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TRANSFORMING PUBLIC HEALTH: MY JOURNEY OF POLIO IMMUNIZATION WITH THE GOVERNMENT OF INDIA

Introduction

My name is Mohammed Fahaam Shaikh am a PharmD graduate currently undertaking my internship. My journey in healthcare extends beyond academic achievements, as a committed social activist I actively seek opportunities to make a tangible impact on public health. One notable endeavour was my involvement in the Polio Immunization Drive with the Government of India, where I worked in a tertiary care setting across various rural and underserved regions of the Surat district such as Palsona, Pasodra and Kamrej village areas.

In these areas, basic healthcare facilities are often scarce, and access to the population of essential healthcare is limited. My role in the immunization drive was driven by a passion to bridge these gaps and contribute to improving public health in communities that face significant healthcare challenges. This experience not only allowed me to apply my PharmD training but also underscored the importance of extending healthcare services to the most vulnerable populations.

Objective

As a dedicated PharmD and social activist, I joined the polio immunization drive to address critical healthcare gaps in rural India. These areas, often lacking in hospitals, equipment, and medicines, also struggle with inadequate healthcare professionals. My goal was to help bridge these gaps and protect vulnerable communities from preventable diseases like polio through immunization.

I aimed to ensure every under-five child in my catchment area would be vaccinated with the Oral polio vaccine. Realizing the challenges in logistics and infrastructure, come what may I vowed to reach out to the last child in the village and leave no one behind. I also aimed to ensure that any child unable to get vaccinated because of sickness or other obstruction would be referred to the Primary Health Center [PHC]. I worked to ensure that these cases were reported to the PHC, allowing for follow-up vaccination and continued care.

By focusing on these objectives, I sought to contribute to the comprehensive goal of eradicating polio and improving overall health outcomes in underserved communities. My involvement aimed to bridge the gap between limited healthcare resources and the essential immunization needs of the population, thereby enhancing public health and safeguarding the future of children in these vulnerable areas.

Role in the Polio Immunization Drive: In the polio immunization drive, my role as a clinical pharmacist was diverse, and many of these were very important to the success of the whole program. One of the most essential tasks was effectively distributing demographics into manageable cohorts to ensure that the whole population could be served in an organized manner. a group consists of three members, in which each group is made up of two pharmacists and one member from the

municipal commission who had prior immunization experience. These members had been on former drives and knew all about the localities plus government officials; hence, continuity and knowledge were provided in great quantity.

The immunization drive was divided into four days. On the first day, our team would gather at an announced spot in a residential area, usually in an apartment complex or a small village. At this location, we set up a banner announcing the vaccination drive and requested all parents to bring their under-fives for polio drops.

Outreach was a key component on this day; we approached local elders to disseminate the information through community groups and engaged directly with parents and caregivers by visiting playgrounds and asking mothers about their children's vaccination status. Our goal was to ensure that everyone was aware of and encouraged to participate in the drive.

On the subsequent days—Day 2, Day 3, and Day 4—we conducted the actual polio vaccinations. Our team went door-to-door in the designated areas, administering the vaccine to children and recording each vaccination on official government sheets. Homes were marked to track which ones had been visited and which children had been vaccinated, ensuring that no child was missed. Any children who had been absent on previous days were vaccinated as we revisited their homes.

Vaccine handling is extremely crucial, and ensuring proper storage, handling, and administration is a key responsibility. For oral polio vaccines (OPV), they must be stored between 2°C and 8°C and never frozen, as freezing can damage them. They should be kept in a dedicated, temperature-monitored refrigerator. I always washed my hands and used sterile techniques when handling the vaccines, checked each vial for damage, and made sure they were within the expiration date. Every vaccination was accurately documented with details like the date and lot number, and I monitored patients for immediate reactions. Any issues, like expired vaccines, broken seals etc. were promptly reported to health authorities. Doctors and health care staff at the primary health care centre double-check the vaccines for their durability thus the chances of error are negligible. Following these guidelines is essential for maintaining the safety and efficacy of polio vaccines.

Challenges faced: Overall, my role in the polio immunization drive was integral to both the logistics of vaccine distribution and the direct interaction with the community. By managing demographics effectively, educating caregivers, and ensuring proper vaccine handling, we contributed significantly to the success of the immunization effort and the broader goal of polio eradication, During the polio immunization drive, logistics posed the most significant challenge. Many villages were located far from the city, making timely access difficult due to limited public transport and poor infrastructure. This situation created a hectic immunization process.

However, the community's response was generally positive. People were welcoming, and children, while naturally apprehensive, were generally cooperative. Immunization has long been promoted in India by healthcare professionals and the government, so there was a strong pro-vaccination sentiment. Since the oral polio vaccine is non-invasive, it was easier to gain trust and facilitate the vaccination process. By addressing logistical issues with careful planning and leveraging community support, we were able to manage the immunization drive effectively.

Impact: My role in the polio immunization drive had a significant impact on its success. My team and I focused on a specific locality with about 250 houses. Over the course of the drive, we achieved notable results: on the first day, we managed to vaccinate 78% of the children in the area. By the second day, our coverage increased to 88%, and by days three and four, we reached an impressive 96%. The few children not vaccinated were either absent or already immunized, making them exceptions in the study.

The high level of community willingness to participate, combined with my consistent efforts in providing healthcare advice and ensuring proper vaccination procedures, greatly contributed to the drive's effectiveness. The drive was deemed highly impactful, advancing our goal of a polio-free world, and our efforts played a key role in achieving this target.

The role of Clinical Pharmacists: The importance of clinical pharmacists cannot be overstated, as they are the essential drivers in healthcare systems especially during vaccination campaigns. They go through a six-year PharmD program that is geared towards equipping them with comprehensive knowledge about medicine, pharmacology and vaccine-related subjects to ensure vaccines are administered safely and effectively.

Clinical pharmacists understand immunization science in detail. This includes the mechanisms involved in vaccines, their side effects if any, and procedures for handling them. Such information enables them to handle emergencies promptly as well as maintain vaccine safety protocols. Moreover, they help patients make informed decisions by advising on the pros and cons of vaccination for their children. Besides, these professionals train other healthcare workers on how to correctly manage vaccines.

Through internships and practical training sessions, PharmD students gain experience in administering immunizations, particularly among infants and children. These programs prepare clinical pharmacists to participate directly in vaccination delivery efforts. Therefore, they monitor patients immediately after administration to solve immediate problems and follow up properly.

Discussion

The polio immunization drive showcased the importance of careful planning, strong community involvement, and precise vaccine management in achieving public health objectives. Despite the challenges of accessing remote villages with poor infrastructure, my strategy of organizing the area into manageable groups and utilizing local expertise proved effective. The community's positive reception, driven by a strong pro-vaccination attitude, made the process smoother, especially since the oral polio vaccine is easy to administer and well-accepted.

At the end of my four-day campaign, myself and the team had administrated 196 Oral polio vaccines in our designated area with 96% of children in that region fully protected from polio. This high coverage not only shows the success of our approach in a small way but also helps much in meeting the wider goal of eradicating polio. The exercise illustrated how teamwork between health workers and communities can enable delivery over logistical challenges and realize public health improvements that would take us closer to polio-free worlds.