To Estimate The Extent of Utilization of Maternal Health Services in The Urban Slums of Lucknow City Uttar Pradesh.

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Abstract : *Everyday in 2015, about 830 women died due to complications of pregnancy and child birth. Almost all of these deaths occurred in low-resource settings, and most could have been prevented. The primary causes of death are haemorrhage, hypertension, infections, and indirect causes, mostly due to interaction between pre-existing medical conditions and pregnancy. The risk of a woman in a developing country dying from Every a maternal-related cause during her lifetime is about 33 times higher compared to a woman living in a developed country. Maternal mortality is a health indicator that shows very wide gaps between rich and poor, urban and rural areas, both between countries and within them.[1]*
Keywords: *Antenatal care , postnatal care ,iron folic acid tablets ,Tetanus toxoid ,health seeking behavior*

I.   Introduction

In the women (15-45 yrs) and children (<15 yrs.) constitute 60% of the total population in India. They comprise the vulnerable fraction of the population due to the risks connected with child-bearing in case of women; and growth, development and survival in case of infants and children. Improvement in maternal health is a major goal in Millennium Declaration, to which India is a signatory. Another important goal is promotion of empowerment of women that have a direct impact on Maternal and Child Health (MCH). It becomes a priority area for the policy makers, planners and various professionals.[2] According to World Health Organization (WHO), approximately 800 women die from preventable causes related to pregnancy and childbirth every day. [3]Out of all maternal deaths, 99 percent occur in developing countries. Further, maternal mortality is higher among women living in rural areas, among poorer communities and among those with low literacy .[4]

II.   material and methods

The present study titled "Utilization of Services Under Reproductive and Child Health Programme Amongst married Women of the Reproductive Age Group in Urban Slums of Lucknow City" was designed to measure the utilization of health services provided to women under reproductive age group that is (15-45 years) of age below poverty line residing in urban slums of Lucknow city. It was planned to assess the prevailing knowledge status of mothers in Lucknow district and also to assess the impact of services provided under RCH programme.

2.1district Profile

Lucknow is centrally placed district of Uttar Pradesh, a state in north India, spread over an area of 2544 sq. kms, which constitute 0.86% of the total area of country. According to the census 2001, the district Lucknow has a population of about 36, 47, 834 with 13, 26,873 (36.4$) in rural areas and 2320961 (63.6%) in urban areas. There are 888 females per 1000 males. Main languages spoken in the district are Hindi and Urdu.

2.2geographical Profile

Lucknow, the capital of the state of Uttar Pradesh is situated 123 meters above sea level. It is situated on 26^03 and $27^0$1North latitude and $80^0$13 and $81^0$30 East Longitude. It is situated on the banks of the river Gomti, which flows from West to East. Lucknow district presents the Gangetic plains of Uttar Pradesh, which topographically falls under the 6th agro-climatic zone i.e. central zone, also known as mid plain zone.

2.2climate:

The climate of Lucknow district is sub-tropical. The average normal rainfall of the district is 953mm. It receives maximum rainfall during the three months of July, August and September which accounts for 70%-75% of the total rainfall the mean maximum and minimum temperature recorded are 47.2 0C and 4 0C in summer and witner respectively, which indicates considerable variation in maximum and minimum temperature over the months. The average temperature ranges from 27.440 C to 23.720

2.2.1Reference Population
The reference population was taken as the population residing in 530 urban slums of Lucknow city that are below poverty line. "Table-1"

2.2.2Study Population & Study Unit
Married women in the reproductive age group (15-45 yrs. Of age) who had delivered in last 2 years preceding the study were taken as study unit & such population was the study population. [11]

2.2.3 Study Design
Community based cross-sectional study was conducted after taking approval from the ethical committee.

III. Indentations and EQUATIONS

3.1 Sampling

3.1.1 Sample Size:
As per the report titled "Concurrent assessment of Health and Family Welfare Programs and technical assistance to district of Uttar Pradesh" by the Department of medical Health And Family Welfare, Uttar Pradesh. [11]
sample size was calculated using the formula.

$$N = z\alpha^2 \times p \times q / d^2$$

Where   N = sample size

Z = statistic at α level of significance i.e 2
p = expected prevalence
q = 100 - p
d = absolute error
The Antenatal coverage amongst the recently delivered women was found to be 60%. Taking P as 60 and Q as 40 kand absolute error (L) 6%,

$$N = \frac{4x60x40}{36} = 266$$

Since respondents are chosen by cluster sampling design affect due to complex sample design comes into picture. Taking into account design effect of 2, the sample size will be
N = 266 x 2 = 532

3.1.2Sampling Technique
The maternal care and other components of the Reproductive and Child Health programme were assessed using 30 cluster sampling technique. Thus for the present study, Probability Proportionate to Size (PPS) method was adopted as the sampling strategy. The clusters were chosen from the sampling frame with Probability Proportional to Size (PPS) in order to compensate for the differences due to variable population in each slum. Each household in the sample had an equal chance of being selected. This made the sample self-weighting, which simultaneously had simplified the analysis. The zone and ward wise list of slums of Lucknow district was procured from the Municipal Corporation and Lucknow Development Authority to select the slums to be used in the survey. The population proportionate to size method was done as follows.
- Column (1) number is assigned to each slum.
- Column (2) : population of each slum was listed.
- Column (3): cumulative population of each slum was listed.

In the next stepsampling interval was calculated by dividing the total cumulative population with the number of clusters required. Thus sampling interval turned out to be 18822. Consecutively to select the first cluster last five digit of the Indian currency note of India was used taking care of the fact that it should be less than cluster interval corresponding to this number first cluster was selected (between 1 and 18822). The first cluster would be located in slum, where the cumulative population was more than the random number was chosen. The second cluster was located in the slum area whose cumulative population exceeded total of the random number & sampling interval (1+18822). The location of each subsequent cluster was identified likewise by adding the sampling interval to the number which located the previous cluster.

The desired number of women to be interviewed in each cluster is 18 in each cluster the first house was chosen at random and from there on, the next nearest house was visited until the desired numbers of mothers were interviewed. If a household had more than one beneficiary, al were included in the survey.[13]

3.1.3 Questionnaire Development & Pilot Testing
The testing study was approved by the ethical committee of Era's Lucknow Medical College and Hospital. The basic questionnaire of "Concurrent assessment of Health and Family Welfare Programmes and technical assistance to district of Uttar Pradesh" by the Department of Medical Halth And Family Welfare, Uttar Pradesh was adopted and reframed as per the requirement of the study. Fifty subjects were interviewed during the pilot testing of the questionnaire. An informed consent was obtained from the respondent at the start of the interview. The interview was done in the presence of a female social worker of the Department Of Community medicine of Era's Lucknow Medical College and the family member of the respondent as per advised by the ethical committee.

3.1.4 Inclusion Criteria
* Recently delivered women (RDW) who gave birth in the last 2 years. [11]
* RDW having BPL card.
* Locked house holds.
* Non-responders.
* RDW residing in that slum for less than 6 months.

3.1.5 Statistical Analysis
Data analysis was done using SPSS 17.0 version. Pearson chi-square test was applied for categorical variables.

IV. Observation
A total of (61.5%) of the women availed ANC services at any place. Out of these (70.5%) got registered at government hospital (23.2%) at private hospital and (6.3%) of the women visited quacks.(Table number 2) More than half (67.2%) of the women were registered for ANC in first trimester and 16.6% in third trimester.(Table-3,4) However, (1.3%) were registered for ANC in second trimester. About (50.6%) of the women have less then three antenatal visits.

Only 332 women utilized various health facilities for antenatal care. Consecutively (78%) of the women utilized government health facilities and around (27.7%) women received services from private health facilities and quacks whereas 208 women did not visited any health facility at all. A total of 98 did not received ANC services at health facility. Out of these, (26.5%) opined that they did not received ANC services at health facility due to financial constraints. However, 23.5% were in view that they were not in need of this.

Majority (82.2%) of the women received IFA tablets during their visits for ANC services and (53.8%) of them fully consumed the tablets. (Table-5)

More than one fourth, (27%) did not consume IFA tables due to its metallic taste and (20.6%) due to problem vomiting once it was used. Less than one fifth of the women did not consume to black stools (18.3%), diarrhea 11.9%, nausea (3.2%), constipation (2.4%) and other reasons were they had gone to parents home, tablets were hard to swallow smells bad and many more.(Table-6) More than had (59.6%) of the women received one dose of TT injections and (25.9%) received two doses. Only (14.5%) of the women received two doses of TT injections. A total of (61.5%) of the women had at least one problem during pregnancy. The common ailments during pregnancy were breathlessness due to weakness (27.8%) dizziness (25.9%) and generalized swelling (23.3%) where as night blindness, lack of quickening, bloody discharge per vagina and seizures were other reported symptoms. More than one third, of the women did not take any treatment for these problems (36.4%) of them sought treatment from government health facility and (10.8%) from private health facility. Only (8.4%) sought treatment from other sources like medical shops and quacks etc.. (Table-6)

V. Figures And Tables
Table-1: Distribution of women according to Sociodemographic profile

Characteristics			No. (n=540)	%
RELIGION		Hindu	334	61.9
		Muslim	200	37.0
		Others	6	1.1
CASTE		SC/ST	367	68.0
		OBC	122	22.6
		General	51	9.4
		<20	68	12.6
		20-25	158	29.3

Age (years)	26-30	89	16.5
	31-35	202	37.4
	36-40	2	0.4
	41-45	21	3.9
Education of women	Illiterate	282	52.2
	Primary	153	28.3
	Middle	105	19.4
Women's age at marriage (years)	<18	300	55.6
	>=18	204	44.4

Table-2 Distribution of women according to utilization of Antenatal care

Antenatal care Services		No (n=332)	%
Place of visit	Govt. hospital	234	70.5
	Private hospital	77	23.2
	Quacks	21	6.3
Trimester of visit	First	223	67.2
	Second	54	16.3
	Third	55	16.6
No. of visits	<3	168	50.6
	≥ 3	164	49.4

Table-3: Distribution of women according to investigations done during antenatal visits

Investigations*	No (n=332)	%
Height	242	72.9
Weight	283	85.2
Blood	273	82.2
Abdomen	271	81.6
Urine	261	78.6
Blood pressure	270	81.3

Table-4: Distribution of women according to reasons for not visiting government healt facility for Antenatal services

Reasons	No (n=98)	%
Financial constraints	26	26.5
No need	23	23.5
No time	19	19.4
Health facility very far	18	18.4
No time	19	19.4
Against belief	12	12.2

Table-5: Distribution of women according to IFA tablets received and consumed by the women.

IFA Tablets	No.	%
Received (n=332)		
Yes	273	82.2
No	59	17.8
Consumption (n=273)		
Fully consumed	147	53.8
Not consumed	126	46.2

Table-6: Distribution of women according to reasons for non consumption of IFA tablets received.

Reasons for non consumption of IFA Tablets	No (n=126)	%
Constipation	3	2.4
Diarrhea	15	11.9
Metallic taste	34	27.0
Nausea	4	3.2
Vomiting	26	20.6
Black stools	23	18.3
Others	21	16.7

Table-6: Distribution of women according to symptoms and their treatment seeking behaviours for aliments during pregnancy.

Complications and place of treatment	No.	%
Type of ailments*		
Breathlessness due to weakness	150	27.8
Dizziness	140	25.9
Generalized swelling	126	23.3
Night blindness	93	17.2
Lack of quickening	83	15.4
Bloody discharge	74	13.7
Seizures	58	10.7
Place of treatment		
Treatment not taken	147	44.3
Government health facility	121	36.4
Private health facility	36	10.8
Others	28	8.4

VI.   DISSCUSSION

The utilization of RCH services has improved among urban poor cutting across the geographical boundaries of states in recent times; still there are large gaps between the groups. The gaps are more specifically and pronounced with respect to ful antenatal care in India and across the states. [5] Taking antenatal and postnatal care, institutional deliveries, anemia, child immunization, and treatment of childhood diseases as key indicators to measure the overall health-seeking behavior, it is evident from the 2005/06 NFHS-3 data that the situation in UP is poor. In most cases, UP indicators are significantly lower than the national average.

Among all the respondents 61.5% of the women availed ANC services. In total 93.7% of the women got registered for antenatal services 70.5% registered at government hospital and 23.2% got registered at private hospital. Only 6.3% of the women visited quacks. 67.2% of the women were registered for ANC in first trimester and 16.6% in third trimestr and 16.3% were registered for ANC in second trimester. Our of total of the women who got registered 50.6% had less then three antenatal visits. Similar results have been shown by [6]that 80.4% of mothers had registered for antenatal care which corresponds to study. [7] In the present study the availing of ANC services was significantly higher in educated women as compared to illiterate . [8], also reported that influence of literacy on utilization of the antenatal services. Our observations also cinfirmed the above influencing factors on utilizing antenatal services. In the present study Tetanus toxoid immunization was found 59.6% for one dose, 25.9% for two doses 14.5% of the women did not received doses of TT injections. Similar results matching to our study are shown by [9] the TTimmunization coverage was found to be 50-60% and in a study conducted by **[10]** showed 75% tetanus toxoid immunization.

In the present study 29.5% of the women did not received ANC services at health center. The reasons they quoted for not availing the ANC care were, 26.5% opined that they did not received ANC services at health facility due to financial constraints, 23.5% viewed that they were not in need of this, Family did not allow, health facility very far, no time & against belief. Similar reasons were coated in the studies .

VII.   Conclusion

People should be made aware of existing government health facility through IEC activities and their utilization should be advocated. It is very essential in slums as the people are reluctant to utilize existing government health facilities even though they are available free to cost. Strengthening high risk approach through early and full ANC has to be emphasized along institutional delivery in order to reduce the maternal mortality.Increasing the awareness regarding schemes like JSY in order to reduce the home deliveries. Measures like early detection, referral and management of the pregnancy related complication likewise ensuring at least two postnatal visits. NGO involvement with active community participation has to be strengthened for effective implementation of RCH services. Health volunteers and workers under NHUM should be piloted in these urban slums to increase the utilization of maternal health services.Regular concurrent assessment of the client based perception of the programme to be done so as to improve the quality services which will increase utilization of the programme.

VIII.   Acknowledgements

References

Journal Papers:
[1]. WHOmaternalandreproductivehealthhttp/www.who.int./maternal_health/env.
[2]. World Health Organization, Maternal Mortality Factsheet, Department of Reproductive Health and Research, World Health Organization, Geneva, Switzerland, 2014.
[3]. V. K. Pillai, A. Maleku, and F. Wei, "Maternal mortality and female literacy rates in developing countries during 1970–2000: a latent growth curve analysis," International Journal of Population Research, vol. 2013, Article ID 163292, 11 pages, 2013.
[4]. Singh JV, Mishra P, Baseline Facts Uttar Pradesh RCH and Some Other Health Programmes, Feb 2007.pg7-14.
[5]. Yadav S K, Singh P. Utilization of Maternal Health Services in Four BIMARU states of India. Indian J Med Sci 2001; pg-35-40.
[6]. Zulfia Khan, Saira mehnaz, Najam Khalique et al (2009). Poor perinatal care practices in urban slums: Possible role of social mobilization networks. Indian Journal of Community Medicine, Vol. 24, Issue. 2:102-107.
[7]. UNICEF (2009). Maternal mortality – A woman dies every 5 minutes from child birth in India. Available from http?://www.unicef.org/india/healthJournal of Urban Health, Feb 2010. (Cited in 2009).
[8]. Ranjan Das, Ali Amir, Papri Nath. Utilization and Coverage of Services by women of Jawan Block in Aligarh. Indian J Com Med 2001 ;26(2): (2001-04- 2001- 06).
[9]. Agarwal S, Sangar K. Need for Dedicated Focus on Urban Health within National Rural Health Mission. Indian Journal of Public Health. July-September2005;Vol,.XXXXIXNo.(3):22-27.
[10]. National Family Health Survey (NHFS-3), Uttar Pradesh. International Institute of Population Sciences, Bombay, 2006.
[11]. Zulfia Khan, Saira mehnaz, Najam Khalique et al (2009). Poor perinatal care practices in urban slums: Possible role of social mobilization networks. Indian Journal of Community Medicine, Vol. 24, Issue. 2:102-107.
Theses:
[12]. DR.Arjit. Kumar Utilization of Services Under Reproductive and Child Health Programme Amongst married Women of the Reproductive Age Group in Urban Slums of Lucknow City.dDr Ram Manohar lohia University Faizabad Lucknow Uttar Pradesh granted M.D (Community Medicine)