



Basic Immunization Education for Parents in Rutong Village, Ambon City, as an Effort to Reduce Infectious Disease Incidence in Children

Muh Nurhidayat Ichsan^{1*} and Abdul M Ukratalo²

¹Faculty of Medicine, Pattimura University, Indonesia

²Department of Biology, Faculty of Science and Technology, Pattimura University, Indonesia

*Corresponding author e-mail: muhnichsan@gmail.com

Abstract— Basic immunization is a key step in preventing infectious diseases that can affect children's health. In Indonesia, basic immunizations provided to children, such as BCG, DPT, polio, hepatitis B, and measles vaccines, have proven effective in reducing the incidence of infectious diseases that may lead to disabilities or even death. However, despite widespread immunization efforts, several challenges remain in achieving optimal immunization coverage. Various factors contribute to the low participation of parents in immunization, ranging from a lack of accurate information to misconceptions regarding vaccine safety. This activity was conducted on September 14, 2023. The method employed was a door-to-door approach, where team members visited residents' homes directly to provide more personalized and in-depth information. The activity received a positive response from the local community, particularly parents, who felt assisted by the information provided. This initiative also helped alleviate parents' concerns about vaccination, which ultimately contributes to reducing the incidence of infectious diseases in children and improving the overall health quality of children.

Keywords— basic immunization, door-to-door, education, vaccination.

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I. INTRODUCTION

According to the World Health Organization (2019), immunization is a simple, safe, and effective method to protect individuals against harmful diseases, even before they are exposed to the causative agents of these diseases (Yusnia et al., 2024). In the Minister of Health Regulation No. 12 of 2017 on Immunization Implementation, immunization is described as a step aimed at stimulating or enhancing the body's immunity (Agustina & Dewi, 2022). The Ministry of Health of Indonesia (2023) states that immunization is a process used to stimulate and strengthen the body's immune system actively against pathogen exposure, thereby preparing the body to face potential disease attacks in the future. Moreover, immunization is also conducted by administering antigens to stimulate the formation of antibodies, thus providing stronger protection against diseases (Kencana et al., 2016).

Data from the WHO indicate a global decline in immunization coverage, dropping from 86% in 2019 to 83% in 2020 (Mukhtar, 2022). According to Paramitha & Rosidi (2022), it is estimated that approximately 23 million children under one year of age did not receive essential vaccinations, the highest number since 2009. In 2020, unvaccinated children increased to 3.4 million (Vasera & Kurniawan, 2023). Of the 19 vaccines introduced in 2020, fewer than half were recorded in the

last two decades, with 1.6 million girls not fully protected against Human Papillomavirus (HPV) infections in that year, a significantly higher figure than in previous years.

According to Ulfah and Sutarno (2023), basic immunization is divided into two categories: complete and booster. Basic immunization is administered to all infants aged 0 to 12 months, including one dose of Hepatitis B 0, one dose of BCG, three doses of DPT-HB-Hib, four doses of polio drops, and one dose of measles/MR (Dillyana & Nurmala, 2019; Wibowo et al., 2020; Hastuty et al., 2022). Usman (2021) explains that the goal of immunization in toddlers is to provide immunity against vaccine-preventable diseases (VPD), thereby reducing morbidity and mortality rates and preventing disabilities due to certain diseases. According to data from the Central Bureau of Statistics (BPS), the coverage of complete basic immunization in Indonesia over the past five years has consistently remained above 85%. However, it has yet to reach the targets set by the Ministry of Health's Strategic Plan (Renstra). In 2018, the coverage of complete basic immunization reached 90.61%, slightly below the Renstra target of 92.5%. On the other hand, 13 provinces successfully met the 2018 Renstra target.

Implementing complete basic immunization is crucial in reducing the morbidity and mortality rates caused by diseases that could have been prevented through immunization. A decline in complete basic

immunization coverage may result in the absence of immunity in infants and toddlers, ultimately lowering children's health quality (Nufus et al., 2024). Mothers' role in the immunization program's success is significant, making it essential for them to have a good understanding of immunization. Parental knowledge, beliefs, and health behaviors also considerably impact this success. One of the main factors contributing to low understanding and adherence to the immunization program is the insufficient socialization from healthcare workers. As a result, many mothers are still unaware of the importance of basic and booster immunization to protect their children's health.

Based on an initial survey conducted in the Negeri Rutong, Ambon City community, it was found that there is a lack of maternal knowledge regarding basic and booster immunization, which affects the low immunization coverage in the area. Data from the Hutumuri Health Center in July 2023 shows that basic immunization coverage has only reached 58.3%, with a gap of 31.7% from the expected target. The low basic immunization coverage, with such a significant gap, indicates that the promotive and preventive efforts, which should be carried out through counseling, education, and strengthening information to the public, have not been optimally implemented (Kaliky & Ukratalo, 2025; Embisa & Ukratalo, 2025; Basyarewan et al., 2025).

Health education using a door-to-door approach is an effective strategy to deliver information directly to the community. This approach allows healthcare workers to reach each household personally, providing more intimate and in-depth education while addressing parents' questions regarding immunization.

II. METHOD

This community service activity was carried out on September 14, 2023, to enhance mothers' understanding of the importance of basic and booster immunization. The method employed in this activity was the door-to-door approach, which directly visited households to provide more personal and in-depth information. The activity consisted of two main components: first, a counseling session on basic and booster immunization, focusing on explaining the types of immunizations that should be administered to children, the appropriate immunization schedules, and the importance of participating in the immunization program to prevent vaccine-preventable diseases. Second, leaflets containing information on basic and booster immunization and their benefits for children's health were distributed—the distribution of these leaflets aimed to provide mothers with a clear and easily understandable guide.

III. RESULT AND DISCUSSION

In this community service activity, the team employed the door-to-door method, which involved direct visits to the homes of mothers with infants (Figure 1). This

method was selected because it allows healthcare workers to interact directly with families, enabling more personal and effective communication. The door-to-door method has proven to be an efficient way to deliver information to communities with limited access to healthcare facilities or other sources of information (Dewi et al., 2022; Handayani, 2024). In this context, the primary objective was to provide better knowledge about basic immunization and ensure that mothers were informed about the vaccinations that should be administered to their children to protect their health from preventable diseases. The door-to-door approach also offers significant advantages in overcoming various barriers that mothers may encounter, such as a lack of understanding about immunization, fear of vaccine side effects, or difficulties in accessing healthcare facilities offering immunization services.



Figure 1. Education on Basic Immunization through the Door-to-Door Approach

Basic immunization for children is crucial to protecting against vaccine-preventable diseases. During this activity, it was explained that basic immunization consists of several vaccines that should be administered at specific ages to protect children from serious infections such as polio, hepatitis B, and diphtheria. These vaccines play a significant role in establishing immunity to protect children from life-threatening diseases. Administering vaccines during infancy and toddler years helps build a strong immune foundation, making the child more resistant to infections that may lead to serious complications (Masayu, 2016).

In addition, the benefits of basic immunization are

vast, not only for individual children but also for the community at large. According to Pratiwi et al. (2024), immunization helps reduce the occurrence of disease outbreaks, as evidenced by the decline in cases of polio and measles in many countries after implementing effective immunization programs. Timely and complete vaccination allows communities to achieve herd immunity, which is crucial for protecting those who cannot receive vaccines for medical reasons.

This activity also emphasized the importance of parental awareness in ensuring that their children receive basic immunizations on schedule. Immunization is administered in stages, starting from birth to the toddler years. Administering vaccines at the scheduled times is critical because a child's immune response to a vaccine is more effective when given according to the schedule set by healthcare professionals and global health organizations. Additionally, early vaccination can provide long-term protection for the child against harmful infectious diseases.

If immunization is not provided on time, children may miss the protection they need, making them vulnerable to infections that could cause serious complications. The immunization schedule developed by the Ministry of Health of Indonesia includes vaccines for hepatitis B, polio, DPT (Diphtheria, Pertussis, Tetanus), measles, and others. Each vaccine has a specific interval that must be followed, such as the BCG vaccine administered at birth or the MMR (Measles, Mumps, Rubella) vaccine given at 18 months. If these vaccinations are missed, the child becomes more susceptible to contracting these diseases (Ministry of Health of the Republic of Indonesia, 2020).

In addition to direct education for mothers, the team distributed leaflets containing important information about the types of basic immunizations children should receive, including the BCG, DTP, polio, hepatitis B, Hib, and measles vaccines (Figure 2). The goal of using leaflets was to provide a clear and easy-to-read guide, allowing mothers to easily remember and understand the necessary vaccinations for their children and the appropriate times to administer them. This medium was chosen for its practicality, as it allows the information to be taken home and reviewed by mothers at their convenience.



Figure 2. Leaflet on Basic Immunization

The immunization program is crucial in protecting children from harmful diseases. This vaccination is administered to the most vulnerable group, young children, especially toddlers. The basic immunizations given to toddlers are designed to protect them from vaccine-preventable diseases, commonly called PD3I (Diseases Preventable by Immunization). Vaccines are administered either through injections at specific points or, in some cases, via oral drops. Every toddler participating in the immunization program must receive a series of essential vaccinations, including one dose of BCG, three doses of DPT-HB (or DPT-HB-Hb), four doses of the polio vaccine, and one dose of the measles vaccine. Through this immunization program, the government aims to reduce the incidence and mortality rates caused by diseases that can be prevented through vaccination.

IV. CONCLUSION

Basic immunization education for parents in Negeri Rutong, Ambon City, is important in reducing the incidence of infectious diseases in children. This activity received a very positive response from the local community, especially parents who felt helped by the information provided. Parents were given comprehensive explanations regarding the benefits of vaccination. This helped alleviate parental concerns about the potential adverse effects of vaccination, which, in turn, reduced the incidence of infectious diseases among children and improved children's health quality.

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