Trends in Utilisation of Maternal Care Services in a Rural Community

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Abstract

IN order to determine the trends in utilisation of maternal care services in a rural area, a study was undertaken in 1977 in the Jawaharlal Institute Rural Health Centre, Ramanathapuram, Pondicherry State. All women who had been registered in the antenatal period in 1977 were followed up till delivery and thereafter upto 42 days in the postnatal period, by the maternal and child health staff of the centre. The utilisation pattern as regards registration, antenatal home and clinic visits, tetanus toxoid immunisation, postnatal visits etc. was observed and compared with that of 1967, when the centre had been started. The findings suggested progressive improvement in the utilisation of services. Maternal mortality was found to have come down from 10.6/1000 live births in 1967 to 2.5/1000 live births in 1977. A method of tabulation for self-assessment of performance is also suggested.

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Introduction

Maternal and child health care (MCH) forms an important component of the general health services provided through primary health centres in the rural areas of India. With the integration of the Family Welfare Programme with the MCH services, there has been a rapid expansion of the services. It is necessary, therefore, to conduct studies related to utilisation patterns and trends, as these would help identify service components requiring improvement or re-organisation. The WHO Expert Committee on MCH (1957) has stressed the need for studies in rural areas. Therefore, an attempt was made to study the pattern of utilisation of maternal care services in a primary health centre area to assess the extent of coverage and the quality of services provided.

Materials and Methods

This study was conducted during 1977, in the Jawaharlal Institute Rural Health Centre (JIRHC), Ramanathapuuram, which is attached to the Department of Preventive and Social Medicine of the Jawaharlal Institute of Post-graduate Medical Education and Research, Pondicherry. This health centre is one of the typical primary health centres of the Union Territory of Pondicherry.

The JIRHC caters to a population of 13,665, residing in 12 villages. There were 2,123 married Women in the age group of 13-45 years. The 591 pregnancies that occurred among these women were followed up till termination and thereafter upto 42 days in the post-natal period. All events during the period from registration of pregnancy to the end of the post-natal period were recorded on specially maintained cards (Gopalkrishnan, 1967). The indices that were used for evaluation were (a) Registration of pregnancy, (b) Ante-natal Clinic and Home visits, (c) Details of delivery, (d) Post-natal home visits, (e) Tetanus Immunisation, and (f) Maternal morality.

These indices were compared with those of 1967, i.e. the year the centre was started.

The MCH staff: population ratio was as follows:

Category of Staff	1967	1977
Doctors	1 : 8,328	1 : 4,555
Public Health Nurses	1 : 4,364	1 : 4,555
Auxiliary Nurse Midwives	1 : 4,364	1 : 6,832

Findings and Discussion

I. Ante-Natal Care:

A. Registration of Pregnancies:

The Family Planning Bureau of the Govt. of Pondicherry stipulates that all pregnancies in each primary health centre area are to be registered. Evaluatory findings on the coverage by maternal health programmes do not show more than 5-20% registration in other parts of India except in the Athoor Block in Tamil Nadu where 96-97% registration is recorded (Ramankutty and Namboothiri, 1972). In the JIRHC area, in 1977,

97.5% of pregnancies (591 out of 606) were registered as compared to 66% registration in 1967 (Table I).

B. Parity and Period of Gestation at Registration:

The acceptance of maternal care services would be reflected of registrations. Rita Sapru et al (1974) observed in a study in Delhi that only 7% of pregnancies were registered in the first trimester, 63% in the second and 27% in the third. Ramankutty and Namboothiri (1972) noted that in Gandhigram, the average period of gestation at the time of registration was 6.5 to 7.5 months. In the present study, nearly 33% of all pregnancies in 1977 were found to have been registered in the first trimester, as compared to 15% in 1967. 48% of all primigravidae were registered in the first trimester in 1977 as compared to 9% in 1967. It is thus observed that expectant mothers are registering in the earlier stages of pregnancy.

C. **Ante-natal home visits:**

More than 93% of the registered ante-natal cases were visited at home by MCH staff of the JIRHC. This coverage is more than that suggested (75%) by the Family Planning Bureau of the Govt. of Pondicherry. The average number of visits per ante-natal woman was six. Seven visits were made for high risk cases. This compares favourably with the Pondicherry Government's stipulation of four visits per ante-natal mother and the average of five visits made to 53% of ante-natal women in Athoor Block.

D. **Ante-natal clinic visits:**

Whereas in 1967, only 8.6% of registered ante-natal women attended the ante-natal clinic, 54% did so in 1977 (Table I). The average frequency of visits made by each woman was 2. Increased acceptance of institutional ante-natal care by rural women is an encouraging feature.

E. **Tetanus toxoid immunisation:**

66% of all registered ante-natal women in 1977 were protected against tetanus as compared to 34% in 1967. (Table I). Most high risk mothers received 3 doses while other parity women received 2 doses. 67% of those who received only one dose, did so because they were registered late. Only 17% did not receive the immunisation at all, as they had either gone to their maternal homes for delivery or were working women. Only 5 expectant mothers refused the immunisation.

Cause specific death rate due to neonatal tetanus was 6.8/1000 births in 1967. Since 1970, there have been no cases of neonatal tetanus.

F. **Place of and attendant at delivery:**

In 1977, 37.5% of deliveries were 'institutional' as compared to 13.7% in 1967 (Table I). Referral of high risk cases accounts for this increase.

In 1977, 62.5% of deliveries in the service area of the JIRHC took place at home. This shows a reduction from 86.3% in 1967. In 1977, out of the 270 home deliveries, 183 (67.3%) were conducted by trained traditional birth attendants, as compared to 19.4% in 1967.

A list of the traditional birth attendants practising in the area is available with the centre. Eighteen of the traditional birth attendants have been trained by the centre in the practice of aseptic midwifery.

II. **Post-natal Care**

The Family Planning Bureau of the Govt. of Pondicherry stipulates that 2 visits be made to all mothers within 10 days of delivery. This stipulation was met with the JIRHC area, irrespective of parity, in 88% of post-natal mothers in 1977, as compared to 34.9% in 1967. In Athoor Block, 35% of post-natal mothers were not visited in the post-natal period as compared to only 12% in this study.

Utilisation of maternal care services as rendered by the JIRHC is possibly reflected in the reduction of maternal mortality. From a figure of 10.6/1000 live births in 1967, there has been a fall to 2.8/1000 live births in 1977. In 1977, there was a single maternal death following caesarean section in a hospital.

All the above figures suggest progressive acceptance of the maternal care services of the JIRHC, and hence, better utilisation. With an MCH staff: population ratio of 1 : 3000, maternal care services could be considerably increased quantitatively and improved qualitatively. Generally, the PHCs, MHC and family welfare centres maintain ante-natal, eligible couple, birth and other related MCH registers. If the data available in these registers are analysed by the method adopted in this paper for the analysis of utilisation of the services it would help in periodical avaluation of the services as also for self-auditing.

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TABLE I

UTILISATION OF MATERNAL CARE SERVICES IN 1967 & 1977

Type of service	1967		1977	
	No. of cases	Percentage	No. of cases	Percentage
1. Gravida wise registration				
Primigravida	37	12.0	114	19.3
Gr. II-IV	191	62.0	319	53.9
Gr. V and above	80	26.0	75	12.6
High risk ('77 only)	—	—	83	14.2
2. Registration of Pregnancy	313		591	
I. Trimester	47	15.0	179	30.3
II. Trimester	155	49.5	307	51.9
III. Trimester	102	32.5	105	17.8
IV. Not known	9	2.8	—	—
3. Ante-natal Home visits				
Visited	27	8.6	325	54
Average no. of visits	2	—	2	—
Not visited	286	91.4	266	46
4. Ante-natal clinic visits				
1-2 visits made	109	34.9	131	22.0
3 or more visits made	199	63.5	423	71.8
Not visited	5	1.6	37	6.2
5. Tetanus toxoid immunisation				
Not immunised	411	45.0	100	17
One dose given	63	20.1	100	17
Two dose given	109	34.9	391	66
6. Place of delivery				
Institutional	38	13.7	162	37.5
Home	270	86.3	270	62.5
7. Post-natal visits				
No. of post-natal women	313		477	
1-2 visits made	155	49.5	145	30.4
3 and more visits made	109	34.9	274	57.4
Not visited	49	15.6	58	12.1

REFERENCES

1. Gopalakrishnan, R. and Datta, S. O. 1967—"Recording system of an Urban Health Centre practising Comprehensive Health Care.' Ind. J. Med. Edn., 6, 1.
2. Namboothiri, D. N. and Ramankutty, P.,—'Evaluation Report (Interim) of the MCH & FP Programme in Athoor', Jan. 1972.
3. Sapru, R., Chuttani, C. S. and Srivastava, A. B. L.,—'The coverage and quality of urban material health programmes rendered through an MCH/FP Centre—An evaluation study, NIHAE Bulletin Vol. VII, No. 4, 1974.
4. Ibid—NIHAE Bulletin Vol. VIII, No. 1, 1975.
5. WHO Technical Report Series No. 115 (1957) pp. 19—Administration of Maternal and child health services.