

A STUDY TO ASSESS THE IMMUNISATION COVERAGE OF CHILDREN FROM A GOVERNMENT MEDICAL COLLEGE IN CHENNAI

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ABSTRACT

BACKGROUND

Immunisation is the most cost effective public health interventions, which directly or indirectly prevents the mortality in under-fives. Complete vaccination of each child is the current need to reduce mortality and morbidity of under-fives in India. The study purpose is to determine the immunisation status of children as per national immunisation schedule from a Government Medical College in Chennai.

MATERIALS AND METHODS

This hospital-based descriptive, cross-sectional study was conducted from May 2016 to June 2016 in a Tertiary Teaching Hospital. All children attending the paediatric outpatient department satisfying the inclusion criteria were included in the study. Information regarding immunisation was taken from the primary care giver and available medical records. Variable factors like socioeconomic status, gender, literacy status of mother, awareness about the immunisation schedule were analysed. The data were entered and analysed using MS Excel. Frequencies and proportions were used to summarise the data. About sixty immunisation sessions held over two months were observed.

RESULTS

Out of 6367 children who had attended the outpatient department in 2 months, 5078 had come for immunisation. Most children were completely immunised, some partially and no child was unimmunised. The commonest reason for the delay in immunisation was admission of the babies in the Neonatal Intensive Care Unit (NICU) at birth and a prolonged stay in the NICU. Other reasons were the parents were not in the residence during the particular immunisation date. Regarding the education of the mother, children of mothers who had a higher secondary and graduate degree were better followed for regular immunisation when compared to illiterate mothers. The commonest mode of awareness about immunisation was from the doctors, nursing personnels and health workers. The limitation in further analysis was due to a very short period of the study and lack of proper documented records by the parents for the children.

CONCLUSION

Mother's education significantly influences the immunisation coverage among the under-fives. Literature survey has also shown that there is only limited studies similar to this in a tertiary care government hospital. Similar cluster group studies of various areas and other hospitals can give a better insight in the immunisation status of children and thus help in complete immunisation coverage of all under-five years children.

KEYWORDS

Immunisation, Children, Factors.

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BACKGROUND

In India, an estimated 26 millions of children are born every year. As per Census 2011, the share of children (0-6 years) accounts 13% of the total population in the country.¹ An estimated 12.7 lakh children die every year before completing 5 years of age. However, 81% of under-five child mortality takes place within one year of the birth which accounts nearly 10.5 lakh infant deaths, whereas 57% of under-five deaths take place within first one month of life accounting to 7.3 lakh neonatal deaths every year in the country.²

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Immunisation is recognised to be one the best strategies for ensuring child health.

Immunisation is one of the most cost effective public health interventions, which directly or indirectly prevents the bulk of mortality in under-fives. Complete vaccination of each and every child is the current need to reduce mortality and morbidity of under-five in India.

Immunisation is recognised to be one the best strategies for ensuring child health. A child from zero age is given various vaccines; many of the vaccines provide life-long protection from the killer diseases. The Government of India implements National Programme for protecting the children residing in the country against eight killer diseases, i.e. Tuberculosis, Polio, Diphtheria, Pertussis, Tetanus, Hepatitis B, Haemophilus influenza B and Measles. The vaccines are given to the children as per the immunisation schedule approved by the GOI.³

The immunisation coverage in most of the urban areas of the State is relatively lower.⁴ In fact, reliable data on the immunisation coverage of the urban areas is also not available

with the administration.^{5,6} It is in this context a study is proposed to assess the immunisation coverage and factors affecting the complete immunisation of a child in a tertiary care hospital.

Objectives

1. To assess the current level of routine immunisation coverage among the 0–5 year children attending the paediatric OPD in a medical college.
2. To assess the immunisation status of children identified in the study as unimmunised or completely/partially immunised.
3. To understand the socioeconomic factors contributing to immunisation failure.
4. To suggest strategies for improving the immunisation coverage.

Methodology

A hospital-based, prospective, cross-sectional study was carried out in May 2016 and June 2016 in the paediatric outpatient department, Kasturba Gandhi Hospital for Women and Children, Government Omandurar Medical College, Chennai. After taking permission from Institutional Ethics Committee, under-five children attending the paediatric outpatient department during the period of study were included. The children (1-5 years) was examined by the team comprising of doctor, nursing sister and interns. The primary respondent was the mother of the child and in case of her absence the father acted as the next respondent. Vaccination was done on all days of the week. Informed verbal consent was taken from the interviewed subjects. The accuracy and validity of the information was confirmed by immunisation card in possible situations and oral information. Details of the age of mother during delivery, educational and socioeconomic status of the couple, mode of delivery whether delivery was conducted in a Government Hospital or Private Hospital were the vaccines given at the appropriate time or delayed and if there was a delay the probable reasons were collected. Educational status of mother was classified as postgraduate, undergraduate, higher secondary, high school, any schooling and illiterate. Children were classified as fully immunised (Received all vaccine in proper doses and frequency as per universal immunisation program up to the age), partially immunised (Received some vaccine as per universal immunisation program, but not completely immunised). The information was collected on pre-designed proforma. The data collected were entered into and analysed using MS Excel. Frequencies and proportions were used to summarise the data. A total of sixty immunisation sessions held over two months were observed.

Inclusion Criteria

All children between 1 to 5 years attending the outpatient department (OPD) from areas in Chennai.

Exclusion Criteria

Children who were seriously ill and unwilling for immunisation were excluded from the study.

RESULTS AND DISCUSSION

Out of total 6367 children who had attended the outpatient department in the 2 months, 5078 had come for immunisation.

Most of the children were completely immunised. Some were partially immunised and no child was unimmunised. Male children constituted 51.6% of the study population and female children constituted 48.4%. Socioeconomic status was assessed using socioeconomic status scale of Kuppaswamy (Urban, 1976). Majority (64.75%) of the children belonged to lower socioeconomic status as is expected in a Government hospital.

The commonest reason for the delay in immunisation was admission of the babies in the Neonatal Intensive Care Unit (NICU) at birth and a prolonged stay in the NICU. Other reasons were the parents were not in the permanent resident during the particular immunisation date. Regarding the education of the mother, children of mothers who had a higher secondary and graduate degree were better followed for regular immunisation when compared to illiterate mothers. The commonest mode of awareness about immunisation was from the doctors, nursing personnel and health workers. The limitation in further analysis was done due to a very short period of the study and lack of proper documented records by the parents for the children. Literature survey has also shown that there is only limited studies similar to this in a tertiary care government hospitals. Similar cluster group studies of various areas and other hospital can give a better insight in the immunisation status of children and thus help in complete immunisation coverage of all under-five years children.^{7,8} The main aim at this stage should be to improve IEC activities, so as to increase community awareness about immunisation. Training and reorientation of health workers, supervision of the ongoing UIP along with timely feedback should be considered as the key component to further improve and sustain routine immunisation coverage in order to reach the unreached.

The aggregate data was analysed to understand the pattern of service provision in the tertiary care hospital. The sex distribution of the study population is presented in Figure 1.

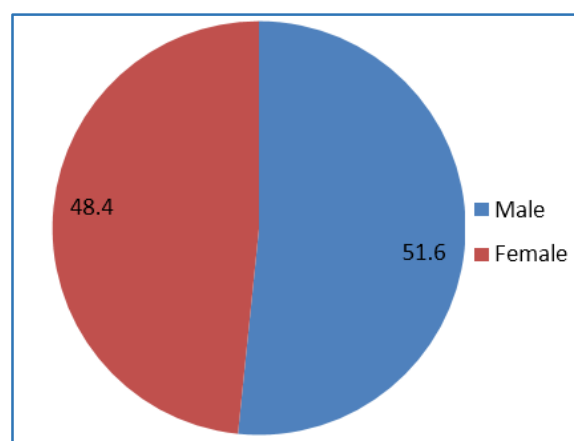


Figure 1. Pie Chart showing Sex Distribution of Study Population

Male children constituted 51.6% of the study population and female children constituted the rest (48.4). Socioeconomic status was assessed using socioeconomic status scale of Kuppaswamy (Urban, 1976). Majority (64.75%) of the children belonged to lower socioeconomic status as is expected in a Government Hospital (Figure 2).

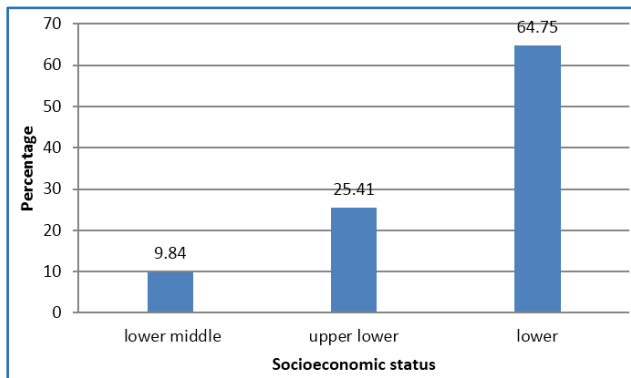


Figure 2. Bar Chart showing Socioeconomic Class of Study Population

Socioeconomic Class	Percentage
Lower Middle	9.8
Upper Lower	25
Lower	65

Table 1. Socioeconomic Class of Study Population

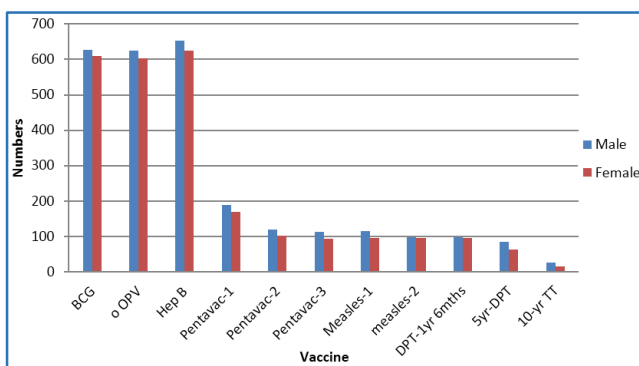


Figure 3. Immunisation Service Delivery May - June 2016

The sex wise data on the children immunised at the immunisation clinic during the study period are presented in Figure 3.

A total of 51 children had been admitted into the NICU during the study period. Thirty two children had been admitted in May 2016 and 19 children had been admitted in June 2016 (Figure 4).

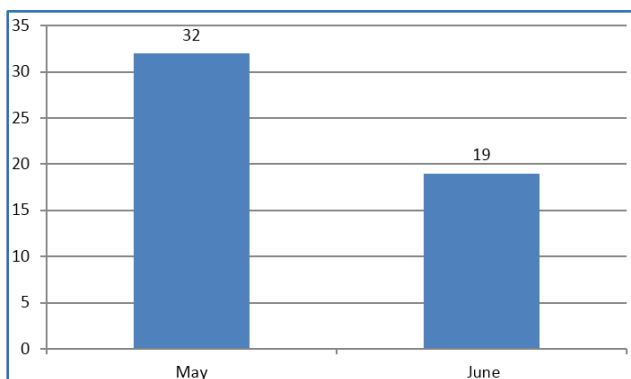


Figure 4. NICU Admissions May-June 2016-09-16

CONCLUSION

The evolution of vaccination efforts in India is far more complex and every single event merits a detailed analysis.

Though preventive efforts from diseases were practiced in India, the reluctance, opposition and slow acceptance of vaccination have been the characteristic of incomplete immunisation coverage. The findings from the study suggest that the immunisation status is improving, but there is still a room for improvement. The main aim to improve the immunisation coverage is to revitalise IEC activities, increase community awareness about immunisation. Lack of awareness or motivation through professionals, behaviour changes, communication interventions and operational challenges also keep the coverage inequitable, in spite of free of cost of immunisation in a government hospital.

Mother’s education significantly influences the immunisation coverage among the under-fives. Literature survey has also shown that there are only limited studies similar to this in a tertiary care government hospital. Similar cluster group studies of various areas and other hospitals can give a better insight in the immunisation status of children and thus help in complete and sustain immunisation coverage of all under-five years children.

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REFERENCES

1. National Family Health Survey. (NFHS-3) 2005–06 India. Volume I September. Available at URL: <https://dhsprogram.com/pubs/pdf/FRIND3/FRIND3-pdf> Accessed on 13th August, 2015;1-2.
2. Reproductive and child health, module for medical officer. National institute of health and family welfare, New Delhi 2000.
3. Study on the immunization status of the children of the Kottayam municipality. A pre-campaign action study to identify the current level of immunization with regard to the immunization of the 0-5 year old children in the Kottayam Municipality, NRHM 2010.
4. Yadav S, Mangal S, Padhiyar N, et al. Evaluation of immunization coverage in urban slums of Jamnagar city. Indian J Community Med 2006;31(4):300-1.
5. Yadav R, Singh P. Immunization status of chil 022 children and mother in the state of Madhya Pradesh. Indian J Community Med 2004;29:147-8.
6. Jha P, Laxminarayan R. Choosing health: an entitlement for all Indians, Toronto. Center for Global Health Research, University of Toronto 2009.
7. World Health Organization. United Nations Children’s Fund. Global immunization vision and strategy 2006-2015, Geneva, Switzerland, 2005. Available from http://www.who.int/vaccinesdocuments/docspdf05/givs_final_en.pdf.
8. Ray SK, Dasgupta S, Dobe M, et al. An evaluation of routine immunization coverage in some districts of West Bengal and Assam. Indian Journal of Public Health 2004;48(2): 82-7.