

## **Conclusions from the PSERENADE Project: Implications for Pneumococcal Vaccine Policy and What is Happening Next**

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Pneumococcal conjugate vaccines (PCVs) were introduced into childhood immunization programs beginning 20 years ago, and 10 years ago the serotypes they covered increased from 7 serotypes to 10 and 13 (PCV10 and PCV13). Currently 147 countries include PCV in their childhood immunization program to prevent pneumococcal pneumonia, meningitis and other serious pneumococcal disease. Many countries have reported substantial declines in vaccinated children in invasive pneumococcal disease (IPD) due to vaccine serotypes, with some replacement disease caused by non-vaccine types. But heterogeneity between countries in the magnitude of the impact and in the herd protection in adults has been observed. The Pneumococcal Serotype Replacement and Distribution Estimation (PSERENADE) Project was conducted to evaluate the available evidence globally on those issues and others regarding the use of PCVs. Specifically, PSERENADE aimed to answer questions about the degree of impact on IPD in children <5 years, whether it differed by product, herd (indirect) effects in older children and adults, degree of replacement disease, whether impact was the same for meningitis as for IPD, impact on serotype 1 outbreaks in all age groups, effect of dosing schedule, the remaining serotypes still causing disease and the proportion of those that are covered by future higher valency PCV products. Over 50 countries participated in the project. Eligibility included having PCV10 or PCV13 in the national immunization program, at least 50% uptake of PCV10/13 for at least one complete year (excluding introduction year) and a stable surveillance system. The change over time since PCV10/13 introduction in the incidence of IPD and meningitis will be shown by age group, product, and schedule and the serotype distribution of disease remaining after at least 5 years of use will be shown.