
Impact of Family Folder System on the Health Status of the Community

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Abstract

Health information is a basic tool of management and a key input for the national health system. Unfortunately, it is still very difficult to get the information at the community level, where it matters most. Health workers are entrusted to maintain thirteen different registers to generate data and to report information to higher levels. The health workers feel that the procedure is too cumbersome and time consuming. Furthermore, the workers consider information collection as an end in itself and the information was seldom used as management tool for augmentation of health services. Family Folder System is an effort towards the development of a family oriented approach to the solving of health problems and to the organization of health care services. The present study has shown that in otherwise two similar communities, the health status is significantly better in a community where family folder system has been implemented.

INTRODUCTION

Health has evolved over the centuries as a concept from an individual concern to a world wide social goal. In order to improve the health status, number of health programmes has increased over the years and the people who implement them at the grass root level often feel over burdened with the collection and recording of data. They maintain separate registers of records relating to families, births, deaths, couples eligible for family planning, antenatal women, postnatal mothers, immunization, stocks of medicine, patients etc. A diary of home visits is also kept. Similar entries are often needed to be made in several registers e.g. Births are recorded in the birth, immunization, postnatal, eligible couples and family registers. The health workers feel that the procedure is too cumbersome and time consuming. There is very little updating of the records. A review of the recording and reporting system shows that most of the records were incomplete¹. This results in inability to maintain continuity of the services provided. Given the above conditions a good comprehensive health management information system is needed which is simple, reliable and action oriented. To address the problem a home based Family Folder System has already been tried at comprehensive health care project at Noorpur Bedi, Punjab². A well designed family folder system provides useful summary data on the demographic profile of the family, socio-economic status, immunization status, growth

monitoring of the under five years of age children, antenatal care, family planning practices, water supply, environmental sanitation, occurrence of communicable diseases, chronic ailments, vital events etc³. Frequent contact of the population with the health care system provides ample opportunities for updating of the records. Introduction of this type of family folder system ensures continuity of the health services and retrieval of records with inbuilt evaluation⁴. A similar family folder system is being used in the field practice areas of various Medical Colleges, in India. In the present study, an effort has been made to study the impact of "The Family Folder System as a Health Management Information System Tool" on the health status of the community, using utilization of the healthcare services and level of awareness about health and healthcare delivery system as indicators of the change.

MATERIALS AND METHODS

The present study was carried out at an urban field practice area of a medical college served by an urban health centre under the department of community medicine since last nine years. Family folder system was introduced in about half of the area served by the Urban Health Centre, since May 2006 to augment the services. The present study is a comparative study. For the study purpose, area served by Urban Health Centre was categorized into two groups i.e. study group and control group. The area where family folder system had been

implemented was taken as study area and the area where family folder had not been implemented was taken as control area. Systematic sampling technique was used to draw the sample. In both areas i.e. control and study area, every fifth house, starting from one was selected for the study. Utilization of the healthcare services and the level of awareness about health and healthcare delivery system were used as indicators to evaluate the health status of the community. Utilization of immunization services (12-24 months old), vitamin-A prophylaxis, IFA prophylaxis (3-6 yrs), Growth monitoring (under five years of age), ante natal services, family planning services, and outpatient services were surveyed for the study purpose. One responsible person (preferably female) from each family was interviewed using an pre-tested open-ended questionnaire for assessing the awareness level of the family about health and health care delivery system and the response was graded on a five point scale. Information regarding families in the study group was obtained from the family folders in the urban health centre. All the selected houses in study group and control group were visited to confirm the information in the family folders in case of study area and to get the information on the pattern of family folders in case of control area. Various terms used were defined as mentioned below.

Family folder system is health information management system which has adopted family as a unit for provision of health services and maintenance of records.

Family folder is a file folder which contains information on environment, socio-demographic profile of the family and also a file for each individual member of the family.

Illiterate: Individuals who had never gone to school were taken as illiterates.

Socio-economic status: Socio-economic status was determined by applying modified Kuppuswamy scale₅.

Fully immunized child: Children of 12-24 months of age who had received one dose of BCG, three doses of DPT/Polio and one dose of measles vaccine

Partially vaccinated: Children who were missing any of the vaccine/dose as per their age

Vitamin A prophylaxis: A dose of vitamin A solution at six months interval till the age of three years.

Growth Monitoring: Weight for age was recorded and plotted on the growth chart for under five years of age

children and malnourishment classified accordingly.

Full antenatal care: At least three antenatal visits, 100 iron folic acid tablets and two doses of tetanus toxoid vaccine

All the information thus collected was compiled, analysed and evaluated. The findings of the study group were compared with the findings from the control group to evaluate the effect of Family Folder System as a tool of Health Management Information System on the health status of the community. Rates, proportions and chi-square were the statistical methods used for analysis of the data. Valid conclusions were drawn.

OBSERVATIONS

The present study is a comparative study carried out at an urban field practice area of a medical college. The area under study was a part of total area served by the Urban Health Centre, which was serving a total population of 4022 in 802 houses. Urban Health Centre has been providing comprehensive healthcare services in the area since past nine years. Family folder system has been introduced in about half of the area (427 houses) served by the Urban Health Centre, since May 2006 and for rest of the area (375 houses) there was no family folder system. Sample size was 85 houses for study group and 75 houses for control group. Table 1 shows the comparison of socio-demographic factors of the study group and control group which may have an impact on the utilization of health services. Table 1 shows that in the study group out of total 85 families majority 46(54.1%) were Hindus, followed by Muslims 23(27.1%) and Christians 13(15.3%). Remaining three (3.5%) families were having faith in other religions. In the control group out of total 75 families majority 35(46.7%) were Hindus followed by Muslims 21(28%) and Christians 17(22.7%) and rest of the families were having faith in other religions. Sex ratio of 936.6 females per 1000 males in the study group was comparable with that of control group i.e. 927.5 females per 1000 males. Age composition of the two groups was also similar. In the study group 2.8 %, 11.3 %, 28.5 %, 29.4 %, 23.8 %, and 4.2 % of the population belonged to the age groups 0-1, 1-5, 5-15, 15-45, 45- 65 and > 65 years of age respectively. Similarly 2.7 %, 11.3 %, 31.5 %, 30.1 %, 20.9 % and 3.5 % of the population in the control group belonged to the age groups 0-1, 1-5, 5-15, 15-45, 45- 65 and > 65 years of age respectively. Literacy rate among the study group was 62.6 per cent, and in the control group it was observed to be 61.1 per cent. According to the Kuppuswamy scale majority 39(45.9 %) of the families in the study group

belonged to middle class followed by upper middle 23(27.0 %), lower middle 14(16.5 %), upper class 6(7.1 %) and lower class 3(3.5 %). Families in the control group also showed similar distribution. Majority 32(42.7 %) of them belonged to middle class followed by upper middle class 22(29.3 %), lower middle 13(17.3 %), upper class 5(6.7 %) and lower class 3(4.0 %). Thus all socio-demographic factors of the study group and control group which may have had an impact on the utilization of health services were comparable in all respects except the factor under study that is family folder system.

Figure 1

Table 1: Comparison of socio-demographic profile of the population in the study group and control group

Socio-demographic attributes		Study group	Control group
Religion	Hindu	46(54.1)	35(46.7)
	Muslim	23(27.1)	21(28.0)
	Christian	13(15.3)	17(22.7)
	Others	03(3.5)	02(2.7)
	Total	85(100)	75(100)
Population	Male	221(51.6)	193(51.9)
	Female	207(48.4)	179(48.1)
	Total	428(100)	372(100)
Age distribution	0-1	12(2.8)	10(2.7)
	1-5	48(11.3)	42(11.3)
	5-15	122(28.5)	117(31.5)
	15-45	126(29.4)	112(30.1)
	45-65	102(23.8)	78(20.9)
	>65	18(4.2)	13(3.5)
	Total	428(100)	372(100)
Literacy rate	Male	66.9	65.7
	Female	58.2	57.6
	Total	62.6	61.1
Socio-economic status	Upper	6(7.1)	5(6.7)
	Upper middle	23(27.0)	22(29.3)
	Middle	39(45.9)	32(42.7)
	Lower middle	14(16.5)	13(17.3)
	Lower	03(3.5)	3(4.0)
	Total	85(100)	75(100)

Table 2 shows that 11(84.6 %) the children in the age group 12- 24 months were fully immunized, 2(15.4 %) were partially and there was not even a single child who has not been immunized at all in the study group. This was in comparison to the control group where just 7(63.6 %) were fully immunized, 3(27.3 %) were partially immunized and

1(9.1 %) of the eligible children had not received even a single vaccine.

Vitamin A prophylaxis coverage was much better in the study group, majority 35 (60.4 %) of the children were getting it regularly as compared to just 13 (26.5 %) of the children in the control group. On the other side only 17 (29.3 %) of the children in the study group were getting vitamin A prophylaxis irregularly and 6 (10.3 %) had not received it at all, compared to 27 (55.1 %) getting it irregularly and 9 (18.4 %) not getting at all in the control group. In the study group 11 (32.4 %) children in the age group 3-6 years were receiving iron and folic acid tablets regularly and 17 (50.0 %) were getting the prophylaxis irregularly. Only 6 (17.6 %) of the children in the study group were not getting any iron folic acid prophylaxis whereas in control group number of such children was quite high, 24 (77.4 %).

Figure 2

Table 2: Utilization of health services by study group and control group

Health service	Utilization	Eligible persons utilizing the services		P value
		Study group	Control group	
Immunization status (12-24 months old)	Fully immunized	11(84.6)	7(63.6)	>0.05
	Partially immunized	2(15.4)	3(27.3)	
	Not immunized	Nil	1(9.1)	
	Total eligible	13(100)	11(100)	
Vitamin-A prophylaxis	Regular	35(60.4)	13(26.5)	<0.005
	Irregular	17(29.3)	27(55.1)	
	Not taken	6(10.3)	9(18.4)	
	Total	58(100)	49(100)	
IFA prophylaxis (3-6 yrs)	Regular	11(32.4)	Nil	<0.001
	Irregular	17(50.0)	7(22.6)	
	Not given	6(17.6)	24(77.4)	
	Total eligible	34(100)	31(100)	
Growth monitoring	Regular	41(68.3)	Nil	<0.001
	Irregular	19(31.7)	23(44.2)	
	Not monitored	Nil	29(75.8)	
	Total	60(100)	52(100)	
Ante natal services	Full ANC	7(87.5)	2(28.6)	<0.001
	Partial ANC	1(12.5)	4(57.1)	
	No ANC	Nil	1(14.3)	
	Total	8(100)	7(100)	
Family Planning	CPR	68.2	48.1	<0.001
Utilisation of OPD services	Male	162(44.4)	53(36.1)	
	Female	203(55.6)	94(63.9)	
	Total	365(100)	147(100)	

No child in the control group was getting iron and folic acid tablets regularly and the number of the children getting it irregularly was also quite low, 7 (22.6 %).

In the study group 41 (68.3 %) of the children were utilizing the growth monitoring services regularly whereas in the control group no child was utilizing these services regularly. There was not even a single child in the study group who has not utilized these services but in the control group majority 29 (75.8 %) of the children had not utilized these services. However 19 (31.7 %) and 23 (44.2 %) of the children in the study group and control group respectively, were utilizing these services irregularly

Ante-natal services were also better utilized by the pregnant women in the study group. Seven (87.5%) out of eight eligible pregnant women in the study group has got full ante-natal care. They had a minimum of three antenatal check-up, 100 iron and folic acid tablets and two doses of tetanus toxoid vaccine. But only two (28.6 %) out of the 7 pregnant women in the control group had full ante-natal care. Utilization of the family planning services by the study group population was also much better than by the control group. Couple protection rate was observed to be 68.2 % amongst the study group and 48.1 % amongst the control group.

The over all utilization of the out patient department services in terms of number of visits to the facility was also seen to be better in the study area. The study group population paid a total of 365 visits to the facility whereas the control group population made only a total of 147 visits to the facility. In both the group females made more visits 203 (55.6 %) in study group and 94 (63.9 %) in control group than the males 62 (44.4 %) in the study group and 53 (36.1 %) in the control group.

Figure 3

Table 3: Awareness regarding health and health services among study and control groups

Level of awareness	Study group	Control group
Excellent	07(8.2)	Nil
Very good	21(24.7)	02(2.7)
Good	42(49.4)	17(22.7)
Fair	12(14.2)	21(28.0)
Poor	03(3.5)	35(46.6)
Total no. of families	85(100)	75(100)

P value <0.001

Table 3 shows a statistically significant (p value < 0.001) difference in the level of awareness among the two

communities. Majority 42(49.4 %) of the families in the study group has good level of awareness about health and health care delivery system followed by 21 (24.7 %) families with very good, 12 (14.2 %) with fair, 7 (8.2 %) with excellent and only 3 (3.5 %) of the families with poor level of awareness. But majority 35 (46.6 %) of the 75 families in the control group has poor level of awareness about the health and health care delivery system followed by 21 (28.0 %) of the families with fair, 17 (22.7 %) with good and 2 (2.7 %) of the families having very good level of awareness. None of the families in the control group was having excellent level of awareness about health and health care delivery system.

DISCUSSION

Health information is an integral part of the national health system. Unfortunately, it is still very difficult to get the information at the community level, where it matters most. As reported elsewhere the health workers are over burdened with 13 different registers to generate data and to report information to higher levels. The most common use of various registers/records is enumeration and tracking of eligible clients for providing care and ensuring continuity and follow-up of services such as immunization, Vitamin A prophylaxis and treatment of childhood illnesses (ARI and diarrhoeal diseases), maternal care (antenatal, natal and post-natal services) and contraception, treatment and prophylaxis for anaemia in women and children, treatment and control of diseases like tuberculosis, malaria, leprosy, blindness and malnutrition etc.,. Services provided are first recorded in the home visit diary and subsequently transcribed to relevant registers, which is quite cumbersome exercise, as it happens to be labour intensive activity, consequently many columns under the services registers were incomplete or left blank. Inevitably the multiple registers and records consumed substantial time of the workers and the capacity of the workers was limited to accomplish enormous task. The enumeration and registration of clients tends to be incomplete and falls short of expected level. Full coverage is not ensured. Further, the workers seem to perceive that the collection of information is an end in itself. Despite the evidence that much of the information tends to be irrelevant, of poor quality, redundant, therefore, nonetheless some useful data is available which is seldom used by health teams at sub centre level for assessing community health needs, segmentation of clients, prioritization of clients for services, preparation of efficient work schedule for coverage of clients, tracking the clients for continuity of services. The monthly performance reports are invariably inflated and the

managers/ supervisors never used these records/ information as a management tool for monitoring and evaluation of performance of workers, to improve the functions of subcentre team or to build confidence of community. As information is a basic tool of management and a key input for the progress of any society it is urgently required to develop an information system which can fill the gap. It is being increasingly recognised that since the family is the unit of living it should also be the unit of health/illness. The family has been variously treated as an independent, dependent and intervening variable, as a participating, predisposing and contributory factor in the etiology, care and treatment of both physical and mental illness, and also as a basic unit of interaction and transaction of health care. Family Folder System is an effort towards the development of a family oriented approach to the solving of health problems and to the organization of health care services. The present study has shown that there is a visible difference in the health status of two similar communities with the family folder system being the only variable between them. We can conclude that if implemented sincerely the family folder

system can prove to be a wonderful Health Management Information System tool.

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