

Short Communication

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2 **Community Based Monitoring under NRHM at Village Level in the State**

3 **of Maharashtra, India**

15 **SOURCE OF FUNDING**

16 The study was carried out with in house funding from parent organization of NRHM.

17 **CONFLICT OF INTEREST**

18 Investigators declare 'nil' conflict of interest.

19 **AUTHORS CONTRIBUTION**

20 This work was carried out in collaboration between all authors. Both the authors
21 contributed to the study conceptualization and design. PPD finalized the design and
22 contributed to writing of the article, analysis and interpretation of the data. APK conducted
23 field visits.

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27 ABSTRACT

28 **Background:** Government of India, under National Rural Health Mission has established
29 Village Health Sanitation Nutrition Committees (VHSNC) and selected Accredited Social
30 Health Activists (ASHAs) in all the villages. Government also started Community Based
31 Monitoring (CBM) project through Non-Governmental Organizations. Maharashtra State of
32 was one of the nine states selected in the pilot project.

33 **Objectives:** To assess the effect of training and implementation of CBM on Knowledge,
34 Attitude and Practices of VHSNC members including ASHAs.

35 **Design:** It is a descriptive study using comparison group.

36 **Settings:** The study was carried out in 90 villages, 45 each from study group and control
37 group, in the State of Maharashtra, India.

38 **Interventions:** Investigators sought help from Community Medicine Departments from
39 nearby Medical Colleges to conduct study in four districts. In one district the investigators
40 themselves conducted the study. From each village one ASHA and three members of
41 VHSNC were interviewed. Separate comprehensive scoring systems were evolved for
42 assessment.

43 **Main variable:** Score obtained by the members was studied.

44 **Results:** Only 41% ASHAs and 28% VHSNC member were trained. ASHAs' overall mean
45 score was 7.52. The mean score of VHSNC trained members was 6.55 and for un-trained was
46 5.00.

47 **Discussion:** The interviewed members were lacking in core areas. The members are not
48 ready to take ownership and to monitor services.

49 **Conclusions:** The training and implementation of CBM did not have any difference in
50 awareness and active participation of ASHAs. This may be due to improper coverage of
51 training. The training helped VHSNC members in improving score.

52 **Key words:** Accredited Social Health Activist, Community Based Monitoring, Village
53 Health Committee, Un-Tied Fund

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56 **1. INTRODUCTION**

57 In pursuit of enhanced pace towards achievement of Millennium Development Goals
58 and taking into consideration the problems after carrying out situation analysis, some
59 concrete mechanisms of enhancing the community partnership and accountability of public
60 sector towards the community have been initiated in the National Rural Health Mission
61 (NRHM) across the India since 12 April 2005. These mechanisms include decentralization of
62 health planning and monitoring responsibility by constituting committees at village, block
63 and district levels. At institutional level, Rogi Kalyan Samitis (Patient Welfare Committees)
64 for varied functions have been established. At the community level in rural areas dedicated
65 women have been selected and appointed as Accredited Social Health Activists (ASHAs).
66 They specially function for improving health of the women and children. In addition to these
67 mechanisms Community Based Monitoring project with help of Non-Governmental
68 Organizations (NGOs) had been launched in 9 states in first phase, including the State of
69 Maharashtra. Community Based Monitoring (CBM) in the State of Maharashtra started in the
70 year 2007-2008. A total of 5 districts were selected. Then 3 blocks from each district, from
71 each of the block 3 Primary Health Centers (PHCs) and 5 villages from each PHC were
72 selected by the state level nodal NGO. The nodal NGO selected district and block level
73 NGOs for actual implementation of the project. At village level Village Health, Sanitation
74 and Nutrition Committee (VHSNC) is constituted in all the villages after implementation of
75 NRHM. In CBM project one member nominated by the block level NGO has also been made

76 a member of VHSNC. Maharashtra State was the first state to include and provide allocation
 77 to CBM in project implementation plan. Apart from the reports from implementing Non-
 78 Governmental Organizations evaluation studies of the project have not been carried out. After
 79 3 years of implementation, expansion of the project was planned in most of the states by state
 80 level nodal NGOs and the governments. In Maharashtra, State government and NRHM
 81 desired to carry out appraisal of the first phase of implementation before expansion. NRHM,
 82 Maharashtra sought technical help from State Health System Resource Center (SHSRC)
 83 where the investigators were then working. Accordingly the investigators decided to conduct
 84 an observational study with comparison group to assess effect of CBM on village level
 85 functionaries. Investigators selected village level functionaries not only because they
 86 represent the first level contact with the people but also that they are present in very large
 87 number to influence the performance of the project. The two objectives were; to study the
 88 effect of training in CBM on awareness and active participation of members of VHSNC and
 89 to study the effect of implementation of CBM process on awareness and active participation
 90 of members of VHSNC.

91 2. MATERIAL AND METHODS

92 2.1 Study Location

93 The population of the state is 112.37 million and it is second most populous state after Uttar
 94 Pradesh in India. The rural population in the state is 54.67% and resides in small 43,663
 95 villages. There six administrative divisions and 35 districts in the State of Maharashtra. CBM
 96 was implemented in following five districts Amravati, Nandurbar, Osmanabad, Pune and
 97 Thane. One district was selected from each division excepting one division as Government of
 98 India insisted maximum five districts for implementation of the project. Department of
 99 Community Medicine of nearest medical college was involved as coordinating agency for
 100 carrying out the study. Professor and Head of the Department was Chief Coordinator for that

district. The State Health System Resource Center is located in Pune; hence study of that district has been undertaken by the team from SHSRC. The design of the study was developed seeking active help from the state level nodal NGO which is also located in Pune. The authors conducted the study with cooperation from the NGOs implementing the project at block, district and state level. The study was planned and conducted in 2010-2011.

2.2 Selection of Villages

CBM- Group: List of villages was obtained under each of the PHCs in which the project was implemented. The villages were arranged alphabetically and one village was selected from each PHC by random number generated using Open-Epi software. Thus in total 45 villages were included in sample.

Non-CBM Group: The blocks in each district where CBM project was not implemented were arranged in alphabetical order. Three blocks from each district were then selected using the computer generated random number. From each block, three PHCs and from each selected PHC one village was then selected adopting the identical method. Thus in control group also 45 villages were included in the sample.

2.3 Survey and assessment instruments

Separate questionnaires were prepared by SHSRC and finalized after discussion among the participant coordinators. One questionnaire was prepared to interview the ASHA. Other questionnaire was prepared for interviewing the VHSNC member. The questionnaire assessed awareness and active participation pertaining to vital aspects like village health plan, village health calendar, functioning of VHSNC and Un-Tied Fund (UTF) for village etc. [1]. Separate scoring systems were also developed to compile the information from the interviews. Based on the information obtained from the personal interview of ASHAs the comprehensive scheme of marking was evolved and is given in table 1. Similarly based on

the information obtained during interview, other scheme of marking was evolved for the VHSNC members. It is given in table 2.

2.4 Process and analysis

From each of the selected villages ASHA, Sarpanch (elected peoples' representative heading local self-government) and two members of Village Health, Sanitation and Nutrition Committee (one female member representing self-help group and one from Scheduled Cast/Schedule Tribe category) were interviewed. The district chief coordinators identified suitable team members for information collection from the villages. Team members were post graduate students in Community Medicine Department. They were trained for data collection. In the field visits they were accompanied by their teachers. A total of two visits were made for each selected village. Prior intimation was given to the persons to be interviewed through concerned Block Health Officer/Medical Officer of Primary Health Center. Information collected by the teams was filled in by the trained data entry operators and was checked by SHSRC. Analysis was done using SPSS and Excel statistical package. The proposal was discussed in the meeting of Ethical Committee of State Health System Resource Center, NRHM, Government of Maharashtra and then exempted from review.

3. RESULTS

In all the 45 villages in both the groups VHSNCs were established and one member nominated by CBM implementing NGO was included in the respective VHSNC. The meetings of VHSNC are not conducted as per schedule. Quarterly reports are almost not sent to PHCs. Interviews were planned for 90 ASHAs, however in four villages (1 in CBM category and three in non-CBM category) ASHAs could not be contacted due to various reasons like vacancy, illness etc. Only 18 out of 44 (i.e.40.9%) ASHAs from CBM category

of villages said that they had received any training in CBM. In those who had received training, the duration of training varied from 1-3 days. The summary of marks scored by the ASHAs as per the articulated scheme is shown in table 3. A total of 54 members of VHSNC were expected to be covered from each district. However this target could not be achieved in three districts namely Osmanabad, Pune and Thane. Overall 95.18% VHSNC members were interviewed. No member from Scheduled Caste and Scheduled Tribe category was available for interview in Nadurabar and Osmanabad district respectively. Coverage of “Sarpanch” (excepting Pune) and “female members of self-help group” was 100% in all districts. In Pune district “Sarpanch” and SC/ST category members could not be contacted and interviewed leading to lowest coverage of 81.48% in that district. Of the 128 VHSNC members interviewed from CBM villages selected, only 28.1 % had received any training of CBM. The district wise details are given in table 4. The duration of training varied from 1-7 days. The marks scored by the members of VHSNCs are given in table-5. For identifying the areas which need more attention analysis of scoring in various aspects was carried out. The points emerged after analyses of the forms were as follows:

1. Village health plan and role of VHSNC members in it.
2. Village health calendar and its importance.
3. Un-Tied Fund and its utilization.
4. Common agenda points that need be discussed in the VHSNC meetings.

4. DISCUSSION

The project of community based monitoring identified broadly two spheres of monitoring. The first sphere is administrative unit like village, block, district and state and the second sphere is institution of Primary Health Center. In both the spheres separate committees have been advocated. The project functions on triangulation process between community, Non-Government Organizations/Community Based Organizations and Panchayati Raj Institutions

(local self-governments). Enormous thrust is given on involvement of village level
 176 functionaries to ensure assured health services under NRHM. The reasons are obvious; the
 177 health indicators for various reasons are poor in rural area and still in India the rural
 178 population (68.84%) outnumbers the urban population. While describing the status of public
 179 health in NRHM initial document, it has been pointed that lack of community ownership of
 180 public health programmes influences levels of efficiency, accountability and effectiveness.
 181 Adequate emphasis is given to monitoring and evaluation. Apart from routine monitoring
 182 from the health department, the additional component in the form of CBM as a project has
 183 been introduced. It was expected that it would serve at least two purposes firstly would
 184 enhance community ownership and secondly would establish a good monitoring system with
 185 accountability. Investigators developed simple and comprehensive tools to assess effect of
 186 CBM. The tool incorporated the core aspects envisaged in the managers' manual developed
 187 for CBM [1]. The implementing NGOs carried out the expected steps including training [2].
 188 The NGOs implementing CBM trained ASHAs and VHSNC members also. The poor
 189 training response from VHSNC members was also observed by the implementing nodal
 190 agency [3]. There were many interactive sessions. The response for inclusion in VHSNC
 191 improved only when they felt that the process may offer them some political benefit. There
 192 was no uniformity in the duration of the training in both the categories. The data in table 3
 193 indicates that the difference in the average marks scored by the ASHAs in CBM and non-
 194 CBM category of villages is marginal and is statistically not significant. ($t= 1.377$, $P= 0.172$).
 195 Similarly, the difference in the average marks scored by trained and untrained ASHAs is also
 196 marginal and statistically not significant. ($t= 0.0849$, $P=0.398$). After inquiry with the NGOs
 197 about the poor performance in the training process of the ASHAs, investigators learnt that it
 198 was largely because of the recent elections held for Gram-Panchayat (local self-government)
 199 and subsequent election of new members to the VHSNCs. Most of the ASHAs were involved

directly or indirectly in the election process. There is slight difference ($\chi^2 = 9.326$, $P=0.053$) in district wise training status of the VHSNC members. Statistical analysis of the data in table-5 indicates that the difference in the average marks scored by the VHSNC members from CBM implementing and CBM-non implementing villages is statistically not significant ($Z = 0.4332$, $P>0.05$). However, the difference in the average marks scored by the trained and untrained VHSNC members is statistically significant ($t = 3.408$, $P = 0.001$). It appears that absence of statistically significant difference in the average marks in the CBM and non-CBM categories of villages is due to the presence of large number of untrained VHSNC members in the CBM category. It may however be noted that even in CBM category, the trained VHSNC members the mean score was 6.55 (maximum score = 10).

For the first time some amount is kept at the disposal of the committee but even the members are not aware and do not utilize as desired. It was also observed that since the UTF accounts at village are maintained by the Anganwadi worker, it was perceived by many VHSNC members that the UTF is primarily meant for management of malnutrition in children in Anganwadi. Problems pertaining to UTF were similarly observed in exactly 45 villages from three districts in Jharkhand [4]. The state nodal agencies in their published reports [3,5], have shown some positive changes. Investigators believe they are basically because of before- after design. All these members of the committee are non-technical persons are not exposed earlier to health related trainings. All the points identified as lacking areas are core components of CBM process and all the village level functionaries were deficient in the core aspects. The members are not sure about their role. The opportunity of monitoring as well planning health of the village is not utilized to full extent.

5. CONCLUSIONS

The investigators did not observe any synergistic effect of institutions established under NRHM and additional institution of CBM on knowledge, attitude and practices among

the members of the committee. Inability to play expected role will have direct effects on the outcome variables. CBM by involvement of NGOs may not deliver the expected result in every place. The continuity of interest in the monitoring process among members of the VHSNC may also pose challenge.

LIMITATIONS

Investigators did not include any outcome variable including the availability and status of village report card in the study.

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S. No.	Item	Marks

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1	Is she is aware about the health plan of the village	Y=1, Else 0
2	Mentions at least one element in the health plan	1, Else 0
3	Is she aware of village health calendar	Y=1, Else 0
4	Mentions correctly where the calendar is displayed	1 if correct, Else 0
5	Mentions correct frequency of meetings of VHSNC	1 if correct, Else 0
6	Attended at least one meeting of VHSNC	1 if YES, Else 0
7	Says has raised at least one issue in VHSNC meeting	1 if YES, Else 0
8	Aware of UTF for village	1 if YES, Else 0
9	Mentions correct amount of UTF for the village	1 if correct, Else 0
10	Mentions at least one purpose for which UTF can be used	1 if mentioned, Else 0
11	Mentions financial assistance to needy patient as one of the purposes of UTF	1 if mentioned, Else 0
12	Has recommended at least one item for expenditure from UTF	1 if recommended, Else 0
	Maximum	12

277 Table 1. Scheme of scoring of ASHAs based on the information obtained in personal
278 interview

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280 Table 2. Scheme of marking for VHSNC members

S. No.	Item	Marks
1	Is the member aware about the Village Health Plan? (VHP)	
2	Is the member able to tell at least one element in latest VHP of the village?	
3	Is the member aware about Village Health Calendar? (VHC)	
4	Is the member able to tell where the VHC is displayed?	
5	Is the member able to tell correct frequency of the meeting of VHSNC?	
6	Has the member attended at least one meeting?	
7	Is the member able to tell at least one issue discussed in meeting of VHSNC?	
8	Is the member aware of UTF for village?	
9	Is the member able to tell correct amount of UTF for village?	
10	Has the member recommended at least one item for expenditure from UTF?	
	Maximum	10

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282 For all questions; 1 if yes, Else 0

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Table 3. Summary of scores of ASHAs as per the scheme

Category	N	Mean	SD	t	DF	P
CBM	44	7.90	2.60			
Non-CBM	42	7.11	2.71	1.377	84	0.172
Total	86	7.52	2.67			
Training	N	Mean	SD	t	DF	P
Trained	18	8.00	2.47			
Un-trained	68	7.39	2.72	0.849	84	0.398
Total	86	7.52	2.67			

Table 4. District wise proportion of trained VHSNC members

District	Total	Received training
		(%)
Amravati	27	3 (11.1)
Nandurbar	27	7 (25.9)
Osmanabad	26	11 (42.3)
Pune	24	10 (41.7)
Thane	24	5 (20.8)
Total	128	36 (28.1)

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320 Table 5. Summary of marks scored by VHSNC members

Category	N	Mean	SD	RD	P
CBM	128	5.28	2.56	0.4332	>0.05
Non-CBM	129	5.14	2.62		
Total	257	5.21	2.59		
Training	N	Mean	SD	t and DF	P
Trained	36	6.55	2.17	3.408, 255	<0.001
Untrained	221	5.00	2.59		
Total	257	5.21	2.59		

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