

ABSTRACT

Introduction:

Immunization is regarded as a high priority intervention as it averted number of communicable diseases. At present all countries have national immunization programmes as it is the single most cost effective way to prevent deaths especially in children. High immunization coverage has caused a sharp drop in the incidence of vaccine preventable diseases during the past decade in Sri Lanka. Immunization has been an integrated component of maternal and child health programme even before the start of Expanded Programme on Immunization (EPI). With the rising cost of newly introduced vaccines EPI has faced new challenges to maintain the sustainability. One of the reasons to achieve the success is dedicated public health staff with excellent public health infrastructure. Public Health Midwife (PHM) is the first level of contact between the individual and the health system that is providing essential health care at door step.

Objective:

To describe knowledge and practices of Public Health Midwives on Expanded Programme on Immunization, service provision and estimate the related cost involved in infant immunization in Kalutara district

Methodology:

A descriptive cross sectional study was carried out in Kalutara district. In first component of the study to assess the knowledge and practices of Public Health Midwives on EPI and provision of services, a sample of 396 PHMM was selected and all PHMM were included to fulfill the sample size. In second component 4 MOH offices under Regional Director of Health Service (RDHS) division were included to estimate the cost incurred for EPI programme. Fifteen immunization clinics from urban and rural setting were selected by simple random method from the four MOHs as a representative sample to estimate direct and indirect cost in EPI programme and service provision in Kalutara RDHS. The response rate for the study population was 95.2%. A pre tested self-administered questionnaire and an observation check list were used in the study population and pre tested data extracted sheets were used to estimate direct and indirect cost incurred for EPI programme in the district.



Results:

All the participants were Sinhalese (100%). Most of the PHMM were qualified with G.C.E. Advanced Level examination (76.13%). A majority of them stated that they have received basic training on immunization (93.4%) and EPI programme (92.3%). Only a few of them had training on vaccine financing (33.2%). Majority of PHMM performed immunization at the time of data collection (97.1%). Out of all PHMM 77.2% had good knowledge on overall awareness of vaccine and cold chain management. PHMM with good knowledge on vaccine wastage as cost saving method was 90.7%. Eighteen participants (4.77%) were aware on cost of Pentavalent vaccine. Their knowledge on vaccine financing was poor. Only 30% were aware on vaccine financing. Vaccine financing knowledge was significantly associated with service duration of the PHM ($p=0.048$). PHMM with high knowledge on EPI programme was more (49%) with above 10 years of service duration. Their knowledge on vaccines was significantly associated with duration of service ($p=0.001$). The participants with training on EPI were more aware on vaccine wastage (94.8%) and participants knowledge on vaccine wastage was significantly associated with training on EPI ($p=0.039$). Majority of participants followed correct practice on service provision on infant immunization (96.8%). The practices on provision of services was not significantly associated with selected socio demographic factors like age, educational level and marital status ($p>0.05$). PHMM who had adequate knowledge on cost saving, correctly followed wastage minimizing of vaccines. Their knowledge on cost saving was statistically significant with practices on wastage ($p=0.002$).

The correct handling of vaccines, steps taken for excess vaccines remained after a clinic session, correct and timely filling of Child Health Development Records and correct record keeping were correctly done in all 15 clinic settings (100%).

The cost for a fully vaccinated child at the age of one year was Rs.1447.20. Out of total cost for a child, the cost for vaccines (90.6%) was higher than other costs.

Total annual cost for EPI for infant immunization in 15 clinic settings is Rs: 17749743.36

Conclusions:

The knowledge on vaccine financing of Public Health Midwife has to be improved. It will lead to provide their services more responsible and accountable way by minimizing all possible wastages on EPI programme. It will lower the total cost spend on EPI programme. Vaccine cost is the highest proportion among all other components

in EPI programme in the country. Total EPI programme cost was Rs: 17749743.36 for infant immunization for one year duration in 15 clinic settings. The cost for fully vaccinated infant was Rs: 1447.20

Key words: Vaccines, EPI programme, Wastage, Vaccine financing, cost saving