

Review: Pneumococcal conjugate vaccines effective at preventing child deaths

19 October 2009

A study published in *The Cochrane Review* this month concludes that pneumococcal conjugate vaccines (PCV), already known to prevent invasive pneumococcal disease (IPD) and x-ray defined pneumonia, was also effective against child deaths. The findings were based on a systematic review of the results of 6 randomized and controlled trials conducted in the US, Africa, Philippines, and Finland. Eighty percent of children were less likely to develop vaccine-type IPD, 58% all-serotype IPD, and 27% x-ray defined pneumonia than children who did not receive the vaccine. Eleven percent of child deaths were also prevented. In total, 113,044 children were included in the six trials - 57,015 children in the PCV group and 56,029 in the control group.

"Pneumococcal disease is driving a global health crisis, particularly in the [developing world](#)," said Marilla G. Lucero of the Research Institute for [Tropical Medicine](#) and primary author of the study. "This study underscores the value of vaccines in preventing this deadly disease and saving children's lives."

Pneumococcal disease, or *Streptococcus pneumoniae*, is a leading cause of pneumonia, meningitis, sepsis and other life-threatening ailments. It takes the lives of 1.6 million people each year, including more than 800,000 children despite the existence of safe and effective vaccines to prevent it. Ninety-five percent of child pneumococcal deaths occur in the developing world, largely unreached by the existing vaccines as yet.

WHO recommends that all countries prioritize introduction of PCV, particularly those with high child mortality rates. In 2000, the United States became the first country to license a 7-valent pneumococcal vaccine (PCV-7), which has virtually eliminated severe pneumococcal disease caused by vaccine serotypes in the U.S. Since then, 37 countries have implemented universal or

widespread use of PCV-7, nearly all of which are in the industrialized world. New financial mechanisms, including the GAVI Alliance's Advance Market Commitment, are now in place to help low-income countries prevent pneumococcal deaths in their own countries. Next generation PCVs are expected to shortly become available and will provide expanded serotype coverage of strains common in the developing world.

"While early detection and treatment can save lives, this review highlights the effectiveness of pneumococcal conjugate vaccines for preventing pneumococcal disease before it occurs," said Dr. Orin Levine, executive director of PneumoADIP at the Johns Hopkins Bloomberg School of Public Health. "Low-income countries can now have the opportunity to introduce pneumococcal vaccine on an unprecedented timetable and at prices their governments can afford. We recommend that all countries eligible for GAVI support apply now and take immediate steps to prioritize prevention."

More information: For more information on the study, please visit www.cochrane.org/reviews/en/ab004977.html

Source: Johns Hopkins University Bloomberg School of Public Health ([news](#) : [web](#))

APA citation: Review: Pneumococcal conjugate vaccines effective at preventing child deaths (2009, October 19) retrieved 25 September 2022 from <https://medicalxpress.com/news/2009-10-pneumococcal-conjugate-vaccines-effective-child.html>

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