

Research Article

Assessment of health care facilities for maternal and child health care at Bal Mahila chikitsalyas in Lucknow district, India

Krishna Kumar Sahu^{*}, M K Manar and S K Singh

Department of Community Medicine and Public Health, K.G. Medical University UP, Lucknow, India

*** Correspondence Info:**

Dr. Krishna Kumar Sahu,
Department of Community Medicine and Public Health,
K.G. Medical University UP, Lucknow, India
E-mail: krishnasahu74@gmail.com

Abstract

A facility based survey was conducted from Oct 2011 to March 2012 at six Bal Mahila Chikitsalyas (BMCs) in Lucknow district. It was a cross section study. All the BMCs, work as first referral units (FRUs) was included in the study. Assessment was done on the basis of availability of infrastructure, human resources and medical equipments. Functional electric Generator facility was available in 33.3% of BMCs. Availability of functional ambulance was in only 16.7 percent of BMCs. Blood transfusion and caesarean services were available in only 33.3% of BMCs. About 50% of BMCs had regular paediatrician and obstetricians. In 66.7% of BMCs regular anaesthetics or MO trained in LSAS were present. BMCs (50%) had medical officers (MO's) who were trained in integrated management of neonatal and childhood infection (IMNCI) and two BMCs (33.3%) had MO's trained in emergency obstetric care (EmOC). Radiant warmers were found in all the BMCs, but functional in only three (50.0%). Only two (33.3%) centres had functional phototherapy unit. In hypertensive drug, four BMCs (66.7%) had Nifedipine and Methyl Dopa. In Emergency drugs like adrenaline and aminophylline were available in 33.3% and 100.0% of BMCs. Calcium gluconate was found only in two (33.3%) of the BMCs. Vitamin K was available only one (16.7%) BMC.

Key words: Health care facilities⁷; maternal health; child health; Bal Mahila Chikitsalyas; Urban health.

1. Introduction

At present India has the world's second largest urban population, next to China, and is facing an unprecedented scale of urbanization¹. According to the provisional Census of India (2011), 377 million people are residing in urban areas, constituting 31% of the total population, and this is projected to increase to 900 million by 2050. This will be more than 2.5 times the size of the United States of America's current population². In other words, almost a billion people or 55% of India's population will reside in urban India by 2050^{2,3}.

In rural area, there are three tier system for the health care delivery but in urban there are no such type of system for health care. Several studies have demonstrated that urban health care facilities often benefit only an affluent minority and that widespread socioeconomic inequalities result in major health disparities^{4,5,6,7}. Access to care is hampered by the prevalence of costly specialized services so the poor are left with fewer affordable care options. However, less is known about the gaps in access to care in small and medium towns⁵, where most of the urban population resides and where growth is outpacing that of larger agglomerations⁸. Increasing urbanization and widening inequalities, unmatched by the development of affordable services, could lead to restrictions in access to care and higher propensity to resort to self-treatment among the poor⁹.

In urban areas of Uttar Pradesh, Maternal and Child Health (MCH) services are provided by government or municipal hospitals, the family welfare centres, D-Type health centres (DTHC) and post partum centres. Selected Reproductive and Child Health (RCH) services are also supported through anganwadi centres. The two key stakeholders for providing the health care are urban local bodies and department of health and family welfare. Bal Mahila Chikitsalyas come under the department of health and family welfare. Objective of the study was assessment of health care facilities for maternal and child health care at Bal Mahila chikitsalyas in Lucknow.

2. Methodology

The facility based survey was conducted from Oct 2011 to March 2012. There are eight Bal Mahila Chikitsalyas (BMCs) in Lucknow district. Out of eight Bal Mahila Chikitsalyas, six work as first referral units (FRUs). Bal Mahila Chikitsalyas especially have been developed for the maternal and child care services. For the assessment of available health services six Bal Mahila Chikitsalyas (work as FRUs) were included in the present study. For assessment of facilities for maternal care and neonatal care, predesigned schedule (on the bases of Facility based Integrated Management of Neonatal and Childhood Infection training module¹⁰ and Indian Public Health Standard¹¹) was developed. Assessment was done on the basis of availability of infrastructure, human resources and medical equipments with respect of prevailing norms.

The definition of FRU includes the following three components¹²

- a. Essential Obstetric Care**
- b. Provision of Blood Storage Unit**
- c. New Born Care Services**

The consent was taken from the medical superintendent of each Bal Mahila Chikitsalyas. Interview was taken from medical superintendent, medical officer, OT in charge and nurses.

1.1 Data analysis

Data was tabulated on Microsoft Excel Sheet and analyzed by using the software SPSS, version 17.0. Frequency distributions were calculated for all variables.

3. Result

Table 1: Distribution of health facilities on the basis of physical facilities and infrastructure

Physical facilities	BMC hospitals (n=6)	
	No.	Percentage
Separate labour room	6	100
Newborn care corner in the labour room	6	100
Lighting adequate in labour room and newborn care corner	6	100
Generator		
Functioning with fuel	2	33.3
Not functional or no fuel	4	66.6
Running Water supply in the labour room		
Safe and sufficient water for hand washing	6	100
Ambulance		
Functional with fuel	1	16.7
Availability of blood transfusion services	2	33.3
Availability of caesarean services	2	33.3

All of the BMCs had separate labour room, new-born care corner and adequate light in labour room. Functional Generator facility was available in 33.3% of BMCs. In running water supply in labour room, all centre had safe water supply with sufficient quantity for hand washing. Availability of functional ambulance was in only 16.7 percent of BMCs. Blood transfusion and caesarean services were available in only 33.3% of BMCs (table1).

Table 2: Distribution of health facilities on the basis of availability of health personnel

Staff	BMC hospitals (n= 6)	
	No.	Percentage
Paediatricians	3	50.0
Regular Obstetrician	3	50.0
Regular Anaesthetics/ Trained in LSAS	4	66.7
General duty Medical Officers	6	100.0
Staff nurses	6	100.0
ANMs	6	100.0
MO's trained in IMNCI	3	50.0
MO's trained in Em OC	2	33.3
24 hours newborn care & delivery care	6	100.0

In the present study, 50% of Bal Mahila Chickitsalya had paediatrician and obstetricians. In 66.7% of BMCs regular anaesthetics or medical officer (MO) trained in LSAS were present. All the BMCs had General duty Medical Officers (GDMOs), staff nurses and ANMs. Three BMCs (50%) had medical officers (MO's) who were trained in integrated management of neonatal and childhood infection (IMNCI) and two BMCs (33.3%) had MO's trained in emergency obstetric care (EmOC). All the BMCs had facilities for providing 24 hours newborn care and delivery services. (table2)

Table 3: Distribution of health facilities on the basis of availability of equipments

Medical Equipments	BMC hospitals (n=6)	
	No.	Percentage
Normal delivery set	6	100.0
Laparotomy set	6	100.0
LSCS Set	6	100.0
Mechanical baby weigh scale		
Present and functional	6	100.0
Radiant warmer		
Present and functional	3	50.0
Suction pump / mucus trap		
Present and functional	6	100.0
Self inflating resuscitation bag with mask		
Present and functional	6	100.0
Oxygen facility	6	100.0
Feeding tube	4	66.7
IV infusion set for newborn	4	66.7
Phototherapy unit		
Not present	1	16.7
Present but not functional	3	50.0
Present and functional	2	33.3

All the BMCs had normal delivery set, Laparotomy set, LSCS set and mechanical baby weighing scales. Radiant warmers were found in all the BMCs, but functional in only three (50.0%) health facilities. All the health facilities had suction pumps, resuscitation bags with masks and oxygen facilities. Majority of BMCs (66.7%) had feeding tubes and IV infusion set. Only two (33.3%) BMCs had functional phototherapy unit (Table 3).

Table 4: Distribution of health facilities on the basis of availability of essential drugs

Essential drugs	BMC hospitals (n=6)	
	No.	Percentage
Ampicillin / Penicillin/ Cephalosporins	6	100.0
Gentamicin	6	100.0
Metronidazole	5	83.3
Nifedipine	4	66.7
Methyl Dopa	4	66.7
Magnesium sulphate	4	66.7
Diazepam	4	66.7
Oxytocine	6	100.0
Adrenaline	2	33.3
Aminophylline	6	100.0
Normal saline/Ringer's lactate	6	100.0
Calcium gluconate	2	33.3
Vit K	1	16.7
Vit K use from outside	2	33.3

Antibiotics (Ampicillin/ Penicillin/ Cephalosporins, Gentamicin) were available in all the BMCs, whereas Metronidazole was available in five BMCs. In hypertensive drug, four BMCs (66.7%) had Nifedipine and Methyl Dopa. Magnesium sulphate was available in 66.7% of BMCs. Emergency drugs like adrenaline and aminophylline were available in 33.3% and 100.0% of centres. Calcium gluconate was found only in two (33.3%) of the BMCs. Fluids such as normal saline and ringer's lactate were present in all the BMCs. Vitamin K were available only at one BMC (16.7%) and two BMCs (33.3%) use it from outside (Table 4).

4. Discussion

According to Indian Public Health Standard (IPHS) blood transfusion services and caesarean services should be available at each FRU. For the cold chain maintenance each centre should have functional electric generator. But in this study out of six, only two (33.3%) BMCs had such facility. Out of six BMCs, only one had found ambulance/ transport facility however it is recommended by IPHS that each unit (BMCs) accepting neonatal and sick child referrals should have, or have access to, an appropriately staffed and equipped transport service.

According to IPHS, paediatrician should be posted at each FRU and will be in charge of the Stabilization Unit. Regular Obstetrician and Anaesthetics/ Trained in LSAS should be available at each FRU for operative procedure. Training of the Doctors and Nurses posted at Stabilization Unit will undergo Facility based care training. In our study it was found that about half of BMCs had deficiency of specialist. Some medical officers (MO's) were trained in integrated management of neonatal and childhood infection (IMNCI) and emergency obstetric care (EmOC).

The availability of medical equipments was found deficient, according to IPHS radiant warmer and phototherapy unit should be available at all the centres. In this study functional radiant warmer was present half of the health facilities and only two BMCs had functional phototherapy unit. According to IPHS, Antibiotics, Nifedipine, Methyl Dopa, Magnesium sulphate, Adrenaline, Calcium gluconate and Vit K should be available at all the centres. In this study some centres had deficiency of drugs. According to another study, in rural area, in PHCs infrastructure, equipment, trained health staffs were defect¹³.

5. Conclusion

The facilities available for the maternal and child health care at the Bal Mahila Chikitsalyas were unsatisfactory in comparison to prevailing standards (IPHS). For the better care of the urban patients strengthening of these health facilities are required.

Reference

1. United Nations (2005) World Urbanization Prospects: Concepts and Definitions. Population Division of the Department of Economic and Social Affairs of the United Nations.
2. Office of Registrar General of India (2011) Census of India. Ministry of Home Affairs, Government of India, New Delhi.
3. United Nations (2008) World Urbanization Prospects. Population Division of the Department of Economic and Social Affairs of the United Nations.
4. Rossi-Espagnet A, Goldstein GB, Tabibzadeh I. Urbanization and health in developing countries: a challenge for health for all. *World Health Statistics Quarterly* 1991; 44:186-244.
5. Harpham T, Tanner M, Urban health in developing countries: progress and prospects. London: Earthscan Publications; 1995.
6. Sclar ED, Garau P, Carolini G, The 21st century health challenge of slums and cities. *The Lancet* 2005; 365:901-3.
7. Vlahov D, Galea S, Gibble E, et al. Perspectives on urban conditions and population health. *Cadernos de Saude Publica (Rio de Janeiro)* 2005; 21:949-57.
8. United Nation. World urbanization prospects: the 2003 revision. New York: United Nations Population Division; 2004.
9. Castro-Leal F, Dayton J, Demery L, et al. Public spending on health care in Africa: do the poor benefit? *Bulletin of the World Health Organization* 2000; 78:66-74.
10. Facility based IMNCI participant manual, Ministry of health and family welfare, Government of India, New Delhi 2009.
11. IPHS guideline for First Referral Unit 2006.
12. Guidelines For Operationalising First Referral Units, Maternal Health Division Department of Family Welfare, Ministry of Health & Family Welfare, Government of India 2004.
13. Sahu KK, Idris MZ, Agarwal M, Singh SK, Shankar P, Dixit RK, Assessment of essential newborn care services for low birth weight babies in rural Lucknow, India, *Int J Biomed Res* 2013; 04 (11): 623-627.