



Legacy of Polio Vaccination: The Way Vaccines Have Shaped Global Health

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DESCRIPTION

Polio, a crippling and sometimes fatal disease caused by the poliovirus, was once one of the most feared diseases worldwide. The disease primarily affects young children, causing irreversible paralysis and, in severe cases, death. However, the legacy of polio vaccination is one of triumph, having shaped global health through its innovative approach to disease control and its significant contribution to the eventual goal of global polio eradication. The story of the polio vaccine represents one of the greatest successes in modern medicine, offering lessons on how vaccines can shape public health policy and practice globally.

The development of polio vaccines began in the mid-20th century and marked a turning point in the fight against infectious diseases. In 1955, Dr. Jonas Salk developed the first successful polio vaccine, the Inactivated Polio Vaccine (IPV), which was given through injection. This vaccine provided immunity by introducing inactivated virus particles that prompted an immune response without causing disease. Shortly thereafter, in 1961, Dr. Albert Sabin developed the Oral Polio Vaccine (OPV), which used live, weakened virus strains to induce immunity. OPV offered advantages such as ease of administration. Salk's achievement revolutionized polio control, providing the first tool to prevent the disease on a large scale.

The impact of the polio vaccine was immediately felt across the world. In many countries, polio incidence dropped dramatically and the debilitating disease was nearly eliminated in places where it had been rampant. However, polio remained endemic in certain parts of the world, particularly in areas with weak healthcare infrastructures, where vaccination campaigns struggled to reach every child. In 1988, the World Health Organization (WHO), together with United Nations Children's Fund (UNICEF), the Centers for Disease Control and Prevention (CDC) and the Rotary International Foundation, launched the Global Polio Eradication Initiative (GPEI).

This initiative aimed to eliminate polio globally by increasing immunization coverage, enhancing surveillance systems and

improving vaccine delivery methods. The GPEI has been pivotal in reducing polio cases by more than 99%, with only a few countries remaining affected today. The legacy of polio vaccination goes beyond the eradication of a single disease; it has profoundly influenced global health policy and strategies. The success of polio vaccination demonstrated the power of vaccines to prevent infectious diseases on a massive scale. It has become a model for the development and implementation of vaccination programs for other diseases, including measles, tuberculosis and more recently, COVID-19.

Furthermore, polio vaccination campaigns have helped build global health infrastructure, particularly in low-income and remote areas. Vaccination efforts have led to improved healthcare delivery systems, better disease surveillance and stronger healthcare networks. These advancements have not only helped control polio but have also been used to combat other preventable diseases. Despite the successes, challenges remain in the final stages of polio eradication. Vaccine hesitancy, logistical challenges, conflict zones and weak healthcare infrastructure continue to hinder the complete eradication of the disease. However, the global community remains committed to finishing the job, learning from the polio vaccination campaign's successes and setbacks.

CONCLUSION

The legacy of polio vaccination is one of hope, resilience and progress. Through innovative vaccines, global cooperation and relentless commitment to public health, polio has been reduced to a mere shadow of its former self. These vaccines played major roles in reducing the incidence of polio and have been central to eradication efforts globally. The impact of polio vaccination extends beyond the eradication of a single disease, influencing global health practices, policies and immunization strategies. As the world moves closer to polio's final eradication, the lessons learned will continue to shape the future of global health for generations to come.

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