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International Journal of Current Research
Vol. 6, Issue, 09, pp.8504-8507, September, 2014

INTERNATIONAL JOURNAL OF CURRENT RESEARCH

ISSN: 0975-833X

RESEARCH ARTICLE

ROLE MODEL TO ESTABLISH COMPREHENSIVE HEALTH CARE IN PRIMARY HEALTH CENTRE AREA WITH SPECIAL REFERENCE TO MATERNAL AND CHILD HEALTH

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ARTICLE INFO

Article History:
Received 09th June, 2014
Received in revised form
16th July, 2014
Accepted 22nd August, 2014
Published online 18th September, 2014

Key words:

Community health volunteer,
Primary health care,
Maternal and Child health.

ABSTRACT

Background: Primary health care is the key to achieving Health For All at national and international level.
Objectives: The present study was to find out the effectiveness of community participation through community health volunteers and village leaders to improve the quality of maternal and child health services and thus reduce the maternal and infant mortality and morbidity.
Materials and Methods: A cohort study was conducted over a period of two years from December 2009 to November 2011. The target group consists of 32,000 population in 33 villages in the field practice area of Vydehi Institute of Medical Sciences and Research Centre, Bangalore. A total of 30 community health volunteers 1 per 1000 population were trained to carry out health services at village level. Statistical analysis was carried out based on percentages and proportions.
Results: There was 100% achievement of the indicators pertaining to infant mortality rate, maternal mortality rate, antenatal mothers receiving at least five health checkups, iron and folic acid tablets and tetanus toxoid immunization, institutional delivery and infant immunization. Awareness of HIV/AIDS was 88%. Couple protection rate went up to 96.87% in the first year but decreased to 69.32% in the second year of the study. The percentage of population motivated by the community health volunteers who availed of services at primary health centre or Vydehi Institute of Medical Sciences and Research Centre, Bangalore also rose to 60.2% and 79.4% in the first and second years of the study respectively.
Conclusion: Community participation through community health volunteers at village level helps to achieve maternal and child health targets. Capacity building of primary health centre personnel improves quality of services. Management information system of the target groups in the primary health centre area enables in monitoring and evaluation of the health services.

INTRODUCTION

India has a population of over 1.21 billion making it the second largest populated country in the world. In Karnataka over 6.11 crore population are present, out of which 61.43 % live in rural area (http://www.censusindia.gov.in/accessed on 10-4-2014). The World Health Organisation (WHO) has defined primary health care as essential care at the nucleus of the health care system. It is the first level of contact of individuals, the family and the community with the national care system bringing health care as close as possible to where people live and constitutes the first element of a continuing health care process (mohfw.nic.in/NRHM/Documents/IPHS_for_PHC.pdf/accessed on 1-4-2014). The overall objective of Indian public health standards for Primary Health Centre is to provide health care that is quality oriented and sensitive to the needs of the community (World Health Organization 1994). These standards would help monitor and improve the functioning of the Primary Health Centres. The aim of the study was to increase awareness on healthy behavioural patterns and thus utilisation of health services resulting in reduction in morbidity and mortality rates in mothers and children.

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Goals

The broad goals of the study were as follows:

1) To substantially increase the percentage of safe and institutional deliveries by creating awareness for demand and accepting services for antenatal care, intra natal care and postnatal care in the area
2) To cover a maximum number of children under Universal Immunization Programme
3) To improve the nutritional status of mothers and children by availing Supplementary feeding programmes and through change in their food habits and hygiene

4) To reduce morbidity and mortality by decreasing vector borne diseases e.g. Malaria, Filaria, Dengue and Japanese encephalitis
5) To induce healthy habits and to reduce the threat of lifestyle diseases e.g alcoholism and tobacco use.

Objectives

1) Reduction in infant and maternal mortality rate in conformity with national goals
2) To strengthen and enhance the quality and quantity of the maternal and child health programme
3) To expand and provide integrated curative, diagnostic, preventive and referral services within the reach of the population in a cost effective manner
4) To take up training programme to different categories of personnel to enhance their skills in order to render better quality services
5) The main thrust was on community participation involving Community Health Volunteers(CHVs),local leaders and local practitioners
6) To plan and organize Information, Education and Communication activities in the area of Maternal and Child Health, family planning, nutrition, Respiratory Tract Infections and Sexually Transmitted Diseases and HIV/AIDS
7) To improve the existing management, information and evaluation systems with regard to morbidity, mortality and fertility statistics for better planning and decision making.

Strategies

This study used the following strategies to achieve the above objectives:

1) Advocacy on the above area
   a. through local village Panchayat, Zilla Parishad and Health Committee
   b. through Community Health Volunteers(CHVs)
   c. local liason with health infrastructure, school teachers, mahila mandals etc., village leaders and elders to make it a peoples' programme.
2) To augment the quality and availability of existing family welfare services
3) To strengthen the existing infrastructure through CHVs and village dais
4) To improve the antenatal and postnatal care, family planning services and provide primary health care through domiciliary visits by CHVs
5) To strengthen the management information system by developing a data base of all families for monitoring and effective management
6) To develop and deliver information education and communication packages giving prevention and care messages to all sectors of population and thus contribute to positive behaviour changes
7) To establish linkage with other national health programmes including provision of protected water and maintaining sanitation

MATERIALS AND METHODS

The present study was conducted over a period of 2 years from December 2009 to November 2011.The total population of the study was 32000 consisting of 33 villages and Sarjapura headquarters being the catchment area of Sarjapura primary health centre, the rural health training centre of Vydehi Institute of Medical Sciences and Research Centre. The study was conducted through 4 clinics situated in the sub-centres of Sarjapura, Handenahalli, Kuthaganahalli and Mugalur. The staff of the rural health training centre namely 2 medical officers and other paramedical staff such as medico social workers, health educators, female health workers, public health nurse, lab technicians and also the local dais and anganwadi workers were trained to improve the quality of care rendered through the band of community heath volunteers appointed to work in these villages. The services of the 33 anganwadi centres were augmented through technical inputs and health checkups with the help of interns and nurse trainees from Vydehi Institute of Medical Sciences and Research Centre. A band of CHVs was created for the population of 32000, one per 1000 population (200 families) in the neighbourhood.

There were a total of 30 CHVs who were selected in consultation with the sarpanch and endorsed by the gramsabha. The criteria for the selection of Community Health Volunteers was that they should be from the same village with a minimum of seventh standard of schooling, preferably married women who had faith in family planning methods. They were given 6 weeks intensive training and paid an honorarium of Rs.1000 per month. They worked as link persons between the community and the primary health centre. The local health staff, anganwadi workers and female health workers were also inducted into the study on incentive basis. The CHVs visited each house in their alloted villages and collected the demographic, socio economic data, health status and utilisation of health care services of the family members. The CHVs visited 8 houses each day and educated and motivated the family about sanitation, hygiene and promotive care. They rendered first aid and attended to minor ailments and were given guidance as to where they should refer the cases.

The CHVs defined the health needs of the family members and guided them to seek help and access services from the primary health centre. Whenever an individual became sick or utilised the health care facility the data was collected and updated in the system on a daily basis. The other parameters were updated on a weekly basis. The CHVs were equipped with a first aid box including oral rehydration salt packets. They visited the primary health centre for refresher course and accountability at the end of each month. Every 10 CHVs were supervised by Medical Officers of PHC and technical officers who provided ambulatory services to the villagers at their door step. All the supervisors were managed by a professor from the Department of Community Medicine. The facilities at the PHC and four subcentres were strengthened. Specialists namely Obstetricians, Pediatricians, Anaesthetists, Surgeons were made available to provide secondary care if required.

Major activities of the Community Health Volunteers:

a. Survey of the entire villages to obtain the demographic and socio economic particulars to facilitate in developing of the data base

b. To immunize all the children in the project area as per schedule
c. To facilitate prompt antenatal care, house listing all women in reproductive age group was done and early registration of pregnancy. The main emphasis on care was on recording of blood pressure, urine examination, haemoglobin estimation and weight recording. Screening for STD, HIV & blood grouping was also conducted, food supplementation was given through Anganwadis and 100% immunization of all pregnant women with tetanus toxoid was ensured
d. To maintain eligible couple register to facilitate the implementation of family welfare programme
e. To give health education on adequate nutrition using locally available food, value of breast feeding, immunization of newborn, care of the newborn, and prevention of death due to diarrhoea and acute respiratory tract infections.
f. To augment natal care they encouraged women to undergo delivery in the institution namely the Rural Health Training Centre or at Vydehi Institute of Medical Sciences and Research Centre

Postnatal and infant care was augmented by specialists at Rural Health Training Centre and in the village clinics. The study catered to health and medical care needs in terms of primary health care through the band of CHVs, female health workers, interns and nurse trainees located in the various villages through Health clinics in the sub centres. Secondary health care if needed was provided by Vydehi Institute of Medical Sciences and Research Centre. This was expected to facilitate good community participation and co-operation in implementation of the national programmes in the villages.

Other supportive activities in the project area were

1. Eye camps to facilitate in blindness eradication by cataract surgery and provision of glasses for school children and adults with refractive errors
2. Dental care in schools in the villages with the support from Vydehi Institute of Dental Sciences
3. Early cancer detection with the support from the department of Oncology and Obstetrics of Vydehi Institute of Medical Sciences and Research Centre.

RESULTS

The results of the study are depicted in the following table. It can be seen that there were no maternal deaths during the two years period from 2009 to 2011. Though there was 1 infant death in 2010, the target for infant mortality rate of 30/1000 live births was achieved. In 2010 the couple protection rate was 96.87 % and in 2011 it was 69.32%. This present study shows that 100% of the children in the primary health centre area had received immunization as per the National Immunization Programme. During ante natal period 100% of mothers received at least 5 antenatal checkups and iron and folic acid tablets. Institutional deliveries were also 100%. The couple protection rate in the first year of the study was 96.8% of the target whereas in the second year it was 69.32%. Awareness on HIV/AIDS was 85.66% and 88.85% in 2010 and 2011 respectively.

DISCUSSION

Millenium Development Goal (MDG)-4 called for achieving a two- third reduction in the mortality of children aged less than 5 years between 1990 and 2015. If this MDG 4 is to be reached annual under five deaths must be reduced to fewer than 5 million by 2015 (Infant and child mortality in India 2012) Primary Health Centre is the first contact point between village communities and the doctor. The activities of PHC involve curative, preventive, promotive and family welfare services (Majumder and Upadhyay 2004). Primary health care should use an integrated approach of preventive, promotive, curative and rehabilitative services for the individual, family and community (WHO, 1978). Primary health care is based on people, rather than on a predetermined system. It emphasizes social control over health service development, namely problem identification, programme formulation, programme implementation and evaluation (Primary health centre, Selective or Comprehensive? 1984). The present study showed that there was 1 infant death due to congenital heart disease from January to December 2010. Infant mortality rate was 3.39/1000 live births which was less than the target of 30/1000 live births, therefore there was 100% achievement in this aspect. IMR in Karnataka is 45 and in India is 53 according (SRS 2008). In the study by Shobha and Ravi Arole in Jamkhed, infant mortality had fallen in the targeted area from 176 per 1,000 to 23 per 1,000 live births in comprehensive rural health care project (http://www.dasra.org/pdf/Primary_Health/Comprehensive_Rural_Healthcare_Project.pdf). In our project we had 100% achievement in reducing infant mortality, better than the national average of 53 per thousand live births.
In this study 85% was the target for immunization of infants in 2010 and there was 100% achievement in this aspect. There

Targets and Achievements

Item	Baseline data	Target 2010	Achievement 2010 (%)	Target 2011	Achievement 2011 (%)
MMR	300/lakh	200/lakh	100	40/lakh	100
IMR	47/1000	30/1000	100	10/1000	100
Couple Protection Rate	53%	60	96.87	80	69.32
Low Birth Weight	30%	25	100	20	100
Infants Reaching 1st birthday fully immunized	56%	85	100.00	100	99.97
Children Road to Health Chart maintained	50%	75	81.31	100	96.69
Pregnant with 5 ANCs	20%	60	100.00	100	99.99
Pregnant with anemia receiving IFA tabs	80%	100	100.00	100	100
Institutional Delivery	34%	50	100.00	100	99.91
Delivery conducted by Trained personnel	43%	80	100.00	100	100
Awareness of HIV/AIDS	60%	100	85.66	100	88.85
% population reached who avail of facilities at PHC	30%	45	60.15	100	79.43

was also 100% achievement of immunization in 2011. This was much better than the immunization reported under National Family Health Survey 3 (National Family Health Survey (NFHS-3) 2005). As depicted in the table there were no maternal deaths in 2010 and 2011. The target MMR for 2010 was 200 and for 2011 was 40 per lakh of live births. As the MMR in Sarjapura PHC area was nil therefore achievement was 100%. Similarly the project in Jamkhed, Community Rural Healthcare Project brought down MMR to 75 (Arole 2014) better than the national average of 212 per 100,000 live births (Family welfare statistics in India, 2011). This needs to be kept up in future years also. The low MMR can be attributed to the fact that 99.9% of the antenatal mothers who were motivated by the Community Health Volunteers (CHVs) for at least 5 antenatal check-ups had availed of the services at the Sarjapura PHC. The target for at least 5 ANC checkups was 60% in 2010 and 100% in 2011. Therefore the achievement was 100% in this study which was better than the Karnataka state average of 79.9%. In this study 100% pregnant women received IFA tablets which was better than the Karnataka state average of 74.3% (Family welfare statistics in India, 2011).

The target for Couple Protection Rate was 60% in 2010 and achievement was 96.87% However, the achievement in 2011 was 69.32% as the target was higher, 80%, and there were many new eligible couples who were not keen for spacing methods. Even then this was higher than the national average of 40.4% (Family welfare statistics in India, 2011). In this study we had achieved 100 % institutional deliveries when compared with the national average of 38.3% (Family welfare statistics in India, 2011).

Conclusion

Primary health care services can be improved utilizing community health volunteers at village level. Capacity building of the team of health care professionals at primary health centre level helps to improve the quality of services and thus decreases the morbidity and mortality in rural areas. A good management information system enables to monitor and evaluate maternal and child health services.

Acknowledgement

We are highly thankful to Karnataka Health System Development and Reform Project for funding this study. We are grateful to Vydehi Institute of Medical Sciences and Research Centre for providing the facilities for the study.

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