

New studies show progress, value in vaccination against deadly pneumonia

November 10 2011

Vaccines against the primary cause of deaths from pneumonia in developing countries could save millions of lives and are highly cost-effective, according to a comprehensive new analysis to be released on Thursday, Nov. 10.

In a paper published in the journal *International Health*, the authors estimate that two pneumococcal vaccines being introduced in the world's [poorest countries](#) with support from the GAVI Alliance could save the lives of three to four million children over the next 10 years. A separate report released by the International [Vaccine](#) Access Center (IVAC) at the Johns Hopkins University shows that progress in rolling out interventions to control pneumonia has been uneven, with the greatest recent progress in access to vaccines but lingering lack of access to [medical care](#) and [antibiotics](#) in the countries where children are most vulnerable to pneumonia.

Pneumonia took the lives of more than 1.5 million children in 2008 – more than any other cause of [death](#), and over 98% of those deaths are in [developing countries](#). However, there is emerging evidence that this death toll can be reduced, and rapidly. With GAVI's support, some of the world's poorest countries are signing up at an unprecedented rate to introduce vaccines against pneumococcal disease, a leading cause of pneumonia and meningitis. According to the Pneumococcal Global Serotype Project, the new vaccines are expected to prevent more than 70% of serious pneumococcal infections among children in Africa and Asia, where children have the highest risk of this disease.

"In 2011, 3.6 million children will be immunised against pneumococcal disease, and 10 million more are expected to receive the vaccine by the end of next year," said Seth Berkley M.D., CEO of the GAVI Alliance. "As of Saturday, when Malawi introduces the pneumococcal vaccine for its children, it will become the 16th of the world's lowest-income countries to take this step – and this is just the beginning. Thanks to our donors, we plan to support the rollout of these vaccines to nearly 60 countries by 2015."

According to the World Health Organization, the average coverage of basic vaccines in GAVI's target nations is approximately 80% compared to an average immunisation rate of 67% in 2000.

Despite tremendous gains in vaccine access, however, children often do not receive appropriate antibiotic treatment for pneumonia cases that do occur. These findings are underscored in a report issued today by IVAC, which shows that while progress is being made with vaccination in the 15 countries with the most child pneumonia deaths, the latest data show that all of these countries have sub-optimal levels of protection and treatment interventions, including exclusive breastfeeding, access to care facilities and treatment with antibiotics.

"Vaccines and antibiotic treatments are like two safety nets that work together – vaccines provide a first line of defense, while antibiotics ensure that children who get through the first net don't die," said Orin Levine, professor and executive director of IVAC. "We must sustain the tremendous progress achieved this year in vaccines and expand access to antibiotic treatment to fully tackle this disease."

In a new study to be published today in *International Health*, the analyses show that both the 10-valent and 13-valent pneumococcal vaccines being rolled out now in GAVI-supported countries are a "best buy" – and their value for money is highest in the countries at greatest risk – findings that

holds up in spite of challenges with data collection in several of the countries covered in the analysis.

"We know the vaccines can save hundreds of thousands of lives every year throughout the developing world," said Anushua Sinha, a senior author on the study and associate professor in the Department of Preventive Medicine and Community Health at the University of Medicine & Dentistry of New Jersey. "This new research shows that, with GAVI support, pneumococcal vaccines are also very good value for the money, no matter how we break out the data."

The new study, which was funded by GAVI and conducted by an independent group of academic researchers, finds that the benefits of vaccination go far beyond the children who are actually immunised. The authors estimate that "herd immunity" would protect older adults and younger children, because they will be exposed to fewer sources of infection. The authors also note that the vaccines being introduced with GAVI's support will cover more strains of pneumonia, are cost-effective and save more lives.

Sinha said that she and her colleagues based their conclusions on the price of the pneumococcal vaccines under the terms of GAVI's Advance Market Commitment. At the prices negotiated, she said, the vaccines would be "highly cost-effective in 69 out of the 72 GAVI countries." Data on costs averted with GAVI-funded vaccines are equally as compelling. The study shows that from 2010 to 2019, costs averted due to direct and indirect effects of the vaccines range from US\$ 986 million to US\$ 1.2 billion, about 85% of which would otherwise be spent treating pneumonia.

The global roll out of pneumococcal vaccines in developing countries began in December 2010 when Nicaragua introduced the vaccine into its routine programme with GAVI's support. Since then Kenya, Guyana,

Sierra Leone, Yemen, Honduras, Democratic Republic of the Congo, Mali, Central African Republic, the Gambia, Benin, Cameroon, Rwanda, Burundi and Ethiopia have introduced it this year and Malawi will begin on 12 November – World [Pneumonia](#) Day.

This progress is thanks to GAVI donors and to the development of the Advance Market Commitment (AMC), an innovative finance mechanism pioneered by GAVI. With US \$1.5 billion from Italy, the United Kingdom, Canada, the Russian Federation, Norway and the Bill & Melinda Gates Foundation, the AMC encourages the acceleration of production capacity by the manufacturers who currently produce [pneumococcal vaccines](#). On 13 June 2011, donors committed US\$ 4.3 billion, enabling GAVI to reach more [children](#) faster than planned and to accelerate the introduction of new vaccines.

More information: For more information, visit www.gavialliance.org/pneumonia, www.jhsph.edu/ivac or www.worldpneumoniaday.org

Provided by GAVI Alliance

Citation: New studies show progress, value in vaccination against deadly pneumonia (2011, November 10) retrieved 11 May 2024 from <https://medicalxpress.com/news/2011-11-vaccination-deadly-pneumonia.html>

<p>This document is subject to copyright. Apart from any fair dealing for the purpose of private study or research, no part may be reproduced without the written permission. The content is provided for information purposes only.</p>
--