Functioning of the Sub Health Centers (SHCs) in Mandla District

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Abstract

The study was carried out to find out various facilities available at Sub Health Centres (SHCs) and the actual work performed by the health workers. Physical facilities were assessed in 40 selected SHCs in terms of basic amenities, drugs and supplies including furniture and equipments using a checklist by the research team. The functions of HWs were studied under the different service components viz. antenatal care, natal care, post natal care, immunization, family planning and other national health programs. The work performed by the HWs as per the records maintained by them was taken to represent the performance of the SHC and was also graded as poor, satisfactory or good. Only 4 out of 40 (10%) SHCs were found to have good physical facilities followed by satisfactory facilities in 17 SHCs and poor at 19 of the remaining SHCs. At many places the supplies and equipments though adequately available were lying unused (eg. BP instruments, Cu-T insertion kits, delivery kits etc). Regarding services provided by the HWs immunization services were good at 27 (out of 40) SHCs, antenatal services were good only at 5 SHCs, whereas intra natal, family planning and other services were poor at all the 40 SHCs. The overall functioning of SHCs was poor at 27 of the 40 SHCs.

Introduction

The delivery of primary health care services is the foundation of the rural health care system and forms an integral part of the national health care system. At the most peripheral level the primary health care is delivered through sub health center (SHC) which is manned by one male multipurpose worker and one female multipurpose worker or ANM (Park, 2002). Despite the presence of these sub-health centers since 1974, the health care services delivered to the rural population are far from satisfactory. The condition is all the more dismal in Madhya Pradesh with a heterogeneous tribal and non-tribal population and varied terrain.

With this view this study was carried out to explore the existing status of functioning of HW (F) and HW (M) in the Mandla district of Madhya Pradesh which is predominantly a tribal district. According to the latest figures, the population of Mandla is 8.93 lacs. A substantial proportion of population is illiterate (40.2%) and living below the poverty line (59.2%). The district has 9 blocks and 1247 scattered villages. The district has 248 sub health centers. Development of infrastructure and health personnel in sub health centers have been attempted with support from various international agencies like World Bank, WHO, DANIDA, UNICEF, UNFPA etc. in order to improve the quantity as well as quality of health and family welfare services (Bulletin RHS,2002). Still, health status of the population in Mandla district shows a dismal picture. Infant mortality rate, maternal mortality rate and under five mortality rates are quite high in comparison to other districts of Madhya Pradesh.

The present study was done to assess firstly the various facilities available at the SHCs located in Mandla district and secondly to observe the functioning of the SHCs with respect to various indicators like the coverage of MCH services and other National Health Programmes.

Material and Methods

1. Study design

The total number of sub-health centers in Mandla district is 248. By the rule of thumb 15 % of the sub-health centers were selected by simple random sampling method for the study adopting the module of User's Guide: PHC Management Advancement Program (2002). The sample size thus, came out to be 40. Due to variation in staff availability at some of the SHCs with the post of HW (M) or HW (F) lying vacant or the presence of an additional HW (F) (contractual), 42 HW (F)s & 32 HW(M)s had to be included in the study from the selected 40 SHCs. This gave a total of 74 SHC workers instead of 80 HWs.

The study units for observational study were the selected SHCs and their male and female multipurpose workers. The study design used is observational and cross sectional.

2. Data collection techniques and tools

Checklist for the observation of the facilities available at the selected SHCs was used. Recorded data available at SHCs in order to assess the performance and achievements of the health workers was noted on a pre-designed questionnaire. Further a scoring system was created to evaluate the components of the study viz Performance and Physical facilities.

3. Evaluation of performance

Different indices were computed for the evaluation of physical facilities at SHCs and performance of health workers.

i) Physical facilities

In order to evaluate the availability of various physical facilities at the SHCs, these facilities were grouped under 3 categories:

- Basic amenities
- Drugs and supplies
- Furniture and equipments

Each of the selected SHC was visited. A checklist including the names of all the items under these 3 categories was used. A score of 1 was allotted if the item was available for the purpose of this study; the total score came out to be 50. Finally the SHCs were graded according to the total scores obtained as follows:

Grade	Total score obtained by SHC
Poor	≤15
Satisfactory	16 – 35
Good	>35

ii) Performance of health workers

In order to elicit the performance of the health workers so as to assess the overall functioning of the SHCs during the year 2003 - 2004, various records (from 1st April 2003 to 31st March 2004) of the HWs were examined and noted down on a pre-designed questionnaire. The functions performed by the HWs were broken down into certain service components viz.

- Antenatal Care
- Natal Care
- Post natal Care
- Immunization
- Family Planning
- Other National Health Programmes

Each of these components was further broken down into several elements for the sake of proper assessment.

a) Antenatal care (ANC)

- Percentage of Antenatal registration against expected in the area.The expected number of pregnancies were calculated as follows-

$$\frac{[\text{Birth rate of rural MP (33.4)} \times \text{Population of SHC}] + 10\ \%\ \text{pregnancy wastage}}{1000}$$

- Percentage of registered Antenatal cases receiving 3 visits (3 antenatal visits exclude the visit by the HW (F) for case registration).
- Percentage of registered Antenatal cases receiving 2 doses of TT (or 1 booster dose of TT).
- Percentage of registered Antenatal cases receiving 100 Tablets of IFA.
- Percentage of registered Antenatal cases whose urine examination was done.
- Percentage of registered Antenatal cases whose Hb. estimation was done.
- Percentage of registered Antenatal cases whose weight was recorded.
- Percentage of high risk pregnancies referred .

The average antenatal performance of each sub center was calculated by taking the average of the above mentioned elements.

b) Natal care services

- Percentage of deliveries conducted by trained personnel viz – TBA, ANM, LHV.
- Percentage of Institutional deliveries (for the purpose of this study institutional deliveries include only those deliveries which were conducted by the doctor at the PHC).

Average natal care performance was obtained as the average of the above two elements (1 and 2)

c) Post natal care (PNC)

- Percentage of registered PNC cases receiving 3 visits.
- Percentage of registered PNC cases receiving IFA Tabs.

The average PNC performance of the sub health center was calculated by taking the average of the above two elements.

d) Immunization Services

The percentage of children immunized for BCG, 3 doses of OPV & DPT each, Measles and the first dose of Vitamin A was calculated as follows-

$$\frac{\text{No. of infants immunized with each of these vaccines}}{\text{Total no. of infants in each SHC area}} \times 100$$

Total no. of infants in each SHC area was calculated as (RCH module for Medical officers, 2001) -

$$\frac{[\text{Birth rate of rural MP (33.4)} - \text{IMR of rural MP}]}{1000} \times \text{Population of SHC}$$

The average immunization performance of each SHC was calculated by taking the average of the individual immunization done for each of these vaccines.

e) Family Planning Services

The total number of eligible couples under each SHC area was noted. The number of users of each method of contraception viz – Oral pills, Condoms and IUDs as well as those who had undergone sterilization operations (upto 31st March, 2004) including LTT & VT was also recorded. Using this information the Couple Protection Rate and the percentage users of each method of contraception was calculated as- CPR=

$$\frac{[\text{No. of individuals undergoing sterilization} + \text{No. of users of OP/9+CC/18+IUD/3}]}{\text{Total no. of eligible couples in each SHC area}} \times 100$$

f) Other Services

Under this component the following health programs were included-

- Percentage of ARI cases registered
- Percentage of Diarrhoea cases registered

In order to assess the percentage of ARI and diarrhea cases registered, first the under-5 population under each of the selected SHC was calculated [the under-5 population was taken as 13 % of the total population of the area (Training Module, RCH for medical officers-2001). Then the expected number of episodes of diarrhea and ARI per child per year was calculated [taking 4 episodes of diarrhea per child per year and 3 episodes of ARI per child per year in rural areas as the national average (Park, 2002)].

Subsequently, the number of episodes/cases of ARI and diarrhea reported by the HWs was expressed as a percentage of the total number of expected episodes of diarrhea / ARI for each year. An average of all the above mentioned services was taken into consideration to assess the overall performance of the SHCs. The performance was then graded as follows:

Performance grade	Overall % performance
Poor	≤60%
Satisfactory	60.1% – 70%
Good	>70%

To determine various factors which promote or hinder the performance of SHCs analysis and comparison of various important factors with work performance of HWs as obtained by interviewing the health workers was done.

Results and Discussion

Table 1 gives the details of available government health facilities in Mandla district. Mandla being the predominantly tribal district, the average population covered by the SHCs is above the norm of 3000 per SHC.

Table 1: Profile of Govt. health facilities at the Block level in Mandla district

S. No.	Health Facility	Status in Mandla	Status in MP
1	No. of CHCs	08	
2	No. of PHCs	30	
3	No. of SHCs	248	
4	Av. No. of SHCs per PHC	8.26	7.07
5	Av. No. of Villages per SHC	4.83	5.99
6	Av. Population Covered per SHC	3600.80	5447
7	Percentage of SHC without any worker	2.5 %	0.13 %
8	Percentage of SHC without HW(M)	20 %	12.03 %
9	Percentage of SHC without HW(F)	0 %	10.01 %

Av : Average; No. : Number

Table 2 shows that only 11 out of 40 SHCs studied had their own building and the remaining SHCs were run in the rented buildings. Most of the workers do not reside in the SHCs because of the non-availability of the SHC building in the village. Table 3 reveals that 46 out of 74 (62.16%) workers who reported as residing in SHC village in a rented house at the time of the interview were in fact not found to be residing when cross checked.

Table 2: Status of building of the SHC (n= 40)

S. No.	Status of Building	No. of SHC	Percentage
1	Govt. Building Present	11	27.5
2	No Govt. SHC Building	26	65
3	Building Under Construction	3	7.5
	Total	40	100

Table 3 : Place of residence of the HWs (n=74)

S. No.	Place of Residence	HW(F)	HW(M)	Total	%
1	In the SHC building	7	3	10	13.52
2	In SHC Village (Not in SHC building)	26	20	46	62.16
3	Not in SHC Village	9	9	18	24.32
	Total	42	32	74	100

Performance of the SHCs

Table 4 shows grading of the SHCs on the basis of various services provided. This revealed that only 5 out of 40 (12.5%) SHCs' performance of antenatal services was good while 87.5% of the SHCs (35 out of 40) were placed either in the category of satisfactory (42.5%) or poor (45%).

Table 4 : Grading of SHCs on the basis of overall performance of various services provided (n=40)

S.No.	Grade	ANC	INC	PNC	Immunization	FP	Other Services	Overall performance of SHCs
1	Poor	18	40	19	6	40	40	27
2	Satisfactory	17	0	5	7	0	0	5
3	Good	5	0	16	27	0	0	8
	Total	40	40	40	40	40	40	40

As far as the intra-natal services were concerned all 40 SHCs included in the study performed poorly mainly because of the absence of the HW(F)s at the time of delivery, small fraction of the deliveries being institutional and overdependence on family members or trained birth attendants for conducting the deliveries. Nearly one-half of the SHCs (52.5%) performed either satisfactorily (12.5%) or well (40%) in postnatal care services. In contrast to above services the performance of 85% of the SHCs was graded as either good (67.5%) or satisfactory (17.5%) for Immunization with more than 70% coverage for individual vaccines and only 15 % of the SHCs performed poorly. This could be attributed to the combined efforts of the Integrated Child Development Services Scheme and health infrastructure but more so due to over emphasis on immunization at all levels of program management.

The Family Planning performance was poor in all (100%) of the sub-health centers mainly because of more emphasis on sterilization which accounted for 39.21% of the eligible couples effectively protected. There is a need to increase the acceptance of temporary methods of contraception by the community to promote family planning program. Similarly the performance of the SHCs for other National Health Programmes included in the study viz: ARI & Diarrhoea Control Program was dismal (the average performance being 4.27% and 3.45% respectively) in all the selected SHCs.

The grading of the SHCs on the basis of the overall performance taking the above mentioned services into consideration are shown in Table 4, which indicates the good performance in 8 SHC out of 40 (20%) whereas the remaining 27 SHC perform poorly. Nearly similar findings were obtained by Lal et al in their study on Coverage and Quality of Maternal and Child Health Services at Sub-health centre level. (Lal et al, 2000).

Physical facilities at SHCs

Only 35% of the SHCs studied had regular water supply, space for examination of female patient and a store room for storing drugs and other materials whereas 45% of the SHCs had toilet facility and electric supply. On the contrary, more than 90% of the SHCs had regular and adequate supply of family planning materials like Nirodh, Oral pills and IUDs, immunization cards, vaccine carrier, gloves, syringe & needles and slides for blood smear examination. Similarly in more than 80% of the SHCs, ORS packets, IEC materials like posters and pamphlets and equipments such as adult weighing machine, delivery kit and stove were found in good working condition. Vital items like drug kit, BP instrument, weighing machine for children, steam sterilizer, spirit lamp and torch were present varying between 50 – 70% of the SHCs. Autoclave, hemoglobin kit, uristix, stethoscope, kerosene, antiseptic ointment or solution was found in less than 30 % of the SHCs. Basic furniture like examination table, benches, chairs, cupboard for drugs, foot steps and writing table and mattress, bed sheets, vessel for water storage and waste disposable container was present in 18 % of the SHCs.

Table 5: Grading of SHCs on the basis of Availability of Various Physical Facilities

S.No.	Grade	No. of SHC(n=40)	% of SHC
1	Poor (<=25)	19	47.5
2	Satisfactory (26 – 35)	17	42.5
3	Good (>35)	4	10
	Total	40	100

Table 5 shows grading of SHCs on the basis of availability of various physical facilities. Only 4 out of 40 (10%) SHCs were found to have good physical facilities followed by satisfactory facilities in 17 SHCs and poor at 19 of the remaining SHCs. Another important finding was that at many places where the supplies were sufficient and adequate equipment available, they were lying un-used (e.g.: stethoscopes, BP instruments, Cu-T insertion kits, infant weighing machines, delivery kits etc.) mostly because the workers were insufficiently trained in their proper use or were too complacent to use them. Findings from other studies (Jain et al 1999; Population Council, 1995, 1995a) conducted in various parts of the country are similar to the present study.

References

Aga Khan Foundation. Assessing the quality of services- Module 6, User's Guide: Primary Health Care Management Advancement Program. New Delhi: Aga Khan Foundation.

Government of India. 2002. Bulletin on rural health statistics in India. New Delhi: Department of Family Welfare. Ministry of Health & Family Welfare. March.

Lal S, Kapoor S, Vashisht BMS, Punia MS. 2000. Coverage and quality of maternal and child health services at Sub centre level. Indian Journal of Community Medicine. Vol. 26 (1): pp 16-20.

Jain S, Singh JV. 1999. Evaluation of physical facilities available at Sub centre in district Meerut. Indian Journal of Community Medicine. Vol. XXVI (1): pp 27 – 29.

Lal S, Kapoor S, Vashisht BMS, Punia MS. 2000. Coverage and quality of maternal and child

NIHFW. 2001. Training module for reproductive & child health (RCH) for Medical Officers. New Delhi: National Institute of Health & Family Welfare. May.

Park K. 2002. Textbook of preventive and social medicine. 17th Edition.

Population Council. 1995. Situation analysis of Family Welfare Programme in UP in district Agra-Final Report. New Delhi: Council for Social Development and New Delhi: Population Council of India.

Population Council. 1995a. Situation Analysis of Family Welfare Programme in UP in district Sitapur- Final Report. New Delhi: Council for Social Development and New Delhi: Population Council.