

EDITORIAL

INITIATION OF PNEUMOCOCCAL VACCINE AGAINST PNEUMONIA
IN PAKISTAN

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Globally, *Streptococcus pneumoniae* is a pathogen mostly affecting infants, causing an estimated killing of 1.2 million.¹ In 2005, WHO estimated that 1.6 million people died of pneumococcal disease every year; the estimate included the deaths of 0.7–1 million children aged <5 years, most of whom lived in developing countries.² Due to this high disease burden, the introduction of Pneumococcal conjugated vaccine (PCV) and Hemophilus Influenza B conjugated vaccine (Hib CV) into routine childhood immunization programmes is a high priority for many national governments and international agencies, including the World Health Organization (WHO) and the Global Alliance for Vaccines and Immunization (GAVI). Even in economically developed regions like Europe and the United States, pneumococcal pneumonia is the most common community-acquired bacterial pneumonia, estimated to affect approximately 100 per 100,000 adults each year.³

Globally increased concerns regarding prevention of communicable diseases have given rise to new vaccines.⁴ Since 2000, prevention of pneumococcal disease in young children has been possible by vaccination using multivalent glycol-conjugate vaccines. PCV and Hib CV have excellent safety profiles and have shown high effectiveness against pneumococcal and Hib disease respectively.⁴ World Health Organization (WHO) recommends the use of PCV and Hib CV in routine childhood immunization programs in all their regions.⁴ They consider that these vaccines should be included in national immunization programs on priority, particularly in countries where death in children aged <5 years is more than 50/1000 live births or where >50,000 children die annually.⁵ Although major contribution in childhood morbidity and mortality comes from the low and middle income countries but there is lack of reliable estimates from this part of the world. Studies have estimated that specific PCV formulations could reduce overall under-five mortality by 11% suggesting that use of these vaccines is important for achieving Millennium Development Goal (MDG)-4, to reduce under-five mortality by two-thirds between 1990 and 2015.⁶

PCV is a relatively new vaccine and currently has been integrated into routine childhood immunization programmes in many parts of the world.⁷ WHO emphasizes on the use of PCV on the basis of assessments of Global framework for Immunization Monitoring and Surveillance (GFIMS), showing

remarkable effects of PCV in pneumococcal disease prevention, primarily high-income countries where PCV is currently used routinely.^{8,9} PCV introduced for the first time into the routine infant immunization programme in the United States in 2000. Now it has been included in immunization programmes of more than 70 countries globally including many low and middle income countries.^{7,9}

Despite a lot of supporting evidence, many low and middle income countries have not introduced pneumococcal vaccine in their routine immunization programmes.⁸ Pakistan has one of the highest infant mortality rates in the world, and over 50 percent of deaths in post-neonatal children are attributable to pneumonia that can be partially prevented through immunization with newer vaccines.¹⁰ This scenario provides a strong rationale for routine administration of PCV.⁸ PCV offers an opportunity for the reduction of under-five mortality and morbidity in Pakistan due to its proven effectiveness in reducing the burden of pneumonia.¹⁰ In the past few years the increased communication to stakeholders including national policy makers (DG Health and Secretary Health) by advocacy efforts of non-government organizations, has resulted in the integration of PCV into routine immunization schedule.¹⁰ Pakistan finally introduced the pneumococcal vaccine (PCV 10) integration in its Expanded Program on Immunization (EPI) in March, 2012.⁸ Pakistan is the first country in South Asia to introduce this expensive vaccine to inoculate children less than five years against the pneumococcal disease in through EPI.¹¹

Global Alliance for Vaccines and Immunization (GAVI), UNICEF and WHO are assisting the government in providing PCV.¹¹ The PCV was initially introduced in Punjab province, then Sindh and then the rest of the country. PCV13 will be routinely given to children at 2, 4, 6 and 12–15 months of age. Children in this age range are at greatest risk for serious diseases caused by pneumococcal infection.¹¹ In Pakistan, routine vaccination coverage for other vaccines is still suboptimal for achieving the desired goals. This coverage cannot be improved until a bilateral communication is established between different stakeholders like families, communities, vaccine managers and media.^{11,12}

Communication strategies are known to have a great impact in the context of new vaccine introduction in Pakistan.¹² some of the most important strategies

include advocacy to healthcare professionals as well as community mobilization not only to accept, but to create demand, the new vaccines for their well-being.¹²

Effective communication around vaccine safety, including management of public reactions requires serious investment into strategic communication for immunization. The immunization managers should be trained to address adverse event for immunization (AEFI). If this communication strategy not adopted can result in loss of interest of public in immunization, decrease in immunization coverage and resurgence of preventable diseases in the form of outbreaks and epidemics.

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