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## RESEARCH ARTICLE

### STUDY ON PERCEPTION AND ATTITUDE OF MOTHERS REGARDING PENTAVALENT VACCINE IN DIST BATHINDA, PUNJAB

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#### ABSTRACT

Immunization is one of the most important public health interventions and a cost effective strategy to control the infectious diseases especially in children. Advent of combination vaccines has facilitated incorporation of additional vaccines into immunization schedule. Pentavalent vaccine, against five killer diseases—diphtheria, pertussis, tetanus, hepatitis B and Hemophilus influenza type B (Hib), has been introduced in almost all GAVI eligible countries by 2011 and it was launched in Punjab on 7<sup>th</sup> Jan 2015.

**Material and Methods:** Focused group discussion was conducted on mothers in urban area covered by urban health centre, rural area covered by rural health center and Community Health centre, Nathana attached with community medicine department, Adesh medical college. Framed questions were introduced to the participants by the moderator in the form of discussion.

**Results:** Maximum number of mothers (88%) did not have any knowledge about the vaccine. Very less number of mothers had received information regarding pentavalent vaccine through Doctors, ANMs or Immunization cards (12%). Overhaul the health workers played a very poor role in imparting information regarding the vaccine.

**Conclusion:** This study shows that not much is being done to disseminate the information to the community and to motivate them which needs to be done to bring maximum children under the ambit of vaccination.

#### INTRODUCTION

Immunization is one of the most important public health interventions and a cost effective strategy to control the infectious diseases especially in children. Complete immunization coverage in India has increased from below 20% in the 1980s to nearly 61% at present, but still more than 1/3rd children remain un-immunized. Advent of combination vaccines has facilitated incorporation of additional vaccines into immunization schedule. Pentavalent vaccine, against five killer diseases—diphtheria, pertussis, tetanus, hepatitis B and Hemophilus influenza type B (Hib), has been introduced in almost all GAVI eligible countries by 2011 and it was launched in Punjab on 7<sup>th</sup> January 2015 (Bairwa, 2012). Haemophilus influenza type B (Hib) is an important cause of childhood meningitis and pneumonia in under five children particularly infants, resulting in at least 3 million cases of serious disease annually worldwide. Hib is leading Cause of bacterial childhood meningitis and important cause of severe pneumonia in India. Approximately, 19 % ( 410,000) of underfive deaths in India are due to pneumonia and India accounts for almost 40% of worldwide childhood pneumonia cases.

According to a study conducted in India, the case fatality rate of Hib meningitis was 11% ([http://www.rguhs.ac.in/cdc/onlinecdc/uploads/05\\_N070\\_25228.doc](http://www.rguhs.ac.in/cdc/onlinecdc/uploads/05_N070_25228.doc)). Each year there are more than 150 million of childhood pneumonia and nearly 2 million children under five lose their lives to an acute bout of pneumonia. About 200,000 child death are attributed to pneumonia each year occur in neonatal period. In India, pneumonia is responsible for about 400,000 deaths in children under five and substantial proportion of these pneumonia deaths are pneumococcal ([http://www.rguhs.ac.in/cdc/onlinecdc/uploads/05\\_N070\\_25228.doc](http://www.rguhs.ac.in/cdc/onlinecdc/uploads/05_N070_25228.doc)). A study was conducted to ascertain the uptake of newer vaccines in under five children through house to house survey. The result tells that, out of 1031 children of the urban population; more than 40% got immunized with newer vaccines. Maximum coverage was seen for hepatitis B (44.7%) for three doses followed by immunization against Hib (27.8%) (Puri, 2007). Hib vaccine is used over 120 countries would wide has been proven to be safe and effective. After the introduction of Hib conjugate vaccine in 1990 for routine administration to infant in United State the number of children with invasive Hib disease decreased drastically (Luis, 2008). In India a large proportion of children are at a higher risk due to increasing resistance to antibiotics as well as limited access to health care facilities. With this view

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IAP advocates routine immunization against Hib for who can afford the vaccine (Invasive Bacterial Infection Surveillance (IBIS), 2002). Introduction of any new vaccine into the community needs lot of efforts in disseminating the knowledge to the community and getting their cooperation for appropriate compliance (Selvaraj, 2015). Perception of the people and their attitude play an important role in acceptance of any new strategy. In this context, this study was planned to assess mother's perception and attitude towards pentavalent vaccine.

## Review of Literature

A study by Selvaraj *et al* among mothers of under five children states that In the post-introduction phase of pentavalent vaccine, totally 36.7% and 6% mothers were aware on pentavalent vaccine and diseases prevented by it, respectively (Selvaraj, 2015). A study conducted by American University of Armenia on Perceptions, Attitudes and Practices towards Immunization and Introduction of new vaccines in Armenia proved that Mothers (and their families) from the area, some hospital doctors who had access to evidence-based medicine, some teaching-university staff/scientists and policy-makers/experts engaged in the vaccination program were supportive of vaccination (Martirosyan, 2012). In a FGD conducted by the change project on mothers to find out attitude of mothers regarding pentavalent vaccine in the Dominican Republic, almost all mothers liked the idea of getting more protection with less effort ([http://www.manoffgroup.com/documents/sum\\_mozdr.pdf](http://www.manoffgroup.com/documents/sum_mozdr.pdf)). In another study attitude of parents regarding prevalent issues related childhood vaccination was studied. Of 6025 participants, 95% regarded their pediatrician as the most important source of information followed by leaflets 48%, health magazine 44.7% and the interest 38.7% (Heininger, 2006). A descriptive study was conducted to evaluate knowledge attitude, and behavior of 841 Italian mothers regarding the immunization. Over all 28.5% of mothers were aware about Hib vaccination. Respondent's attitude towards the utility of vaccination was favorable only for 22.5%. Study emphasized the need for health education programmes for promoting immunization of under five children (Angelillo, 1999). A Study was conducted to evaluate the status of mother's knowledge, attitude and practices (KAP) and its related factors and provide evidence for further effective implementation on childhood immunization. 591 mothers who were having children under 2 years of age were taken for the study. The results indicated that mother's knowledge, attitude and practices of childhood immunization were at a low level and is influenced by educational background, country economic level, mother's age, household size and ethnic groups (Wang, 2007).

## Aims and objectives

- To assess the perception, attitude and expectations of mothers regarding the pentavalent vaccine.
- To assess the role of health care providers in changing attitude of the mothers.
- To identify the barriers to getting immunized in routine services.

## MATERIAL AND METHODS

Focused group discussion was conducted on mothers in urban area covered by urban health centre, rural area covered by rural

health centre and Community Health centre Nathana attached with Community Medicine department, Adesh Medical College, District Bathinda, Punjab. Four groups were chosen from Bhucho Mandi, Nathana, and Bhalaiana. Each group comprised of 8-12 members, with duration of each discussion about 45 min to one hour. Framed questions were introduced to the participants by the moderator in the form of discussion. Informed verbal consent was obtained from all the participants.

**Unit of study:** Mothers of beneficiary children.

**Inclusion criteria:** Mothers of under-5 children who are going for pentavalent vaccination for the second time.

**Exclusion criteria:** Uncooperative mothers and those not consenting.

Data was analyzed both by manual method as well as with the help of MS Excel.

## RESULTS

A total of 43 mothers participated in focussed group discussion in 4 groups which were chosen from Bhucho Mandi, Nathana, and Bhalaiana. According to this study a very large number of mothers ( 88%) had no knowledge about pentavalent vaccine while just 5 mothers i.e. 12% had just heard about the name of this vaccine. The same can be seen in the pie diagram given below (Fig. 1).

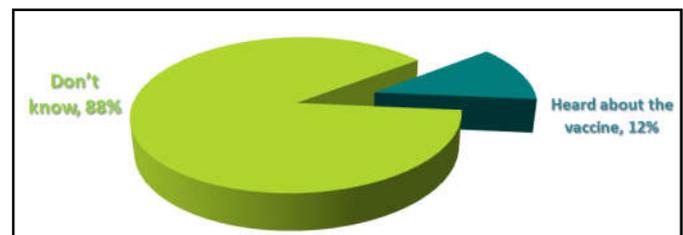


Figure 1. Knowledge regarding pentavalent vaccine

ANM and ASHA workers accounted for 7% (3out of 43 mothers), whereas immunization card and doctors present at PHC accounted for 2% each as the source of information regarding pentavalent vaccine (Fig 2).

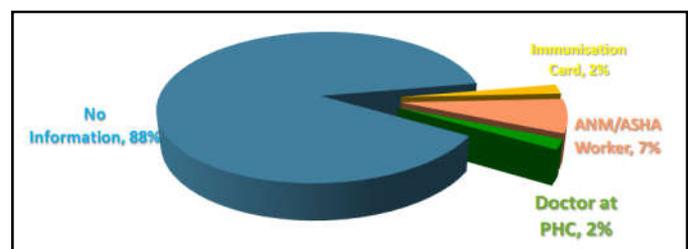
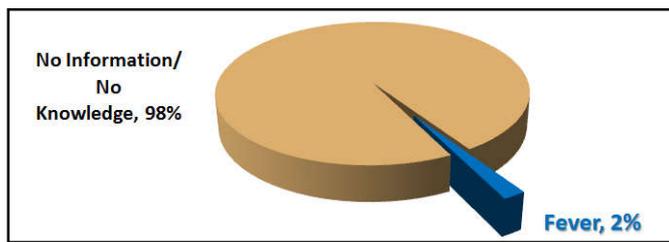


Figure 2. Source of information

Health workers played a very poor role in imparting information regarding the vaccine to all the mothers. Only 5 % of mothers were told that their child would be administered a new vaccine, without the mothers being told about the components or the side effects of the vaccine. Only 1 mother (2%) knew that fever could be one of the side effects of

pentavalent vaccine as is the case with most other vaccines. 98% of mothers had no knowledge whatsoever regarding the side effects of this vaccine (Fig 3).



**Figure 3. Side effects of vaccine**

When asked about the benefits of this vaccine after imparting the basic information by the investigators, only 7% (i.e. 3 mothers) felt that this vaccine would come in handy as only one prick or injection would be required for immunity against the five diseases provided by the vaccine. On the other hand 40 mothers did not comment anything regarding the vaccine even after being told about the same. Moreover 93% of mothers had a positive attitude regarding getting their child getting vaccinated with pentavalent vaccine whereas 3 mothers again did not want to comment anything regarding this. Just 33 mothers (77%) wanted to recommend others to get their child vaccinated before being provided with any information regarding this vaccine. There was no difficulty faced by any mother during the immunization sessions which are conducted every Wednesday and Saturday in all the PHCs where the study was conducted.

## DISCUSSION

Though the pentavalent vaccine, introduced in place of DPT and Hep B being given previously, is administered by the health workers in all the health centres of this area and mothers have got their children vaccinated, no other knowledge about the advantage of vaccine has been given by the health workers in majority of cases. However, after being told about the usefulness and ease of the newer combination vaccine, mothers had positive attitude about getting their children vaccinated and also for recommending to others. On inclusion of this vaccine in the National schedule, It was a part of government's policy to train health workers for community mobilization for achieving maximum coverage for the new vaccine and rest of the vaccines but this study shows that not much is being done to disseminate the information to the community and to motivate them which needs to be done to bring maximum children under the ambit of vaccination.

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