

UTILIZATION OF SERVICES FROM A MOBILE HEALTH CLINIC IN RURAL AREAS OF ALIGARH DISTRICT

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ABSTRACT:

Research Problem: What is the pattern of utilization of services from the Mobile Health Clinic?

Objective: To study the morbidity pattern and coverage and quality of health services in a specified population.

Study Design: Population based cross - sectional study.

Setting: Rural areas of Aligarh district in field practice area under ROME SCHEME.

Participants: All patients attending the Mobile Health Clinic during the calendar year 1995.

Sample Size:

- i) 12106 patients for clinic record analysis.
- ii) 4735 patients above 18 years of age for interview schedule

Study Variables: Demographic profiles, socio-economic characteristics, common ailments, morbidity pattern, present level of health awareness, satisfaction from the services received.

Statistical Analysis: By proportions.

Result: Majority of the patients were under 25 years of age. Large number of patients visited the clinic during the rainy season. Skin diseases were the most frequent (35.96%). The present level of health awareness is unsatisfactory. 65% respondents were satisfied with the services received.

Recommendations: Visit schedule must be weekly to prevent the patients from seeking alternative sources of medical care. Attachment of medico-social workers with the clinic will greatly improve the health promotional activities. More time should be allowed for better doctor - patient communication.

Key Words: ROME, Mobile Health Clinic, Service utilization pattern.

INTRODUCTION:

The enjoyment of the highest "attainable standard of health that will enable every individual to lead a socially and economically productive life" is one of the fundamental human rights widely recognised by the international community.² In order to achieve

this aim and to meet the challenge of reaching the under-served rural and urban population with adequate health care services and to ensure their utilization, the Government of India in 1977 provided Mobile Health Clinics to all medical colleges under Reorientation of Medical Education (ROME) Scheme.³

The objective was to involve the entire faculty of a medical college in training of students in the field and providing comprehensive health care services at the doorstep⁴ because it was perceived that provision of health care services through the Mobile Health Clinics was necessary for those who had to travel more than 5 Kms. distance to reach a Primary Health Centre.⁵

In Jawaharlal Nehru Medical College, Aligarh Muslim University, Aligarh, the Department of Community Medicine is providing a range of curative and preventive services through the Mobile Health Clinic, under ROME SCHEME, for the last 18 years in rural areas of Aligarh district. It was imperative to study the pattern of morbidity and utilization of services provided alongwith the degree of satisfaction from the services received. This information will help in improving the coverage and quality of health services provided through the Mobile Health Clinic. The present study was conducted with the following aims and objectives:

- i) To study the morbidity pattern of patients who attended the clinic and their demographic and socio - economic profile.
- ii) To assess the coverage and quality of health services provided and the degree of satisfaction from the services received.

MATERIAL AND METHOD:

The study population comprised of all the patients who attended the Mobile Health Clinic during the calendar year 1995. The records of the clinic for the

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study period were analysed to determine the demographic profile and morbidity pattern. Data was also collected through interview of patients attending the mobile clinic. Interview schedules, which covered major dimensions like demographic and socio-economic profile, current illness, and degree of satisfaction with the services received, were administered to all persons above 18 years of age. The interview schedules were pretested and revised before administration. The items pertaining to maternal and child health care were administered only to the lactating mothers who had delivered their babies within the last one year.

OBSERVATIONS AND DISCUSSION

I. ANALYSIS OF THE CLINIC RECORDS:

There are 11 villages having a total population of 42,800 (1991 census) in the field practice area under the ROME Scheme. In a fortnightly schedule, for each of the 11 villages, 246 visits were made (mean = 21) in the calendar year 1995. A total number of 12106 patients availed the services of the Mobile Health Clinic which reveals that only 28.28% of the total population in the catchment area could avail the services. The clinic was predominantly visited by Hindus (66.06) of the lower castes. Out of 12106 patients who availed the services, 7603 (62.8%) were males and 4503 (37.2%) females.

The age-wise analysis of the clinic records revealed that maximum number of patients (21.2%) were in 6 - 18 years age group followed by under 6 years (15.68%) and above 60 years (12.57%) (Table - I A). Highest number (4396) of patients (36.33%) attended the Mobile Health Clinic during rainy season (July - October) closely followed by those (33.1%) attending during the winter months (November - February). Priyadarshi and Ghosh⁶ also observed similar seasonal variation in their study population.

In both genders, skin diseases (35.95%) were the commonest illnesses followed by gastrointestinal (18.5%), respiratory (16.42%) and febrile illnesses (13.48%) (Table - II). In females, respiratory diseases were marginally higher than the gastrointestinal diseases, probably due to their encounter with smoke, dust and fumes in the cooking process. The same trend of disease frequency was observed in all age groups. Diseases related to eyes, nose and throat were frequent among children under 6 years of age whereas diseases of bones and joints were found to be increasing along with increase in age.

Priyadarshi and Ghosh⁶ observed that gastrointestinal diseases were most frequent in their study population. In our study, high occurrence of skin diseases may be due to poor personal hygiene and high prevalence of scabies in the region⁷.

High frequency of bone and joint diseases in aged population as found in the present study was also reported by other workers⁸. The morbidity pattern of children in the present study is in conformity with the findings of other researchers⁹.

Seasonal variation indicated that there was a definite increase in respiratory and skin diseases in winter months. This is probably due to dusty conditions, poor personal cleanliness and indoor sleeping habit in crowded rooms. Gastrointestinal diseases had a peak in rainy season, probably due to unsafe drinking water and unhygienic feeding practices. Febrile illnesses had occurred in highest frequency during summer months (Table - III). Several workers¹⁰ have also reported similar seasonal morbidity pattern in their study population.

II. INTERVIEW DATA:

A total number of 4735 patients (2974 males and 1761 females) above 18 years of age were interviewed. The majority of the patients (2027) were in the age group of 25 - 45 years and constitute 43.6% of the population interviewed (Table - I B). Among the respondents 96% females and 66.42% males were married and had an average family size of 3.9. This is in clear excess of the national norms¹¹. On an average the birth spacing was 18 months. Only 185 (19.85%) out of 932 eligible couples reported that they were using some kind of contraceptive device (Table - IV). The reason for non-use of contraceptive was stated as hostile attitude of husband and in-laws. Socio-economic class was ascertained by Kuppaswamy classification¹². 2758 (58.24%) respondents were found to be in lower socio-economic group. The literacy status among females (13.2%) was much lower than that among males (28.72%).

52.12% of children between 1 - 2 years of age were completely immunized while 35.94% were partially immunized against six vaccine preventable diseases. Low coverage of measles, and BCG vaccination was mainly responsible for partial immunization (Table - VI). The reason for low coverage of measles and BCG vaccine as stated by the respondents and confirmed by the clinic staff was that since sufficient number of

eligible children were not present on several visits. BCG ampules and measles vials could not be opened in order to avoid wastage of vaccine. In 12% children who were completely unimmunized, the reasons reported were either the illness of the child or non-availability of time to his or her parents or other family members.

Out of 86 lactating mothers who delivered babies within one year, 32% were in age group of 18 - 25 years. Majority of them were married before 18 years of age and delivered their first child before 20 years of age. In 56% cases, delivery was conducted at home by untrained birth attendants. The antenatal visits by female health workers were reported to be almost negligible. However, 73 mothers² reported that they received two doses of tetanus toxoid through Mobile Health Clinic. This could be confirmed by the presence of immunization card in 54% cases only. They also stated that some iron and folic acid tablets were given to them which they discontinued after sometime due to gastrointestinal disturbances.

Breast feeding was initiated in most of the cases after 24 hours of delivery and invariably colostrum was discarded. 46% mothers did not know about exclusive breast feeding and were feeding cow milk to their babies after double dilution. Breast feeding beyond six months was reported by all the lactating mothers. 38% mothers were unaware of the correct weaning process. Most of the mothers continued to breast feed their children beyond 1 year of age. (Table - V).

Frequent occurrence of diarrhoea in children under five years of age was reported by the mothers. More than 65% insisted on some kind of drug and did not attach much importance to home available fluids or oral rehydration solution. All the 86 lactating mothers were aware of the need of immunization for their infants but only 46.52% stated the complete and correct schedule. (Table - V)

More than half of the patients attending the clinic had the current illness since one week and during the waiting time for the scheduled visit of the Mobile Health Clinic they depended upon either home medication or treatment from some unqualified local practitioners.

Important reasons of availing the Mobile

Health Clinic facilities in decreasing order are (i) nearness of the Clinic to their home (70%); (ii) provision of free medicines and vaccination (58%); (iii) little waiting time for getting prescription (26%); (iv) good quality of medicines and (v) excellent behaviour of the staff.

About 65% of the respondents were completely satisfied with the services available at the Clinic, 20% were partially satisfied and 15% completely unsatisfied. Those who were partially satisfied or completely unsatisfied felt that the visits of the Mobile Health Clinic were not regular and very little time was given to individual patients for consultation with the physician.

74% of the respondents felt that the Mobile Health Clinic was a good place to go for treatment of common fevers, cough, cold and gastrointestinal disorders and infectious disease of skin, eye and ear. They felt that patients with tuberculosis, leprosy, cataract and fractures should go to other places where specialist treatment services were available. However, they acknowledged that on the reference of the Mobile Health Clinic they received timely medical care in J. N. Medical College Hospital or elsewhere.

CONCLUSIONS AND RECOMMENDATIONS:

The Clinic was predominantly visited by males under 25 years of age. So educational efforts of preventive nature need to be directed towards this age group, and others, especially to the lactating mothers. A sizeable number of geriatric population attending the Clinic needs greater attention for their special needs.

The knowledge of seasonal morbidity pattern can help in posting of appropriate number of trained health workers to cope with the demand of the situation.

More than half of the patients had the current illness for the last one week. Since the schedule of visit of Mobile Health Clinic was fortnightly, the patients had to seek alternative sources of treatment which defeated the very purpose of the scheme. A weekly schedule of the Mobile Health Clinic will help in timely provision of the health care.

The low level of awareness in lactating mothers regarding maternal and child health care clearly indicates the need for effective health education campaign. If a medico-social worker or health educator is attached to the Mobile Health Clinic, it will greatly improve the

health promotional activities.

Although the excellent behaviour of the clinic staff was appreciated by many patients, there is a need for better doctor patient communication by allowing more time for the consultation with the patients. The Mobile Health Clinic also performed a noble task by timely referring the patients to Rural Health Training Centre, Jawan, or J. N. Medical College, A.M.U., Aligarh.

If programmed properly, the Mobile Health Clinic can play an important role in providing primary health care in the far flung rural areas hitherto not approached by any other health care agency in an effective manner.

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TABLE - IA DISTRIBUTION OF PATIENTS BY AGE AND SEX (CLINIC RECORDS)

| Age Group | Male | | Female | | Total | |
|--------------|-------------|------------|-------------|------------|--------------|------------|
| | Number | Percentage | Number | Percentage | Number | Percentage |
| 0 - 6 | 1068 | 14.04 | 758 | 16.83 | 1826 | 15.08 |
| 6 - 18 | 1596 | 20.99 | 972 | 21.58 | 2568 | 21.20 |
| 18 - 30 | 1367 | 17.98 | 836 | 18.61 | 2203 | 18.19 |
| 30 - 45 | 1446 | 19.02 | 665 | 14.74 | 2111 | 17.43 |
| 45 - 60 | 1187 | 15.62 | 689 | 15.30 | 1876 | 15.49 |
| 60 and | 939 | 12.35 | 583 | 12.94 | 1522 | 12.57 |
| Total | 7603 | 100 | 4503 | 100 | 12106 | 100 |

TABLE - IB AGE AND SEX WISE DISTRIBUTION OF RESPONDENTS (INTERVIEW DATA)

| Age Groups | Male | | Female | | Total | |
|--------------|-------------|------------|-------------|------------|-------------|------------|
| | Number | Percentage | Number | Percentage | Number | Percentage |
| 18 - 25 | 682 | 22.93 | 413 | 23.45 | 1095 | 23.12 |
| 25 - 35 | 734 | 24.68 | 394 | 22.37 | 1128 | 23.82 |
| 35 - 45 | 581 | 19.53 | 356 | 20.21 | 937 | 19.78 |
| 45 - 60 | 515 | 17.31 | 309 | 17.54 | 824 | 17.40 |
| 60 and above | 462 | 15.55 | 289 | 16.43 | 751 | 15.88 |
| Total | 2974 | 100 | 1761 | 100 | 4735 | 100 |

TABLE-II

DISTRIBUTION OF DISEASES BY SEX (CLINIC RECORDS)

| Diseases | Male | | Female | | Total | |
|------------------|-------------|------------|-------------|------------|--------------|------------|
| | Number | Percentage | Number | Percentage | Number | Percentage |
| Skin | 2264 | 35.03 | 2089 | 37.52 | 4353 | 35.95 |
| Gastrointestinal | 1283 | 16.87 | 957 | 21.24 | 2240 | 18.50 |
| Respiratory | 1364 | 17.94 | 624 | 13.86 | 1988 | 16.42 |
| Fevers | 958 | 12.62 | 644 | 14.30 | 1602 | 13.48 |
| Others: | 1334 | 17.54 | 589 | 13.08 | 1923 | 15.65 |
| ENT | 611 | ----- | 119 | ----- | 730 | ----- |
| Eye | 406 | ----- | 96 | ----- | 502 | ----- |
| Bones & Joints | 317 | ----- | 101 | ----- | 418 | ----- |
| Obs. & Gynae. | ----- | ----- | 273 | ----- | 273 | ----- |
| Total | 7603 | 100 | 4503 | 100 | 12106 | 100 |

TABLE-III

DISTRIBUTION OF DISEASES BY SEASON (CLINIC RECORDS)

| Diseases | Winter | | Summer | | Rainy | |
|------------------|-------------|------------|-------------|------------|-------------|------------|
| | Number | Percentage | Number | Percentage | Number | Percentage |
| Skin | 1320 | 32.93 | 1246 | 33.78 | 1787 | 40.65 |
| Gastrointestinal | 516 | 12.87 | 599 | 16.18 | 1125 | 25.59 |
| Respiratory | 836 | 20.86 | 602 | 16.26 | 550 | 12.51 |
| Fevers | 467 | 11.65 | 731 | 19.63 | 404 | 9.19 |
| Others: | 869 | 21.69 | 524 | 14.15 | 530 | 12.06 |
| ENT | 487 | ----- | 214 | ----- | 29 | ----- |
| Eye | 226 | ----- | 183 | ----- | 93 | ----- |
| Bones & Joints | 98 | ----- | 94 | ----- | 220 | ----- |
| Obs. & Gynae. | 58 | ----- | 33 | ----- | 182 | ----- |
| Total | 4008 | 100 | 3702 | 100 | 4396 | 100 |

TABLE - IV

VARIABLES RELATED TO FAMILY WELFARE PRACTICES (ELIGIBLE COUPLES N=932)

| Variables | No. | Percentage |
|--------------------------------|-----|------------|
| Family Size | | |
| < 2 | 102 | 10.94 |
| 2 - 4 | 590 | 63.30 |
| > 4 | 240 | 25.76 |
| Birth Spacing | | |
| > 12 months | 122 | 13.03 |
| 12 - 18 months | 665 | 71.35 |
| < 2 years | 145 | 15.62 |
| Age at Marriage | | |
| < 18 years | 548 | 58.79 |
| > 18 years | 384 | 41.21 |
| Age at 1st Pregnancy | | |
| < 20 years | 513 | 55.04 |
| 20 - 30 years | 307 | 32.93 |
| > 30 years | 112 | 12.03 |
| Contraceptive Practices | | |
| Regular | 95 | 19.85 |
| Occasionally | 90 | |
| Never | 747 | |

TABLE - VI

LEVEL OF IMMUNIZATION COVERAGE

| Immunization Status | No. | Percentage |
|--------------------------|------------|------------|
| Complete | 319 | 52.12 |
| Partial | 220 | 35.94 |
| B.C.G | 198 | ----- |
| DPT | 220 | ----- |
| OPV | 220 | ----- |
| Measles | 168 | ----- |
| Unimmunized | 73 | 11.94 |
| Immunization Card | | |
| Present | 437 | 71.42 |
| Absent | 175 | 28.58 |
| Total | 612 | 100 |

TABLE - V

LEVEL OF HEALTH AWARENESS OF LACTATING MOTHERS (n = 86)

| Variables | No. | Percentage |
|----------------------------------|-----|------------|
| <i>Breast feeding initiated</i> | | |
| Soon after birth | 03 | 03.48 |
| Within 24 hours | 31 | 36.04 |
| After 24 hours | 52 | 60.48 |
| <i>Colostrum</i> | | |
| Not Discarded | 0 | 0 |
| Discarded | 86 | 100 |
| <i>Duration</i> | | |
| 6 months | 14 | 16.27 |
| ≥ 1 year | 72 | 83.73 |
| <i>Weaning</i> | | |
| <i>Solid foods introduced</i> | | |
| At 4 months | 06 | 06.97 |
| At 6 months | 24 | 27.90 |
| At 1 year or more | 56 | 65.13 |
| <i>Diarrhoeal episodes</i> | | |
| HAF required | | |
| Yes | 19 | 22.09 |
| No | 67 | 77.91 |
| <i>Drugs required</i> | | |
| Yes | 78 | 90.69 |
| No | 08 | 09.31 |
| <i>Imm. of children required</i> | | |
| Yes | 86 | 100 |
| No | 0 | 0 |
| <i>Schedule of immunization</i> | | |
| Correct | 40 | 46.52 |
| Incorrect | 46 | 53.48 |
| <i>Concept of safe delivery</i> | | |
| Five cleans | | |
| Yes | 12 | 13.95 |
| No | 74 | 86.05 |