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Original Research Article

Quality assessment of maternal and child health care services at Primary health care level in Kamrup District of Assam**Alpana Priya Rabha****Department of Community Medicine, Assam Medical College, Dibrugarh, Assam, India*

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Article History:*Received:** 21/08/2017**Revised:** 24/08/2017**Accepted:** 26/08/2017**DOI:** <https://doi.org/10.7439/ijbr.v8i8.4349>**Abstract**

Background: According to WHO estimates, India contributes about 24 lakhs to 108 lakhs global child deaths and accounts for 25% of the 529,000 global maternal deaths (Reduction of maternal mortality: A joint WHO/ UNFPA/ World Bank Statement: Geneva; 1999).

Objective: To assess the quality of maternal and child health care services at primary health care level.

Materials and method: The study was conducted in 5 PHCs and 10 S/Cs randomly selected in Kamrup district of Assam. The data was collected from records, interviews of the health personnel and the clients availing the MCH services and lastly by observation method.

Results: The quality of MCH services was assessed by using a system approach inputs, process and outputs.

Conclusions: The quality of MCH services was found to be average at the primary care level.

Keywords: Quality of care, Maternal and Child health, Quality, Maternal mortality.

1. Introduction

Poor health status in terms of high mortality and morbidity among women and children in India had been a major concern for public health professionals even before attainment of independence. The maternal deaths in the South-East Asia Region are among the highest in the world, nearly every two minutes a woman dies as a result of pregnancy or childbirth. Efforts to provide services to these vulnerable sections of the population were initiated under Maternal and Child health services as various national health programmes. India contributes to 25 percent of the over 10.6 million under-five deaths occurring worldwide every year.

The quality of care generally means the degree of excellence of the medical care delivered. The health care quality, in general, focuses on the concept that health care has three major cornerstones: quality, access and cost. The public health activities are concerned with the well being of all people irrespective of age, sex, race, or other characteristics. In, India, women in the child bearing age

(15-49) years constitute 21.7 percent and children under 15 years of age 37.3 percent of the total population. Investment in women's health is now recognized as an essential component of social and economic growth. For sustainable population stabilization and overall development, more emphasis must be given to women's health and empowerment. Quality assessment and improvement activities have burgeoned in the recent years, stimulated by diversified rationale, experiences and perspectives. There is also increasing recognition of insistence on adhering with service delivery protocols by the providers so as to achieve desired health outcomes from services.

According to the conceptual framework, proposed by Donabedian, the present study had been proposed to be carried out to assess the quality of maternal and child health care services in Kamrup district of Assam at primary health care level.[1]

2. Materials and Methods

The study had been undertaken in Kamrup district of Assam covering various health institutions from PHCs and S/cs. From the total numbers of twelve PHCs, 40 percent of PHCs had been selected randomly for the study. From each PHCs, two S/cs had been selected based on their distances. The data had been collected by periodical visits to the selected health care facilities. The information were collected from records, interviews of the health personnel and observation methods. The quality of the services were assessed from inputs, service process and service output.

The quality of maternal and child health care services had been assessed by the following elements - service environment, access, equipment and supplies, professional standards, staffing knowledge and skill, client provider interaction, informed decision making and availability of protocols.

2.1 Statistical Analysis: The statistical analysis was carried out manually. The data were presented in forms of diagrams wherever possible.

3. Results

Table 1: Distribution of manpower at the PHCs

Availability of staff / manpower at the facility	No of PHC (n=5)	%
Medical Officer	5	100
Ayush / Homeo doctor	3	60
Support manpower Staff nurses / ANM	5	100
Pharmacists/ Compounder	5	100
Laboratory technician	5	100

The table showed that all the primary health centres had available manpower except Ayush / homeo doctors were available in only 60% of the facilities.

Table 2: Availability of infrastructure facilities at Sub-centres

Location and condition of the facility	No of Sub-centres (n=10)	Total no (%)
Government building	7	7(70)
General cleanliness	8	8(80)
Solid waste containers available	9	9(90)

The table showed that 70% of the sub-centres are in Govt. Buildings, 80% have maintained the general cleanliness of the facility and 90% have the available solid waste containers for disposing the waste generated at the facilities.

Table 3: Distribution of essential amenities for the clients comfort in PHCs and S/Cs

Availability of essential amenities for the clients comfort	PHC(n=5)		S/C(n=10)	
	No.	%	No.	%
Waiting area has benches in covered shaded area	5	100	10	100
Drinking water available for the clients	5	100	10	100
All occupied beds have mattresses, rubber cover & clean bed sheet	3	60	0	0
Toilet facilities for women	3	60	7	70
Separate curtains in doors & windows for privacy	5	100	7	70

From the above table, it had been observed that all the PHCs and S/Cs had the waiting areas for clients in covered /shaded areas. The drinking water facilities were available in all the PHCs and S/Cs. All occupied beds had mattresses, rubber cover and clean bed sheet available in 60% of PHCs. The toilet facilities for women also found available only in 60% of PHCs and 70% of S/Cs. The curtains in doors and windows for privacy also were observed in all PHCs and 70% of S/Cs.

Table 4: Distribution of PHC and Sub-Centre according to the availability of essential drugs and supplies

Availability of essential drugs and supplies	PHC(n=5)		S/C(n=10)	
	No.	%	No.	%
Maternal health	5	100	10	100
Child health	3	60	8	80
Emergency drugs	2	40	0	0
Essential drugs for RTI/STI	4	80	5	50
FP supplies	5	100	10	100
Drugs for EmOC	2	40	0	0
Disinfection supplies	0	0	0	0

From the above table, it had been observed that the maternal health and FP supplies were available in all the PHCs and S/Cs. Child health supplies were available in 60% and 80% of S/Cs. The emergency drugs were available in 40% of PHCs. The essential drugs for RTI/STIs were available in 80% of PHCs and 50% of S/cs. The drugs for EmOC supplies were available in 40% of PHCs. None of the health facilities had available supplies for disinfection.

Table 5: Immunization Service delivery at the PHCs and Sub-centres

Child health care activities immunization service delivery	PHC		S/C	
	No	%	No	%
Immunization session conducted as planned	5	100	10	100
Measles vaccine administered at 9-12 months of age	5	100	8	80
Sterile needle not touched by hand or swab during the injection process	5	100	10	100
Needle cutter or puncture proof box used for disposing syringes	5	100	10	100
Vaccine carrier kept closed during the immunization sessions	5	100	10	100
Post immunization advice regarding side-effects and follow-up visits	3	60	10	100
Immunization card up dated or completed for each child after administering the vaccines	5	100	10	100
Vaccines logistics & supplies	5	100	10	100
Cold chain management	5	100	0	0
Anganwadi and Asha participated in outreach sessions	0	0	10	100
Drop-out cases were traced & vaccine provided	5	100	10	100

From the table it had been observed that all the PHC and S/Cs had well maintained the immunization service delivery. The post immunization advice regarding side effects and follow up were observed in 60% of PHCs and 100% of S/cs. The vaccines logistics and supplies were

available in all the health care facilities. The cold chain was also well maintained in all the health care facilities.

Table 6: Providers knowledge on new born care and child care at Sub-centres

Providers knowledge on newborn and child care	No of S/C (n=10)	Total No & (%)
Did the provider know about the components of essential new born care	8	8 (80%)
Do ANM know about the kangaroo care for maintenance of temperature of the hypothermic new born	6	6(60%)
Tab cotrimoxazole available and may use for managing respiratory tract infection in children	10	10(100)
ORS packets available and being used for managing diarrhoeal diseases in children	10	10(100)

The table shows that 80% of the health care providers had knowledge about essential new born care, 60% had knowledge on kangaroo care of the health care providers at sub-centres. The knowledge about management on respiratory tract infections and management of diarrhoeal diseases were also observed good. All the health care facilities had available supply of tab. cotrimoxazole and ORS packets for management of ARI and diarrhoeal diseases.

Table 7: Process observation on maternal health care quality at Sub-centre

Activities for maternal health care	No of S/C (n=10)	Total No & (%)
Screening of ANC clients- detection of pregnancy & screening	10	10(100)
Screened for signs of anaemia	10	10(100)
Lab tests for Hb, urine sugar done	0	0
ANC counselling on nutrition, birth preparedness & warning signs	10	10(100)
Encouraged for institutional deliveries	10	10(100)
Provider knowledge- did the health care provider or ANM tell the client to recognize complication during antenatal period	10	10(100)
Do ANM know when the client should come for antenatal or postnatal check up	10	10(100)
Does the ANM know how a women can recognize onset of delivery & signs of labour	10	10(100)
Records show women with labour are managed in the facility	0	0
Records show women with obs. Complication identified and timely referred	0	0
Records show that new born for LBW referred to higher centres	0	0

The table showed that the screening of ANC client and counselling were well maintained by the health care providers at the sub-centre. Tests for HB, urine for albumin and sugar were not done in the sub-centres. The counselling

on nutrition, birth preparedness and warning signs of pregnancy had been done well by the health care providers. None of the sub-centres had any records on labour or delivery as well as on new born care. The knowledge of ANM or health care providers on antenatal care, signs on recognition of onset of labour and delivery and on postnatal was found to be good at all the sub-centres.

4. Discussion

In this study, the MOs were available in all the PHCs. The Ayush/ homeo doctors were available only in 60% of PHCs. The other supporting manpower was also available in all the PHCs. By Satpathy (2005)[2], reported about the nonavailability of MOs in the PHCs because of maldistribution, lack of basic amenities and lack of incentives for working in the rural areas. According to National Commission of Macroeconomics and Health report (2005)[3] that shows that the doctors are in short supply. Kapilashrami stated that most PHCs and sub-centres are often located in areas, which are not easily accessible & are appallingly under equipped with drugs, laboratory facilities, transportation etc. In the present study, all the health care facilities excluding S/cs are housed in Govt. buildings [3]. According to Bulletin on Rural Health Statistics in India, the numbers of FRUs functioning at Block PHC level are 4, at CHC level 19, and at sub-district level are 27 in Assam. In Assam, among the S/cs (5109) functioning 2637 are in Government buildings and rest (2472) are in the rented buildings.

In a study conducted by Jain *et al* [4] in Meerat district revealed that 2/3rd of the S/cs were situated in rented buildings. The present study shows that only 60% of PHCs had maintained the cleanliness of the facilities. All the health facilities had the proper arrangement for the segregation of wastes generated at the facilities. Pandit *et al* [5] in their study in Gujarat stated that 83% of the hospitals were disposing their wastes by open air burning. Gupte *et al* [6] reported in their studies that cleanliness is an important criterion for general health care & deliveries. As goal of health system is customer satisfaction, which WHO refers to the health systems responsiveness. Health systems have to be responsiveness to the needs of the customer satisfaction and the community [7]. Ray SK [8] reported in his studies that inadequate waiting space and unusable toilets at BPHC & S/Cs level in three districts in West Bengal. Agarwal *et al*[9] in their study reported that the facility of separate room for consultation was totally absent in rural areas and at health posts. The same study also reported only 16.6% centres had toilet facilities, 22.2% had waiting areas and about 66.65 had drinking water facilities. At all India level facility survey[10] reported 48.4% having LR, 66.5% water supply, 52.3% toilet facility and 71.3%

had at least one bed at PHCs. In Assam, 85.02% having water supply, 56.21% LR facility, 37.59% and 41.70% having at least one bed at PHCs [10]. Same survey reported for S/Cs, that 78.8% having drinking water facility, 73.6% toilet facility, 43.1% had electricity facility at S/Cs level. In Assam, 50% & 32.4% PHCs had adequately equipped with supplies according to the facility survey report 2003 [10].

Agarwal *et al*[11] in their studies reported the unavailability of antibiotics in both rural and urban health centres for child health care services. International Institute of Population Sciences (2003)[10] in their study observed that less than 60% of the PHCs in India had irregular supply of Vitamin A and 71% of the PHCs and 92% of S/Cs had adequate stock of ORS packets in India. By Agarwal *et al*[11] reported in 2001 in their study, reported the availability of IFA tablets and all types of contraceptives at health care facilities. Agarwal *et al* [11] reported only 30% of the clients were advised about the importance of completing vaccination schedule in comparison to 73.3% among urban clients, only 2/3rd clients were reminded about the next visit.

Similar findings reported by Gulati *et al*[12], that a greater proportion of mothers of rural area as compared to that of urban areas did not know the benefits of immunization. Perry *et al* [13] in their study for assessment of quality of immunization services found that the knowledge of immunization schedule of health worker was good. Steerfland *et al* [14] in their study found that the immunization cards were not available in many of the health centres in Bangladesh. Cutts FT *et al* [15] in their study observed that only half of the clients whose children were vaccinated were informed about the vaccine reactions or about the name of the vaccine received. Full course of potent vaccines given at right age and right interval, by right technique with a valid documentation constitutes the quality criteria for vaccination services [16]. Bhabani K [17] reported only 1.6% women had started breastfeeding within 1hr of delivery, majority 37.90% had started within 24hr of delivery, 31.4% were initiated between 24-48hrs of delivery. Subba *et al*[18] reported that only 43.5% of mothers initiated breastfeeding within 1hr of birth. Agarwal M[11] reported that the quality of postnatal services was poor at primary care level. Sethi *et al* in their study observed that in most of the home deliveries conducted by untrained persons. Sachdev and Choudhury [19] observed in their study that a vast majority of infants in our country (70%) are not fed colostrums and they receive additional fluids. Somyji *et al* reported counselling of antenatal mothers and physical examinations were poor in their studies at primary care level. Agarwal in 2001[9] reported in their study that the quality of antenatal services was poor at primary care level.

5. Conclusions

The study had been concluded that the essential amenities for the clients comfort was adequate in all the PHCs except in S/cs. The essential drugs, equipments & supplies were available at all the health care facilities. There were proper arrangements for hospital wastes at all the health care facilities. The knowledge on new born care of health care providers was poor at S/cs level. Based on the findings some recommendations had been suggested for better quality of care at the primary care level. The infrastructure gap in all the health care facilities should be met. The IEC components should be strengthened at the S/cs. The quality of maternal and child health care services was found to be average at primary care level.

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