	0	0	2	2	2	2	2
3	Sharp Management							
	Disinfection of Broken/Discarded Glassware is done as per recommended procedure	2	0	2	2	2	2	2
	Disinfected Glassware is stored as per protocol given in Schedule I of the BMW Rules 2016	1	0	2	1	1	2	2
	The Staff uses needle cutters for cutting/burning the syringe hub	2	0	2	2	2	2	2
	Sharp Waste is stored in Puncture proof containers	2	0	2	2	1	1	1
	Staff is aware of needle stick injury Protocol and PEP is available to the staff	2	0	1	1	2	1	1
4	Storage of Biomedical Waste							
	Dedicated Storage facility is available for biomedical waste and it has biohazard symbol displayed	1	0	2	1	1	1	1
	The Storage facility is located away from the patient area and has connectivity of a motor able road.	1	0	2	0	1	1	1
	The Storage facility is secured against pilferage and reach of animal and rodents.	0	0	2	1	0	1	1
	No Biomedical waste is stored for more than 48 Hours	1	0	2	1	2	2	2
	The storage facility has hand washing facilities for the workers	0	0	2	1	1	1	1
1. DH Jangir- Champa 2. CHC Malkharoda (Dist. J-C) 3. DH Korba 4 CHC Kartala (Dist Korba) 5 . DH Raipur 6. CHC Dharsiwa (Dist. Raipur) 7. CHC Patan (Dist. Durg)								

Table1: Kayakalp scores of Bio- Medical waste management assessment in selected DHs and CHCs of CG.								
SN	Biomedical Waste Management	1	2	3	4	5	6	7
5	Disposal of Biomedical waste							
	The Health Facility has adequate arrangements for disposal of Biomedical waste	1	0	2	2	1	1	1
	Recyclable waste is disposed as per procedure given in the BMW Rules 2016	0	0	0	0	0	2	2
	Deep Burial Pit is constructed as per norms given in the Biomedical Waste Rules 2016	2	0	2	2	0	1	1
	Disposal of Expired or discarded medicine is done as per protocol given in Schedule I of BMW Rules 2016	1	0	2	0	2	1	1
	Discarded / contaminated linen is disposed as per procedure given in the BMW Rules 2016	1	0	2	2	2	2	2
6	Management Hazardous Waste							
	The Staff is aware of Mercury Spill management	2	0	2	1	1	2	1
	Availability of Mercury Spill Management Kit	2	0	2	2	2	2	2
	Disposal of Radiographic Developer and Fixer	1	0	2	1	1	2	1
	Disposal of Disinfectant solution like Glutaraldehyde	1	0	2	1	1	2	1
	Disposal of Lab reagents	2	0	2	2	2	2	2
7	Solid General Waste Management							
	Recyclable and Biodegradable Wastes have segregated collection	0	0	2	2	1	2	1
	The Facility Undertakes efforts to educate patients and visitors about segregation of recyclable and biodegradable wastes	0	0	0	0	1	1	0
	General Waste is not mixed with infected waste	1	0	2	2	1	2	2
	Availability of Compost Pit within the premises	1	0	2	2	1	2	2
	The facility has introduced innovations in managing General Waste	0	0	1	0	0	1	1
8	Liquid Waste Management							
	The laboratory has a functional protocol for managing discarded samples	2	0	2	2	2	2	2
	Body fluids, Secretions in suction apparatus, blood and other exudates in OT, Labour room, minor OT, Dressing room are disposed only after treatment	2	0	2	2	1	2	2
	The Facility has treatment facility for managing infectious liquid waste	0	0	2	2	2	2	2
	Sullage is managed scientifically	0	0	2	2	2	2	2
	Run off is drained into the municipal drain	0	0	2	2	2	2	2
1. DH Jangir- Champa 2. CHC Malkharoda (Dist. J-C) 3. DH Korba 4 CHC Kartala (Dist Korba) 5 . DH Raipur 6. CHC Dharsiwa (Dist. Raipur) 7. CHC Patan (Dist. Durg)								

Table1: Kayakalp scores of Bio- medical waste management assessment in selected DHs and CHCs of CG.								
SN	Biomedical Waste Management	1	2	3	4	5	6	7
9	Equipment and Supplies for Bio Medical Waste Management							
	Availability of Bins and liners for segregated collection of waste at point of use	1	0	2	2	1	2	2
	Availability of Needle/ Hub cutter and puncture proof boxes	2	1	2	2	2	2	2
	Availability and supply of personal protective equipment	1	0	1	1	2	1	1
	Availability of Sodium Hypochlorite Solution	2	0	2	2	2	2	2
	Availability of trolleys for waste collection and transportation	1	0	2	2	1	2	1
10	Statutory Compliances							
	The Health Facility has a valid authorization for Bio Medical waste Management from the prescribed authority	2	0	2	2	2	2	2
	The Health Facility submits Annual report to pollution control board	0	0	2	2	2	2	2
	The Health Facility has a system of review and monitoring of BMW Management through an existing committee or by forming a new committee	0	0	2	1	2	1	1
	The Health facility maintains its website and annual report is uploaded	0	0	0	0	0	0	0
	The Health Facility maintains records, as required under the Biomedical Waste Rules 2016	1	0	2	2	1	2	1
1. DH Jangir- Champa 2. CHC Malkharoda (Dist. J-C) 3. DH Korba 4 CHC Kartala (Dist Korba) 5 . DH Raipur 6. CHC Dharsiwa (Dist. Raipur) 7.CHC Patan (Dist. Durg)								

Table2: Aggregate scores of various criteria of biomedical waste management in selected DHs and CHCs of CG							
Biomedical Waste Management	Janjgir- Champa		Korba		Raipur		Durg
	DH Janjgir-Champa	CHC Malkharoda	DH Korba	CHC Kartala	DH Raipur	CHC Dharsiwa	CHC Patan
Implementation of Biomedical Waste Rules 2016	4	0	10	7	5	8	7
Segregated Collection and Transportation of Biomedical Waste	7	0	10	10	8	10	8
Sharp Management	9	0	9	8	8	8	8
Storage of Biomedical Waste	3	0	10	6	5	6	6
Disposal of Biomedical waste	5	0	8	6	5	7	7
Management of hazardous waste	8	0	10	7	7	10	7
Solid general waste	2	0	7	6	4	8	6
Liquid Waste Management	4	0	10	10	9	10	10
Equipment and Supplies for Bio Medical Waste Management	7	1	9	9	8	9	8
Statuary Compliances	3	0	8	7	7	7	6
Total Scores	52	1	91	76	66	83	73
Internal Assessment by Health Facility (%)	54	100	93	70.5	69	83	65
Assessment by PRC (%)	52	1	91	74	66	83	73

Table3: Kayakalp scores of Bio- medical waste management assessment in selected PHCs of CG.												
SN	Bio-Medical Waste Management											
1	Segregation of Biomedical Waste	1	2	3	4	5	6	7	8	9	10	11
	Segregation of BMW is done as per BMW management rule, 2016	2	2	2	2	2	2	2	1	2	2	2
	Display of work Instructions for segregation and handling of Biomedical waste	2	2	2	2	2	2	2	1	2	2	0
	Check if the staff is aware of segregation protocol	2	2	2	1	1	2	1	1	2	2	2
2.	Collection and Transportation of Biomedical Waste											
	The facility has linkage with a CWTF Operator or has deep burial pit (with prior approval of the prescribed authority)	2	2	2	2	2	2	2	1	2	1	0
	Biomedical waste bins are covered	2	2	2	2	2	2	2	2	2	2	2
	Transportation of biomedical waste is done in closed container/trolley	2	2	2	2	2	2	2	1	2	2	1
3.	Sharp Management											
	Disinfection of Broken/discarded Glassware is done as per recommended procedure	2	2	2	2	2	2	2	1	2	2	1
	Sharp waste is stored in Puncture proof containers	2	2	2	2	2	2	2	2	2	2	2
	Staff is aware of needle stick injury Protocol	2	2	2	2	2	2	2	1	2	2	2
4.	Storage of Biomedical Waste											
	Dedicated Storage facility is available for biomedical waste	2	2	2	2	2	2	2	0	2	2	0
	No Biomedical waste is stored for more than 48 Hours	0	0	0	1	1	1	1	2	2	2	2
	Access to waste storage facility is secured	1	1	1	2	2	2	2	0	2	2	0
5	Disposal of Biomedical waste											
	PHC has adequate facility for disposal of Biomedical waste	2	2	2	2	2	2	2	1	2	2	0
	Facility manages recyclable waste as per approved procedure	2	2	2	2	2	2	0	0	2	2	0
	Deep Burial Pit is constructed as per norms given in the Biomedical waste rules 2016	2	2	2	2	2	2	2	0	2	2	0
1. PHC Rahoud(Dist. J-C) 2 PHC Korba 3 PHC Lemaru (Dist Korba) 4. PHC Lundra 5. PHC Raghunathpur 6. PHC Bataikela (Dist Surguja) 7. PHC Dondekalan 8. PHC Khorpa 9 PHC Mandir Hasaud (Dist. Raipur) ,10. PHC Charoda11 PHC Tankimaroda (Dist. Durg)												

Table3: Kayakalp scores of Bio- medical waste management assessment in selected PHCs of CG.												
SN	Bio-Medical Waste Management											
6	Management Hazardous Waste	1	2	3	4	5	6	7	8	9	10	11
	Availability of Mercury Spill Management Kit and Staff is aware of Mercury Spill management	2	2	2	2	2	2	2	2	2	2	2
	Disposal of used disinfectant solution like Glutaraldehyde	2	2	2	2	2	2	2	1	2	2	1
	Disposal of Expired or discarded medicine	2	2	2	2	2	2	2	1	2	2	1
7	Solid General Waste Management											
	Availability of Compost pit as per specification	2	2	2	2	2	2	2	0	2	2	0
	Disposal of General waste	2	2	2	2	2	2	2	1	2	2	1
	Innovations in managing general waste	2	2	2	2	2	2	2	0	2	2	0
8	Liquid Waste Management											
	The laboratory has a functional protocol for managing discarded samples	2	2	2	2	2	2	2	1	2	2	2
	Liquid waste is made safe before mixing with other waste water	2	2	2	2	2	2	2	1	2	2	1
	Hand-washing facilities have been provided for patients, handing-over Urine Samples	2	2	2	2	2	2	2	2	2	2	2
9	Equipment and Supplies for Bio Medical Waste Management											
	Availability of Bins for segregated collection of waste at point of use	2	2	2	2	2	2	2	2	2	2	2
	Availability of Needle/ Hub cutter and puncture proof boxes	2	2	2	2	2	2	2	2	2	2	2
	Availability of Colour coded liners for Biomedical waste and general waste	2	2	2	2	2	2	2	2	2	2	2
10	Statuary Compliances											
	PHC has a valid authorization for Bio Medical waste Management from the prescribed authority	2	2	2	2	2	2	2	1	2	2	2
	PHC submits Annual report to pollution control board	2	2	2	2	2	2	2	1	2	2	2
	PHC maintains records, as required under the Biomedical waste rules 2016	1	1	1	1	1	1	1	1	1	1	1
1.PHC Rahoud(Dist. J-C) 2. PHC Korba 3. PHC Lemaru (Dist Korba) 4. PHC Lundra 5. PHC Raghunathpur 6. PHC Bataikela (Dist Surguja) 7. PHC Dondekalan 8. PHC Khorpa 9. PHC Mandir Hasaud (Dist. Raipur) 10. PHC Charoda 11. PHC Tankimaroda (Dist. Durg)												

Table 4: Aggregate scores of various criteria of biomedical waste management in selected PHCs of CG											
Biomedical Waste Management	Janjgir- Champa	Korba		Surguja			Raipur			Durg	
	PHC Rahoud	PHC Korba	PHC Lemaru	PHC Lundra	PHC Raghu- nathpur	PHC Bataik ela	PHC Khorpa	PHC Dondika lan	PHC Mandir Hasaud	PHC Charod a	PHC Tanki Marod a
Implementation of Biomedical Waste Rules 2016	6	6	6	5	5	6	5	3	6	6	4
Segregated Collection and Transportation of BMW	6	6	6	6	6	6	6	4	6	5	3
Sharp Management	6	6	6	6	6	6	6	4	6	6	5
Storage of Biomedical Waste	3	3	3	5	5	5	5	2	6	6	2
Disposal of Biomedical waste	6	6	6	6	6	6	4	1	6	6	0
Management of hazardous waste	6	6	6	6	6	6	6	4	6	6	4
Solid general waste	6	6	6	6	6	6	6	1	6	6	1
Liquid Waste Management	6	6	6	6	6	6	6	4	6	6	5
Equipment and Supplies for BMW Management	6	6	6	6	6	6	6	6	6	6	6
Statutory Compliances	5	5	5	5	5	5	5	3	5	5	5
Total Scores	56	56	56	57	57	58	55	32	59	58	35
Internal Assessment by Health Facility (%)	65	94	81	94	98	97	93	52	97	55	97.5
Assessment by PRC(%)	93	93	93	95	95	97	92	53	98	97	58

Table 5: Kayakalp scores of assessment of infection control in selected DHs and CHCs of CG.

SN	Infection Control							
1	Hand Hygiene	1	2	3	4	5	6	7
	Availability of Sink and running water at point of use	1	1	2	2	1	2	2
	Display of Hand washing Instructions	1	1	2	2	1	2	2
	Adherence to 6 steps of Hand washing	1	0	2	1	1	2	2
	Availability of Alcohol Based hand rub	2	0	2	2	1	2	2
	Staff is aware of when to hand wash	2	1	2	2	2	2	2
2	Personal Protective Equipment (PPE)							
	Use of Gloves during procedures and examination	1	0	2	2	1	2	2
	Use of Masks and Head cap	1	0	2	2	1	1	1
	Use of Heavy Duty Gloves and gumboot by waste handlers	0	0	1	1	1	1	1
	Use of aprons/ Lab coat by the clinical staff	2	0	2	2	1	2	2
	Adequate supply of Personal Protective Equipment (PPE)	0	0	1	1	1	2	2
3	Personal Protective Practices							
	The staff is aware of use of gloves, when to use (occasion) and its type	2	0	2	2	2	2	2
	Correct method of wearing and removing gloves	1	0	2	2	2	2	2
	Correct Method of wearing mask and cap	1	0	2	2	2	2	2
	No re-use of disposable personal protective equipment	2	0	2	2	2	2	2
	The Staff is aware of Standard Precautions	1	0	2	2	2	1	2
4	Decontamination and Cleaning of Instruments							
	Staff knows how to make Chlorine solution	2	2	2	2	2	2	2
	Decontamination of operating and Surface examination table, dressing tables etc. after every procedures	1	1	2	2	2	2	2
	Decontamination of instruments after use	1	1	2	2	2	2	2
	Cleaning of instruments done after decontamination	1	1	2	2	2	2	2
	Adequate Contact Time for decontamination	1	1	2	2	2	2	2
1. DH Jangir- Champa 2. CHC Malkharoda (Dist. J-C) 3. DH Korba 4 CHC Kartala (Dist Korba) 5 . DH Raipur 6. CHC Dharsiwa (Dist. Raipur) 7.CHC Patan (Dist. Durg)								

Table5: Kayakalp scores of assessment of infection control in selected DHs and CHCs of CG.								
SN	Infection Control							
5	Disinfection & Sterilization of Instruments	1	2	3	4	5	6	7
	Adherence to Protocols for autoclaving	2	1	2	2	2	2	2
	Adherence to Protocol for High Level disinfection	0	0	2	2	1	2	2
	Use of Signal Locks for sterilization	2	0	2	2	2	2	2
	Chemical Sterilization of instruments done as per protocol	1	0	2	2	1	2	2
	Sterility of autoclaved pack maintained during storage	0	0	2	2	1	2	2
6	Spill Management							
	Staff is aware of how manage small spills	2	1	2	2	2	2	2
	Availability of spill management Kit	1	1	2	2	2	2	2
	Staff has been trained for spill management	2	1	2	2	2	2	2
	Spill management protocols are displayed at points if use	1	1	2	2	2	2	2
	Staff is aware of management of large spills	1	1	2	2	2	2	2
7	Isolation and Barrier Nursing							
	Provision of Isolation ward	2	0	2	2	2	2	2
	Infectious patients are not mixed for general patients	2	0	2	2	2	2	1
	Maintenance of adequate bed to bed distance in wards	1	0	2	2	2	2	2
	Restriction of external foot wear in critical areas	1	0	2	2	2	2	2
	Restriction of visitors to Isolation Area	1	0	2	2	1	0	0
8	Infection Control Program							
	Infection Control Committee is constituted and functional in the Hospital	1	0	2	2	1	1	1
	Regular Monitoring of infection control practices	1	0	2	2	1	1	1
	Antibiotic Policy is implemented at the facility	1	0	2	2	1	1	1
	Immunization of Service Providers	2	0	2	2	1	1	1
	Regular Medical check- ups of food handlers and housekeeping staff	0	0	2	2	1	1	1
1. DH Jangir- Champa 2. CHC Malkharoda (Dist. J-C) 3. DH Korba 4 CHC Kartala (Dist Korba) 5 . DH Raipur 6. CHC Dharsiwa (Dist. Raipur) 7.CHC Patan (Dist. Durg)								

Table5: Kayakalp scores of assessment of infection control in selected DHs and CHCs of CG.								
SN	Infection Control							
9	Hospital Acquired Infection Surveillance	1	2	3	4	5	6	7
	Regular microbiological surveillance of Critical areas	0	0	2	2	1	2	2
	Hospital measures Surgical Site Infection Rates	0	0	2	2	1	0	0
	Hospital measures Device Related HAI rates	0	0	0	0	1	0	0
	Hospital measures Blood Related and Respiratory Tract HAI	0	0	0	0	1	0	0
	Hospital takes corrective Action on occurrence of HAIs	0	0	0	0	1	0	0
10	Environment Control							
	Maintenance of positive air pressure in OT and ICU	2	0	2	2	1	2	2
	Maintenance of air exchanges in OT and ICU	2	0	2	2	1	2	2
	Maintenance of Layout in OT	2	0	2	2	1	2	2
	Carbolization of OT and Labour Room	2	0	2	2	2	2	2
	General and patient traffic are segregated in Hospitals	0	0	0	0	1	0	0
1. DH Jangir- Champa 2. CHC Malkharoda (Dist. J-C) 3. DH Korba 4 CHC Kartala (Dist Korba) 5 . DH Raipur 6. CHC Dharsiwa (Dist. Raipur) 7.CHC Patan (Dist. Durg)								

Table 6: Aggregate scores of various criteria of assessment of infection control in selected DHs and CHCs of CG							
Infection Control	Janjgir- Champa		Korba	Raipur		Durg	
	DH Janjgir- Champa	CHC Malkharoda	DH Korba	CHC Kartala	DH Raipur	CHC Dharsiwa	CHC Patan
Hand Hygiene	7	0	10	10	6	10	10
Personal Protective Equipment (PPE)	4	0	8	8	5	8	8
Personal Protective Practices	7	0	10	10	10	9	10
Decontamination and Cleaning of Instruments	5	6	10	10	10	10	10
Disinfection & Sterilization of Instruments	5	1	10	10	7	10	10
Spill Management	7	5	10	10	10	10	10
Isolation and Barrier Nursing	7	0	10	10	9	8	7
Infection Control Program	5	0	10	10	5	5	5
Hospital Acquired Infection Surveillance	0	0	4	4	5	2	2
Environment Control	8	0	10	8	6	8	8
Total Scores	55	12	92	90	73	80	80
Internal Assessment by Health Facility (%)	50	110	94	95	72	81	90
Assessment by PRC (%)	55	12	92	90	73	80	80

Table 7: Kayakalp scores of assessment of infection control in selected PHCs of CG.												
SN	Infection Control											
1	Hand Hygiene	1	2	3	4	5	6	7	8	9	10	11
	Availability of Sink and running water at point of use	2	2	2	2	2	2	2	2	2	2	2
	Display of Hand washing Instructions	2	2	2	2	2	2	2	2	2	2	2
	Staff is aware of standard hand washing protocol	2	2	2	2	2	2	2	2	2	2	2
2	Personal Protective Equipment (PPE)											
	Use of Gloves during procedures and examination	2	2	2	2	2	2	2	2	2	2	2
	Use of Masks Head cap and Lab coat, Apron etc.	2	2	2	2	2	2	2	2	2	2	2
	Use of Heavy duty Gloves and gumboot by waste handlers	1	2	2	1	1	1	1	1	1	1	1
3	Personal Protective Practices											
	The staff is aware of use of gloves, when to use (occasion) and its type	1	1	1	1	1	1	1	1	1	1	1
	Correct method of wearing and removing PPEs	1	2	2	1	2	1	2	1	2	2	2
	No re-use of disposable personal protective equipment	1	2	2	1	1	1	1	2	2	2	2
4	Decontamination and Cleaning of Instruments											
	Staff knows how to make Chlorine solution	2	2	2	2	2	2	2	2	2	2	2
	Decontamination of operating and Surface examination table, dressing tables etc. after every procedures	2	0	1	1	1	0	0	1	2	2	1
	Decontamination and cleaning of instruments after use	1	2	1	2	2	1	1	1	2	2	1
5	Disinfection & Sterilization of Instruments											
	Adherence to Protocols for sterilization	1	2	1	2	2	2	2	1	2	2	1
	Adherence to Protocol for High Level disinfection	1	2	2	2	2	2	2	1	2	2	1
	Use of autoclave tape for monitoring of sterilization	1	2	2	2	2	2	2	2	2	2	2
1.PHC Rahoud(Dist. J-C) 2 PHC Korba 3 PHC Lemaru (Dist Korba) 4. PHC Lundra5. PHC Raghunathpur 6. PHC Bataikela (Dist Surguja) 7. PHC Dondekalan 8. PHC Khorpa 9 PHC Mandir Hasaud (Dist. Raipur) ,10. PHC Charoda11 PHC Tankimaroda (Dist. Durg)												

SN	Table7: Kayakalp scores of assessment of infection control in selected PHCs of CG.											
SN	Infection Control											
6	Spill Management	1	2	3	4	5	6	7	8	9	10	11
	Staff is aware of how to manage spills	2	2	2	2	2	2	2	2	2	2	2
	Availability of spill management Kit	2	2	2	2	2	2	2	2	2	2	2
	Spill management protocols are displayed at points if use	2	2	2	2	2	2	2	2	2	2	2
7	Isolation and Barrier Nursing											
	Infectious patients are not mixed for general patients	1	2	2	2	2	2	1	1	2	1	1
	Maintenance of adequate bed to bed distance in wards	1	2	2	2	2	2	2	0	2	2	0
	Restriction of external foot wear in critical areas	2	2	2	2	2	2	2	2	2	2	2
8	Infection Control Program											
	Infection Control Committee is constituted and functional in the PHC	2	2	2	2	2	2	2	1	2	2	1
	Antibiotic Policy is implemented at the facility	2	2	2	2	2	2	2	2	2	1	1
	Immunization and medical check-up of Service Providers	2	2	2	2	2	2	2	2	2	2	2
9	Hospital Acquired Infection Surveillance											
	Facility measures the Health care associated infections	2	2	2	2	2	2	2	2	2	2	2
	Facility reports all notifiable diseases and events	2	2	2	2	2	2	2	2	2	2	2
	Regular Monitoring of infection control practices	2	2	2	2	2	2	2	2	2	2	2
10	Environment Control											
	Cross-ventilation at Patient Care areas (ward, labour room and dressing room)	2	2	2	2	2	2	2	2	2	2	2
	Preventive measures for air borne infections has been taken	1	1	1	1	1	1	1	1	1	1	1
	Adequate number of Air-exchange in Laboratory	2	2	2	2	2	2	1	1	1	1	1
1.PHC Rahoud(Dist. J-C) 2 PHC Korba 3 PHC Lemaru (Dist Korba) 4. PHC Lundra5. PHC Raghunathpur 6. PHC Bataikela (Dist Surguja) 7. PHC Dondekalan 8. PHC Khorpa 9 PHC Mandir Hasaud (Dist. Raipur) 10. PHC Charoda 11. PHC Tankimaroda (Dist. Durg)												

Table 8: Aggregate scores of various criteria of assessment of infection control in selected PHCs of CG

Infection Control	Janjgir - Cham pa	Korba		Surguja			Raipur			Durg	
	PHC Rahoud	PHC Korba	PHC Lemaru	PHC Lundra	PHC Raghunath pur	PHC Bataikela	PHC Khorpa	PHC Dondikalan	PHC Mandir Hasaud	PHC Charoda	PHC Tanki Maroda
Hand Hygiene	6	6	6	6	6	6	6	6	6	6	6
Personal Protective Equipment (PPE)	5	6	6	5	5	5	5	5	5	5	5
Personal Protective Practices	3	5	5	3	4	3	4	4	5	5	5
Decontamination and Cleaning of Instruments	5	4	4	5	5	3	3	4	6	6	4
Disinfection & Sterilization of Instruments	3	6	5	6	6	6	6	4	6	6	4
Spill Management	6	6	6	6	6	6	6	6	6	6	6
Isolation and Barrier Nursing	4	6	6	6	6	6	5	3	6	5	3
Infection Control Program	6	6	6	6	6	6	6	5	6	5	4
Hospital Acquired Infection Surveillance	6	6	6	6	6	6	6	6	6	6	6
Environment Control	5	5	5	5	5	5	4	4	4	4	4
Total Scores	49	56	55	54	55	52	51	47	56	54	47
Internal Assessment by Health Facility (%)	94	100	108	113	110	113	95	57	100	68	95
Assessment by PRC (%)	82	93	52	90	92	87	85	78	93	83	78

संचालनालय स्वास्थ्य सेवायें, छत्तीसगढ़ विभागाध्यक्ष कार्यालय

(तृतीय तल, इन्द्रावती भवन अटल नगर, रायपुर, 492002)

क्रमांक/अस्प. प्रशा./520
प्रति,

अटल नगर, रायपुर, दिनांक : 01/07/2019

1. मुख्य चिकित्सा एवं स्वास्थ्य अधिकारी
जिला-समस्त, छ.ग.।
2. सिविल सर्जन सह मुख्य अस्पताल अधीक्षक
जिला अस्पताल-समस्त, छ.ग.।

विषय:- बायो मेडिकल वेस्ट प्रबंधन अंतर्गत चिकित्सालयों एवं स्वास्थ्य केन्द्रों के स्टॉफ हेतु प्रशिक्षण, मेडिकल चेक-अप तथा टीकाकरण (हेपेटाइटिस-बी एवं टिटनेस) किये जाने के संबंध में दिशा-निर्देश।

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उपरोक्त विषयांतर्गत लेख है कि, बायो मेडिकल वेस्ट प्रबंधन अंतर्गत निम्नानुसार गतिविधियों का आयोजन नियमित अंतराल में किया जाना है-

(क) बायो मेडिकल वेस्ट प्रबंधन प्रशिक्षण:-

1. प्रशिक्षण के विषय:-

बायोमेडिकल वेस्ट मैनेजमेंट अंतर्गत बायोमेडिकल वेस्ट के सेग्रिगेशन, कलेक्शन, पैकेजिंग, ट्रांसपोर्टेशन, ट्रीटमेंट, डिस्पोजल, पर्सनल प्रोटेक्टिव इक्विपमेंट (PPE) का उपयोग, बायोमेडिकल वेस्ट का रिकॉर्ड संधारण, दुर्घटना (जैसे- Needle stick Injury आदि) की रिपोर्टिंग, मेडिकल चेकअप, प्रतिरक्षा टीके आदि विषयों पर संस्था एवं जिला स्तर पर प्रशिक्षण आयोजित किया जाना है। संस्था स्तर पर संबंधित समस्त स्टॉफ को तथा जिला स्तर पर समस्त संस्थाओं से 1 चिकित्सक, 1 नर्सिंग स्टॉफ एवं बीपीएम जहां लागू हो, को प्रशिक्षित किया जाना है।

2. प्रशिक्षुओं की जानकारी:-

संस्था स्तर पर संबंधित समस्त स्टॉफ को तथा जिला स्तर पर जिले की प्रत्येक संस्था (जिला अस्पताल, सिविल अस्पताल/सामुदायिक स्वास्थ्य केन्द्र एवं प्राथमिक स्वास्थ्य केन्द्र) से 1 चिकित्सक, 1 नर्सिंग स्टॉफ एवं समस्त जिला कार्यक्रम प्रबंधक तथा समस्त विकासखंड कार्यक्रम प्रबंधक को प्रशिक्षित किया जाना है। प्राथमिक स्वास्थ्य केन्द्र द्वारा, इसके अंतर्गत आने वाले उप स्वास्थ्य केन्द्रों में पदस्थ ए.एन.एम. व ग्रामीण स्वास्थ्य संयोजक को भी प्रशिक्षण दिया जावेगा।

3. प्रशिक्षक :-

जिला स्तर पर अस्पताल सलाहकार, आरएमएनसीएचए सलाहकार, संभागीय क्वालिटी एश्योरेंस सलाहकार, क्षेत्रीय कार्यालय पर्यावरण संरक्षण मंडल के अधिकारी एवं अन्य योग्य प्रशिक्षित व्यक्ति। प्रशिक्षक के रूप में उप संचालक/राज्य कार्यक्रम अधिकारी एवं राज्य सलाहकारों का सहयोग सहास्य उपलब्धता अनुसार लिया जा सकेगा। संस्था स्तर पर प्रशिक्षण चिकित्सक, नर्सिंग स्टॉफ व विकासखंड कार्यक्रम प्रबंधक के द्वारा दिया जावेगा।

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4. प्रशिक्षण का अंतराल:-

जिला स्तर तथा संस्था स्तर में वर्ष में 2 बार (जनवरी तथा जुलाई में) प्रशिक्षण आयोजित किया जावेगा।

5. प्रशिक्षण का व्यय-

जिला स्तरीय प्रशिक्षण हेतु राष्ट्रीय स्वास्थ्य मिशन वर्ष 2019-20 की आर.ओ.पी. के एफ.एम. आर. कोड 9.5.29.5.a में प्रत्येक जिले हेतु राशि रु.50000 स्वीकृत है। संस्था स्तर के प्रशिक्षण की व्यवस्था संस्था द्वारा की जावेगी।

6. प्रशिक्षण की रिपोर्टिंग-

प्रशिक्षण उपरांत रिपोर्टिंग निम्न प्रारूप में फरवरी माह एवं अगस्त माह के प्रथम सप्ताह में इस कार्यालय को तथा संबंधित क्षेत्रीय पर्यावरण संरक्षण मंडल कार्यालय को अनिवार्य रूप से उपलब्ध कराया जावे-

बायो मेडिकल वेस्ट प्रबंधन प्रशिक्षण की रिपोर्टिंग जिले का नाम.....

क्र.	स्वास्थ्य संस्था	प्रशिक्षण का दिनांक	कुल स्टॉफ की संख्या	स्टॉफ की संख्या जिन्हें प्रशिक्षण प्रदाय किया गया।	प्रशिक्षण के विषय
1	जिला अस्पताल				
2	CH/CHC				
	1				
	2				
	3				
3	PHC/UPHC				
	1				
	2				
	3				

(ख) चिकित्सालयों एवं स्वास्थ्य केन्द्रों के स्टॉफ का मेडिकल चेकअप-

- समस्त स्टॉफ का जनरल मेडिकल चेकअप वर्ष में 2 बार क्रमशः जनवरी व जुलाई माह में संलग्न प्रारूप अनुसार संपन्न किया जावे।
- बायोमेडिकल वेस्ट हैंडलर (नर्सिंग स्टॉफ, लैब स्टॉफ, सफाई कर्मचारियों एवं किचन स्टॉफ) का विस्तृत मेडिकल चेकअप उक्त अवधि में संपन्न किया जावे।
- संस्था स्तर पर प्रत्येक स्टॉफ की फाईल संधारित किया जावे जिसमें मेडिकल चेकअप एवं इम्युनाइजेशन का रिकॉर्ड संधारित किया जावे। ए.एन.एम. व ग्रामीण स्वास्थ्य संयोजक का मेडिकल चेकअप संबंधित प्राथमिक स्वा. केन्द्र/सामु. स्वा. केन्द्र में किया जावे।

4. मेडिकल चेकअप रिपोर्टिंग निम्न प्रारूप में फरवरी माह एवं अगस्त माह के प्रथम सप्ताह में इस कार्यालय तथा संबंधित क्षेत्रीय पर्यावरण संरक्षण मंडल कार्यालय को अनिवार्य रूप से उपलब्ध कराया जावे-

क्र.	स्वास्थ्य संस्था	मेडिकल चेकअप का दिनांक	कुल स्टॉफ की संख्या	स्टॉफ मेडिकल हुआ, संख्या	जिनका चेकअप उनकी	स्वस्थ पाये गए स्टॉफ की संख्या	रिमार्क (चेकअप में पाये गये मुख्य बीमारियों, डिसऑर्डर के नाम)
1	जिला अस्पताल						
2	CH/CHC 1 2 3						
3	PHC /UPHC 1 2 3						

(ग) चिकित्सालयों एवं स्वास्थ्य केन्द्रों के स्टॉफ का टीकाकरण

1. संस्था के समस्त स्टॉफ, विशेषकर बायोडिकल वेस्ट हैंडलर (नर्सिंग स्टॉफ, लैब स्टॉफ, सफाई कर्मचारियों एवं किचन स्टॉफ) को हेपेटाइटिस बी एवं टिटनेस के प्रतिरक्षी टीके अनिवार्य रूप से लगाये जाये।
2. उक्त हेतु वर्ष में 2 बार संस्था स्तर पर कैम्प का आयोजन कर, जिन स्टॉफ को टीका नहीं लगाया गया है, उन्हें हेपेटाइटिस बी तथा टिटनेस के प्रतिरक्षी टीके लगाये जावे तथा उन्हें एक कार्ड प्रदाय किया जावे, जिसमें टीके का विस्तृत विवरण (स्टॉफ का नाम, उम्र, पता, फोटोग्राफ, टीके का नाम, लगाये जाने का दिनांक, प्रतिरक्षा अवधि खत्म होने पर दोबारा टीका लगाये जाने की तिथि) आदि का स्पष्ट उल्लेख हो।
3. हेपेटाइटिस बी का डोज 0,1 तथा 6 माह में दिया जाता है। अतः प्रथम डोज पश्चात् दूसरी डोज का टीका 1 माह पश्चात् एवं तीसरी डोज 6 माह में लगाया जाना सुनिश्चित करें।



4. इम्यूनाइजेशन रिपोर्टिंग निम्न प्रारूप में फरवरी माह एवं अगस्त माह के प्रथम सप्ताह में इस कार्यालय तथा क्षेत्रीय कार्यालय पर्यावरण संरक्षण मंडल को अनिवार्य रूप से उपलब्ध कराया जावे।

क्र.	स्वास्थ्य संस्था का नाम	कुल स्टॉफ की संख्या	स्टॉफ की संख्या, जो पहले से टीकाकृत है एवं पुनः इम्यूनाइजेशन की दिनांक नहीं आया है।	इम्यूनाइजेशन हेतु शेष स्टॉफ की संख्या	स्टॉफ की संख्या, जिन्हें टीका लगाया गया।	टीका लगाये जाने का दिनांक
1	जिला अस्पताल					
2	CH/CH C 1 2 3					
3	PHC/UP HC 1 2 3					

उपरोक्तानुसार गतिविधियां संपादित कर समय-समय पर रिपोर्टिंग किया जाना सुनिश्चित करें।

o/c

संचालक
स्वास्थ्य सेवायें
छत्तीसगढ़

क्रमांक/अस्प. प्रशा./
प्रतिलिपि:-

अटल नगर, रायपुर, दिनांक : 01/ 07/ 2019

- उप सचिव, छ.ग. शासन, मुख्य सचिव कार्यालय, मंत्रालय, अटल नगर, रायपुर, छ.ग.।
- सचिव, छ.ग. शासन, स्वा. एवं परिवार कल्याण विभाग, अटल नगर, रायपुर, छ.ग.।
- आयुक्त, स्वास्थ्य सेवायें, अटल नगर, रायपुर, छ.ग.।
- मिशन संचालक, राष्ट्रीय स्वास्थ्य मिशन, अटल नगर, रायपुर, छ.ग.।
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- समस्त, उप संचालक/राज्य कार्यक्रम अधिकारी, संचालनालय स्वा. सेवायें, छ.ग. की ओर जिला/फैसिलिटी भ्रमण के समय उक्त रिपोर्टिंग की मॉनिटरिंग करने हेतु प्रेषित।
- समस्त, राज्य सलाहकार/प्रोग्राम एसोसिएट, राष्ट्रीय स्वास्थ्य मिशन, छ.ग. की ओर जिला/फैसिलिटी भ्रमण के समय उक्त रिपोर्टिंग की मॉनिटरिंग करने हेतु निर्देशित।

o/c

संचालक
स्वास्थ्य सेवायें
छत्तीसगढ़

Details of cost proposal for Bio Medical Waste management for NHM supplementary PIP year 2019-20

Budget Requirement for Bio-Medical Waste Management in Govt. Health facilities for year 2019-20 (Rs in Lakhs)										
S.No.	Type of Health Facility	No. of Facility	Implementation of Bar Code System		Establishment of Effluent Treatment Plant (ETP)		Outsourcing of BMW to Common Bio-Medical Waste Treatment facility		Grand Total	Remarks
			Unit Cost/ Year	Total Cost	Unit Cost/ Year	Total Cost	Unit Cost/ Year	Total Cost		
1	DH	24	1	24		163		Proposed in regular state budget for District Hospital	187	Rs. 365.26 lakhs had been sanctioned in NHM ROP 2018-19 for 23 DHs. Work is under progress in 11 DHs. Additional fund of Rs. 163 lakhs required for remaining 12 District Hospitals as cost escalation in these DHs due to number of functional bed are relatively more.
2	CHC	188	0.17	31.96	8	1504	1.8	338.4	1874.36	
3	PHC	792	0.08	63.36	Pre treatment of Liquid waste is done. Hence at present not required.		0.6	475.2	538.56	
4	UPHC	45	0.08	3.6			0.6	27	30.6	
Total				122.92		1667		840.6	2630.52	
In Words - Rs. Twenty Six Crore thirty lakhs fifty two thousand only										
Note- List of facilities going to be covered is attached.										