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An Effective Health Care Mission 'Immunization' under Supervision of IMA Serampore: A Study

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Abstract:

Immunization is a great drive taken worldwide and this is considered as a mandatory healthcare procedure to prevent diseases. Getting scheduled vaccination since childhood should be mandatory action to be protected morbidities and mortalities. In this study it is reported that more than 2 lakhs kids have received immunizations from this center since the immunization programmers' beginning. In this vaccination drive the study report from 2019-2022 evolves that MMR (Measles, Mumps and Rubella), PVC (Pneumococcal Conjugate Vaccine), TD (Tetanus and Diphtheria), Quad (Quadrivalent Influenza Vaccine), Polio, Hepatitis-A and Hepatitis-B vaccine are given to children under the secured supervision of health workers and doctors. This study work envisions to frame for inclusion of healthcare and immunization to the children and adults provided by Indian Medical Association (IMA), Serampore Branch in collaboration with Swasthya Bhabna Welfare Society.

Since then, the doctors who are a part of this association have worked tirelessly for the welfare of the community by providing services for child clinics, immunization clinics, health clinics for the elderly, and clinics for expectant women. Also, this facility has qualified medical professionals on duty, including physicians, nurses, and paramedics, to help mothers and kids and morbidity and mortality risk decreases among children. In addition to providing honest and effective services, they are also more watchful for unfavorable side effects including pain at the injected site, oedema, redness, fever, convulsion, and other severe responses following immunization. Yet according to a previous survey study, relatively negligible unpleasant responses were noticed throughout 40 years of immunizations done in this center, although no casualties have yet been reported there. Also, compared to other private sectors, this center offers children affordable immunizations. So, this report envisages the workings and processes undertaken by the organization to provide a robust immunization service to the people of various age groups especially to infants and young children.

Keywords: Immunization, Robust, Program, Health, Vaccination, Organization, Supervision



1. Introduction:

The purpose of this immunization drive is to prevent the morbidities and mortality by protecting from pathogens. Specially for children among 0-16 years of age measles vaccination was also done as it is a highly efficient live vaccine [Nilsson Lennart et al (2003)]¹. Awareness spreading among locality and entire community is likely important and the drive was aimed at increasing the vaccination coverage rate and to ensure the community's overall health and well-being. Another aspect of fulfilling the immunization agenda is to educate mothers and that was another objective of this drive to protect against communicable and non-communicable diseases of children [Itimi Kalamawei et al. (2012)]². A particular vaccine is designed for a specific antigen of a disease, but sometimes some specific vaccine can predispose that is to be effective for another disease like Influenza vaccine predisposition can be preventable for the morbidity of children's Otitis Media (OM) complications [Rodrigues M.C. Charlene (2020)]³. Broader aspect of acceptance polio and tuberculosis vaccinations are noticed among mothers for their children by avoiding all the rumors about vaccines. Sometimes minor side effects like swelling of injection site and mild fever are noticed but major things like anaphylactic shocks have not been reported yet. Expectant mothers also get antenatal vaccine as well as nutritional guidelines from our vaccination center based on their requirement [Dhaliwal K. Baldeep et al. (2021)]⁴. A complete vaccination of a child should be including one dose of BCG (Bacillus-Calmette-Guerin) vaccine for tuberculosis, three doses of Oral Polio Vaccine (OPV3), three doses of Diphtheria-Pertussis-Tetanus vaccine (DPT3), or recently introduced DPT-Hepatitis B-Haemophiles-Influenza type B vaccine and one dose of Measles vaccine. This is a challenge to complete all the vaccines among large number of children of our community but by monitoring, surveillance and care giving as well as letting the parents be aware by health workers this immunization center tries to overcome all the barriers [Pramanik Santanu et al. (2018)]⁵.

2. Review of literature:

According to Verma Ramesh et al. All doses of Hepatitis A and B vaccine should be given at childhood for the prevention of Hepatitis A and B virus even at adolescent age and these

¹ Nilsson Lennart et al. (2003). Allergic Disease at the Age of 7 Years After Pertussis Vaccination in Infancy. American Medical Association. VOL. 157.

² Itimi Kalamawei et al. (2012). Community participation and childhood immunization Coverage: A comparative study of rural and urban communities of Bayelsa State, south-south Nigeria. Nigerian Medical Journal. Vol. 53.

³ Rodrigues M.C. Charlene et al. (2020). Impact of Vaccines; Health, Economic and Social Perspectives. Frontiers in Microbiology. DOI: 10.3389/fmicb.2020.01526.

⁴ Dhaliwal K. Baldeep et al. (2021). Community perceptions of vaccination among influential stakeholders: qualitative research in rural India. BMC Public Health. <https://doi.org/10.1186/s12889-021-12188-4>

⁵ Pramanik Santanu et al. (2018). Impact evaluation of a community engagement intervention in improving childhood immunization coverage: a cluster randomized controlled trial in Assam, India. BMC Public Health. <https://doi.org/10.1186/s12889-018-5458-x>



vaccines can be effective for the reduction of virus-related liver disease and liver cancer also [Verma Ramesh et al. (2014)]⁶. Puri Pankaj et al. highlighted that almost 30% of children of 2-5 years, less than 5% adult and more than 90% newborn are reported as at-risk group of HBV infection. The inclusion of HBV vaccine can show almost 59% of protection with anti-HBs antibody against Hepatitis B virus for the age of 6 years child [Puri Pankaj et al. (2014)]⁷.

According to Zhao Hong et al. HEPLISAV-B, a newly launched Hepatitis B vaccine for greater than 18 years old people is launched as it is instructed as two doses at 1 month of interval instead of previous three doses for 6 months period of infant. HEPLISAV- B vaccine contains oligodeoxynucleotide with immunostimulatory CpG motifs which can stimulate B cells [Zhao Hong et al. (2020)]⁸. On the article of Spelke Mae Bridget et al. another one vaccine, i.e; meningococcal polysaccharide vaccine (MPSV4) is given during pregnancy period which is noticed to give a great output of Meningitis without hampering preterm birth, proper birth weight etc. [Spelke Mae Bridget et al. (2023)]⁹.

Kochhar Sonali et al said that Maternal immunization is too much needed for the prevention of morbidity and mortality of mothers and their offsprings. Pertussis and influenza vaccines are two essential maternal vaccinations which increase antibody level of mothers against these viruses and the antibody also get transferred to fetus through placenta [Kochhar Sonali et al. (2017)]¹⁰. Bridger A. Natalie et al. narrate that Chickenpox of varicella is one of the common diseases among children. Almost 50% children by the age of five and 90% of children by the age of 12 are reported having chickenpox so the universal one dose varicella (chickenpox) vaccination program has claimed through the Immunization Monitoring Program ACTIVE (IMPACT) a significant reduction of hospitalization of children due to chickenpox [Bridger A. Natalie et al. (2018)]¹¹.

⁶ Verma Ramesh et al. (2015). Adolescent vaccines: Need special focus in India. *Human Vaccines & Immunotherapeutics*. Volume 11 Issue 12. <http://dx.doi.org/10.4161/hv.29757>

⁷ Puri Pankaj et al. (2014). Tackling the Hepatitis B Disease Burden in India. *Journal of Clinical and Experimental Hepatology*. Vol. 4. <http://dx.doi.org/10.1016/j.jceh.2014.12.004>

⁸ Hong Zhao et al. (2020). Hepatitis B vaccine development and implementation. *HUMAN VACCINES & IMMUNOTHERAPEUTICS*. VOL. 16. <https://doi.org/10.1080/21645515.2020.1732166>

⁹ Spelke Mae Bridget et al. (2023). Vaccinations/Immunizations During Pregnancy. *Medscape*. <https://emedicine.medscape.com/article/2500098-overview?form=fpf#a5>

¹⁰ Kochhar Sonali et al. (2017). Immunization in pregnancy clinical research in low- and middle-income countries – Study design, regulatory and safety considerations. *ScienceDirect. Vaccine*. <http://dx.doi.org/10.1016/j.vaccine.2017.03.103>

¹¹ Bridger A. Natalie et al. (2018). School, child care and camp exclusion policies for chickenpox: A rational approach. *Canadian Paediatric Society*. doi: 10.1093/pch/pxy096



According to the report of Gupta Sunanda et al. exposure of children and adolescent age group to pet animals are more likely during their playtime so 35.3% of total human rabies cases are found within the age group of 14 years and less than that. Three or four doses of Rabies vaccine is preferred for this age group [Gupta Sunanda et al. (2022)]¹².

Singhal Chinar et al. reported that World Health Organization (WHO) suggested and approved malaria vaccine named RTS, S/AS01 (RTS,S) for the children of five months of age with four scheduled doses to eradicate the prevalence of severe malaria in India. [Singhal Chinar et al. (2022)]¹³. From the narration of Rajaiah Paramasivan et al. this is to be known that Japanese Encephalitis virus is transmitted to human by Culex vishnui subgroup of mosquitoes and almost 67900 cases are reported every year in Asia. Immunization program of Japanese Encephalitis (J.E) has already been started through Universal Immunization Program (UIP) and more vaccination coverage is very much required to prevent and control the spread of Japanese Encephalitis (J.E) [Rajaiah Paramasivan et al. (2019)]¹⁴.

According to Cheng Liqin et al. Human papilloma Virus Vaccination remains a gap in between rural and urban area and high-income group are able to have it than low-income countries. HPV vaccine can show its more efficacy against HPV related diseases prior to HPV exposure and that can protect almost 90% of targeted HPV related diseases. [Cheng Liqin et al. (2020)]¹⁵.

According to Krishnan R. et al. in Inactivated Poliovirus Vaccine (IPV) the amount of antigen, potentiality of doses, number of vaccine doses and immunological adjuvant are more proficient in antibody responses. IPV can show its satisfactory result in Indian infant after 7 weeks of age or 8 weeks of interval [Krishnan R. et al. (1983)]¹⁶. Bhaumik Soumyadeep et al. reported that newly launched pediatric rotavirus oral vaccine named ROTAVAC should be applied with three doses for infants on 6th, 10th, and 14th weeks of their birth. ROTAVAC is reported as an efficient vaccine to reduce diarrhea by 56% during the first year of life and continue guard for 2nd year of

¹² Gupta Sunanda et al. (2022). Adolescent Vaccination in India: Recommendation from the Indian Association for Adolescent Health. Indian Journal of Youth and Adolescent Health. Volume 9. DOI: <https://doi.org/10.24321/2349.2880.202211>

¹³ Singhal Chinar et al. (2022). Awareness of the Malaria Vaccine in India. Cureus. DOI: 10.7759/cureus.29210

¹⁴ Rajaiah Paramasivan et al. (2019). Japanese encephalitis virus in India: An update on virus genotypes. Indian Journal of Medical Research. DOI: 10.4103/ijmr.IJMR_2606_19

¹⁵ Cheng Liqin et al. (2020). Human Papillomavirus Vaccines: An Updated Review. Vaccines. doi:10.3390/vaccines8030391

¹⁶ KRISHNAN R. et al. (1983). Efficacy of inactivated poliovirus vaccine in India. Bulletin of the World Health Organization, 61(4): 689 - 692 (1983). <https://pubmed.ncbi.nlm.nih.gov/6605215/#:~:text=The%20seroconversion%20rates%20in%20infants,was%20found%20to%20be%20satisfactory.>



infant's life. [Bhaumik Soumyadeep et al. (2013)]¹⁷. Chauhan Singha Akashdeep et al suggested about three types of typhoid vaccines, i.e., typhoid conjugated vaccine (TCV), unconjugated Vi polysaccharide (ViPS) and live attenuated Ty21a vaccine licensed by WHO and later Tybbar-TCV vaccine was licensed with more than 80% efficacy that can protect children from typhoid fever more than five years as high titres of IgG anti - Vi antibody is more in Tyobar-TCV. [Chauhan Singha Akashdeep et al. (2021)]¹⁸.

According to Asensi Botet FI et al. to avoid the heckle of completion all doses of scheduled vaccines for a narrow time a combined vaccine DTWPHib vaccine is more adjuvant to increase four folds antibody titres for anti-pertactin, anti-Aggl2 and 3 antibodies. This conjugated vaccine is recommended for two, three- and 4-months infants for better immunity against Diptheria, Tetanus, Pertussis and Hemophilus influenza type B. [Asensi Botet FI et al. (2003)]¹⁹. Khatereh Anbari et al. said that though the role of vaccination saves almost 2.5 million of people each year according to World Health Organizations (WHO), among children some extent of side effect like high fever, mild local reactions, pain and swelling, loss of appetite are also seen after receiving vaccine [Khatereh Anbari et al. (2022)]²⁰. Berhane Yemane et al showed that Adverse Events Following Immunizations (AEFIs) reported a limited data of injection site abscess, fever, injection site oedema and hypersensitivity after yellow fever vaccination and BCG vaccination. Whereas two doses preservative free PCV- 10 vaccine and one dose of pentavalent vaccine (DTP-HiB-HepB) do not show any significant adverse effect on injection site of children. [Berhane Yemane et al. (2014)]²¹.

3. Research Gap:

From the beginning of this immunization program the doctors and healthcare providers who are a part of this association have been working dedicatedly with non-profit mindset for the welfare of the community by providing services for child clinics, maternal, child, adolescent, and adult

¹⁷ Bhaumik Soumyadeep et al. (2013). Rotavirus vaccine in India faces controversy. CMAJ. DOI:10.1503/cmaj.109-4543

¹⁸ Chauhan Singha Akashdeep et al. (2021). Cost effectiveness of typhoid vaccination in India. Vaccine. <https://doi.org/10.1016/j.vaccine.2021.06.003>

¹⁹ Asensi Botet FI et al. (2003). Waning protection following 5 doses of a 3-component diphtheria, tetanus, and acellular pertussis vaccine. Vaccine. <http://dx.doi.org/10.1016/j.vaccine.2017.05.008>

²⁰ Khatereh Anbari et al. (2022). Adverse Events Following Immunizations in Infants Under 1 Year of Age in Lorestan Province, Western Iran. Journal of Preventive Medicine & Public Health. <https://doi.org/10.3961/jpmph.22.540>

²¹ Berhane Yemane et al. (2014). Children Who Received PCV-10 Vaccine from a Two-Dose Vial without Preservative Are Not More Likely to Develop Injection Site Abscess Compared with Those Who Received Pentavalent (DPT-HepB-Hib) Vaccine: A Longitudinal Multi-Site Study. PLOS ONE. Volume 9. <https://journals.plos.org/plosone/article?id=10.1371/journal.pone.0097376>



immunization clinics. More than 2 lakh youngsters have received immunizations from this center since the beginning of this immunization program. Though effortless services have been provided to be immunized the entire community many people cannot receive vaccine due to the lack of concept about immunization and well health. Community based awareness program to timely getting vaccinated from children to adult is lack due to improper campaign, communication and door to door visit to let the people aware about immunization requirement.

4. Objective of the Immunization Drive:

An immunization drive is a public health initiative aimed at protecting individuals and communities from infectious diseases. The primary objectives of such a drive are-

- i) To increase the vaccination coverage of a population particularly among high-risk groups such as young children, pregnant women, and elderly people to give them disease protection.
- ii) Another objective of the immunization drive is to prevent outbreaks of vaccine-preventable diseases. These diseases can cause significant morbidity and mortality, particularly among vulnerable populations. This is the goal of the routine vaccination drive conducted by Indian Medical Association (IMA), Serampore Branch.
- iii) An immunization drive also has important economic benefits. By preventing outbreaks and reducing the incidence of disease. Immunization drives can reduce the burden on healthcare systems and reduce the need for costly treatments.
- iv) Finally, an immunization drive is an important tool for global health and development. By improving access to vaccines and increasing vaccination coverage, immunization drives can help to reduce the burden of disease in low- and middle-income countries and contribute to sustainable development. Some of the vaccines which are administered here regularly are MMR (Measles, Mumps and Rubella), Polio vaccine, Typhoid, PCV (Pneumococcal conjugate vaccine), TD (Tetanus-Diphtheria), Quad to name a few.

5. Methodology of the Vaccination Drive:

The methodology of a routine vaccination drive involves several key steps:

- **Assessment of vaccination coverage:** This involved collecting data on the current vaccination coverage of a population based on past data that was recorded from previous drives. This information is crucial in planning and implementing an effective immunization drive.
- **Development of a plan:** Based on the assessment, a plan is developed on how to go about immunization drive which includes encouraging local people and spreading the importance of immunization program to undertake and participate in the vaccination drive especially for



newborn, maternal and adolescents by posting on social media platforms like Facebook and YouTube to let the community known about the drive.

- **Scope for vaccination:** After examination of children's health by reputed doctors if they are fit or not for receiving vaccination the children are segregated category wise for different scheduled vaccines.
- **Monitoring and evaluation:** After the vaccines are administered, conceptual guidelines and are provided to the patients and parents (in case of child vaccination) about how to lead a healthy life, requirement of completion the entire doses, explain the effects of the vaccine administered, maintaining a record of all the vaccines administered. Monitoring children as well as adults during and after receiving vaccine for any unwanted adverse effects arise. Also, there is a thorough supervision for 15- 30 mins especially for child after vaccination if any adverse effects.
- **Sustainability and maintenance:** Once the immunization drive is complete, health officials ensure that routine vaccination is maintained and that individuals receive recommended booster doses. Post vaccination checkup is done after every scheduled immunization.

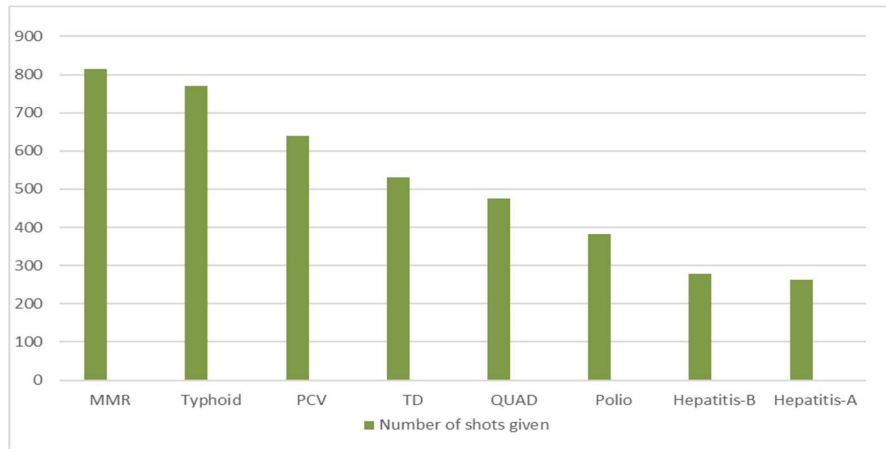
6. Collection of Vaccination Data:

All the data on Immunization within the year of 2019-2022 are collected and these are given into the below table:

6.1 Vaccination for the period of 2019-2020:

Table 1: Information related given vaccines within 2019-2020 and total no. of shots of each vaccine.

| Name of vaccines | Number of shots given |
|---------------------------------------|-----------------------|
| MMR (Measles, Mumps and Rubella) | 814 |
| Typhoid | 771 |
| PVC (Pneumococcal Conjugate Vaccine) | 639 |
| TD (Tetanus and Diphtheria) | 531 |
| Quad (Quadrivalent Influenza Vaccine) | 475 |
| Polio | 383 |
| Hepatitis-B | 278 |
| Hepatitis-A | 262 |

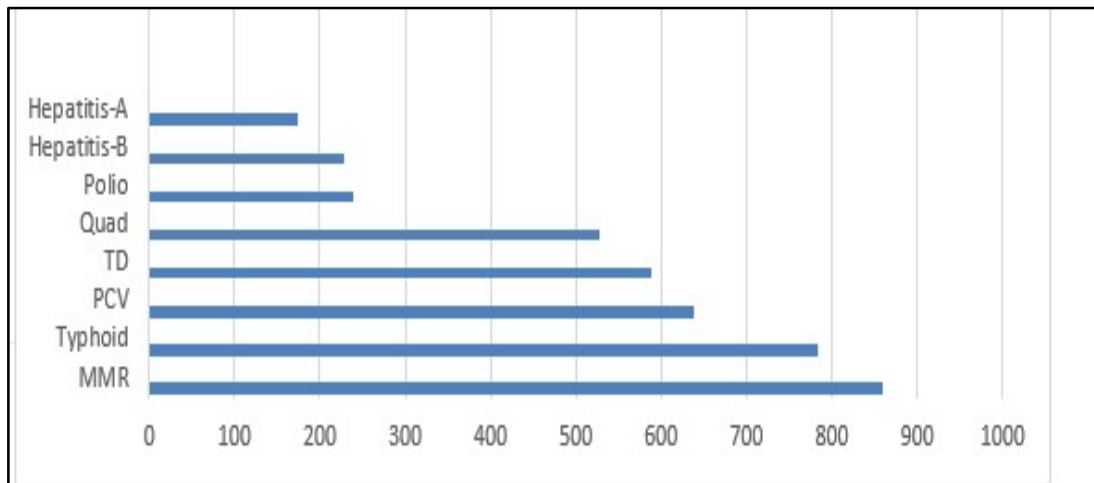


Graph-1: Relation between Vaccines and Number of Shots given.

6.2 Vaccination for the period of 2020-2021:

Table 2: Information related given vaccines within 2020-2021. and total no. of shots of each vaccine.

| Name of vaccines | Number of shots given |
|---------------------------------------|-----------------------|
| MMR (Measles, Mumps and Rubella) | 859 |
| Typhoid | 783 |
| PVC (Pneumococcal Conjugate Vaccine) | 638 |
| TD (Tetanus and Diphtheria) | 588 |
| Quad (Quadrivalent Influenza Vaccine) | 526 |
| Polio | 238 |
| Hepatitis-B | 228 |
| Hepatitis-A | 174 |



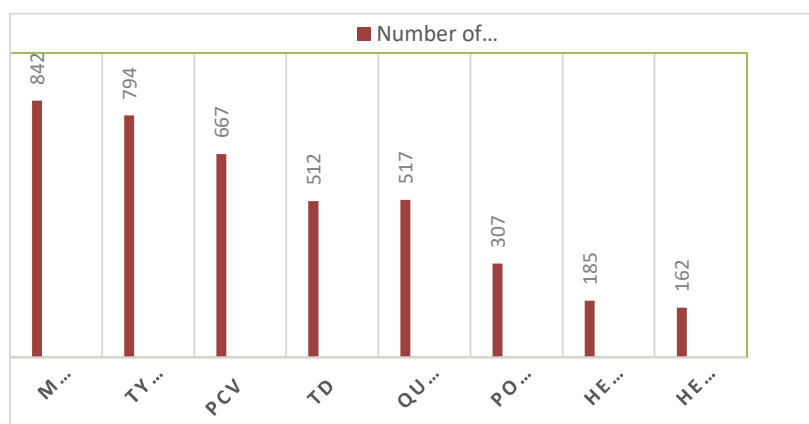
Graph-2: Relation between types of vaccine and number of shots given.



6.3 Vaccination for the period of 2021-2022:

Table 3: Information related given vaccines within 2021-2022 and total no. of shots of each vaccine.

| Name of vaccines | Number of shots given |
|---------------------------------------|-----------------------|
| MMR (Measles, Mumps and Rubella) | 842 |
| Typhoid | 794 |
| PVC (Pneumococcal Conjugate Vaccine) | 667 |
| TD | 512 |
| Quad (Quadrivalent Influenza Vaccine) | 517 |
| Polio | 307 |
| Hepatitis-B | 185 |
| Hepatitis-A | 162 |

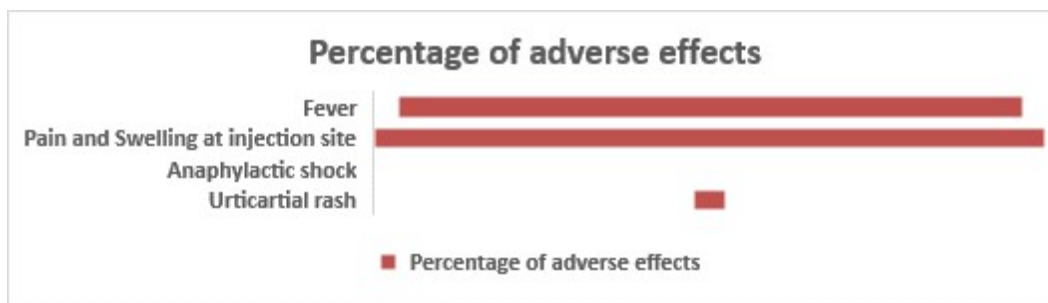


Graph-3: Relation between types of vaccine and number of shots given

6.4 Adverse effects after vaccination during 2019-2022:

Table 4: Information related percentage of adverse effects after vaccination

| Adverse effects after vaccination | Percentage of adverse effects |
|-------------------------------------|-------------------------------|
| Fever | 0.28% |
| Pain and swelling at injection site | 0.30% |
| Urticarial rash | 0.015% |
| Anaphylactic shock | 0.002% |



Graph 4: Relation between different of adverse effects (%) and vaccination



7. Results:

7.1. Result Revealed from the Study:

All the analyzed data from table 1 and graph 1 concludes that total number of MMR (Measles, Mumps and Rubella) vaccine shot is 814 which is highest between the year of 2019-2020, and second highest given shot is analyzed as Typhoid vaccine and total number of given Typhoid vaccine shot is 771. Between the year of 2020-2021, total number of MMR vaccine shot is found 859 which is seen highest in table 2 and graph 2 among all other types of vaccine such as Typhoid, PVC (Pneumococcal Conjugate Vaccine), TD (Tetanus and Diphtheria), Quad (Quadrivalent Influenza Vaccine), Polio, Hepatitis-A and Hepatitis-B vaccine and among these Hepatitis-A vaccination is found lowest in total number. Again, it is found the highest number of vaccine shots of MMR vaccine from table 3 and graph 3 between the year of 2021-2022 among all other vaccine shots given the same span and Hepatitis A is lowest i.e. total 162 number of shots.

From table no. 4 and graph 4 the reports on adverse effect after receiving vaccination is found from the year 2019 to 2022. The highest percentage of adverse effects is pain and swelling at injection site (0.28%) and lowest percentage of adverse effects is anaphylactic shock (0.002%) which are considered negligible. Percentage of fever is 0.28% and urticarial rash is 0.015% which are also noticed as adverse effects of immunization.

7.2. Interpretation of the Results:

- i) **Disease prevention:** This immunization drive wants to cover the whole community by giving required vaccine doses and always focus on to complete entire doses of vaccine for disease prevention. Immunization drives like these mentioned above are to protect infants from diseases such as measles, mumps, rubella, pertussis, and many others.
- ii) **Reduced infant mortality:** Vaccination program by Indian Medical Association can significantly reduce the risk of infant mortality from preventable diseases as the spontaneous program always focus on the more coverage of vaccination.
- iii) **Protection of vulnerable populations:** Infants may be particularly vulnerable to infectious diseases, and by vaccinating them. It can also protect those who cannot receive certain vaccines, such as people with weakened immune systems or allergies.
- iv) **Improved quality of life:** This immunization drives always wants to improve the quality of life for infants by preventing illness, hospitalization, and long-term complications from infectious diseases. This can also reduce the burden on families and healthcare systems. Long-term health benefits: Some vaccines, such as those for HPV and hepatitis B, can prevent infections that can lead to long-term health consequences, such as certain cancers and other liver diseases. Vaccinating infants early can help prevent these future health risks.



7.3. Findings:

From this study a clear scenario is demonstrated that Immunization program is held to build immunity specially herd immunity among newborn, children, maternal and adolescent. The program is organized to literate parents and all other people to protect them and their child from diseases. From the collected data with some important vaccines like MMR, Typhoid, PVC vaccine, Quad vaccine, Polio, Hepatitis-A and Hepatitis-B, TD vaccine are found for analysis. In this study total numbers of individual vaccines are reported in which MMR is found as highest receiving or giving vaccine in every year and Hepatitis-A is found every year as lowest receiving or giving vaccine.

7.4. Challenges Faced during the Vaccination Drive:

Some of the challenges faced during the vaccination drive are:

- Vaccination provided by several local school, healthcare center and all other like these sometime disrupt the vaccination schedule that is undertaken by some patients at the vaccination drive organized.
An instrument to store and use boiled cotton by the healthcare professionals was absent.
- Though the existing patient bed works fine, a new addition would help as cited in the primary research.
- A facility to install an air-condition would enhance the customer as well as the patient experience, especially in the room where vaccination is provided.
- A new almirah or rack and a fridge to store important items is needed as evident from primary research.
- Two different weighing machines, one for aged 0-6 months and another for older patients, would improve the working of the process as cited in the primary research.

8. Suggestion:

In this study on immunization program many of the community are positively convinced to receive vaccine doses according to the mentioned time but more awareness campaign is required to gather more people especially maternal, newborn, and adult to this immunization center. The adverse effects of receiving vaccine doses like fever, swelling and pain, urticarial rash, anaphylactic shocks are minimal even negligible though lack of accommodation to handle the sudden emergencies, i.e., E.C.G machine, respiratory meter are not in needed quantity to examine patients' especially children's health condition while they are having some sudden adverse effect henceforth more equipment installation is inevitable action. Due to lack of healthcare providers and spreading awareness most of the parents especially mothers remain unaware of vaccination date and doses required so more campaign, awareness camp and share through social media are much needed for further progress.



9. Acknowledgement:

This study work is a process of all the people attached with, i.e., all the healthcare providers, doctors, nurses, co-workers who helped for collecting data, spreading the awareness of having vaccination within community, assisting in vaccination process, letting mothers and other people understand for immunization of disease prevention for them and their children and we are showing our gratefulness to them. We are portraying our special thanks and regards to The Indian Medical Association (IMA), Serampore in collaboration with Swasthya Bhabna Welfare Society, Serampore.

10. Conclusion:

In conclusion, analyzing the immunization/vaccination drive is crucial for understanding the effectiveness of vaccination campaigns in combating infectious diseases. The report has highlighted the various factors that influence the success of vaccination programs, including methods implemented, distribution, and coverage rates and other outcomes. Successful immunization programs require a collaborative effort from stakeholders such as governments, healthcare organizations, public health authorities, and also the public. Moreover, addressing vaccine hesitancy requires a multifaceted approach that involves communicating accurate and transparent information about the safety and efficacy of vaccines. As the world continues to grapple with the aftermath COVID-19 pandemic, vaccination drives are more important than ever before, and it is essential to address vaccine hesitancy, increase vaccine access, and ensure equitable vaccine distribution. In summary, analyzing the immunization/vaccination drive provides critical insights into the factors that influence the success of vaccination campaigns. To ensure successful vaccination programs, stakeholders must collaborate to improve vaccine access, distribution, coverage rates, and address vaccine hesitancy. By doing so, we can achieve herd immunity and protect communities from the threat of infectious diseases.

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