Pneumococcal Vaccination for Elderly- Is India Ready?

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The last Indian Census Report 2011 has put India's population as 1.21 billion and the number of elderly (60+) at 98.5 million. Despite India's rapid economic growth, health condition of a majority of older Indians remains poor. Community Acquired Pneumonia (CAP) is a significant cause of morbidity and mortality, particularly among elderly in India. Although vaccination is the mainstay of preventative therapy, Association of Physicians in India does not recommend use of vaccines on a routine basis due to insufficient data on safety, efficacy or effectiveness. Currently two types of pneumococcal vaccines are available—pneumococcal conjugate vaccine (PCV13) and pneumococcal polysaccharide vaccine (PPSV23). PCV13 offers better efficacy against pneumococcal pneumonia and significantly reduces burden of disease. Hence, new ACIP recommendations strongly support usage of PCV13 as a routine vaccine in the adults. However, routine PCV13 administration is not likely to be cost-effective in India because of high cost of the vaccine. Studies have shown that PPSV23 offers considerable efficacy against Invasive Pneumococcal Disease (IPD) and covered more than 80% of the serotypes identified in Indian adults. Since Indian elderly are more prone to develop IPD, it would be beneficial to increase the use of PPSV23 in elderly. Furthermore, dedicated research is needed to resolve the issue of cost effectiveness offered by these vaccinations. Unless comprehensive evidence is obtained on the vaccine's efficacy in elderly, policy-makers in India will remain reluctant to admit PPSV23 as a cost-saving strategy in the context of mass vaccination program.

Determinants of maternal immunization in developing countries

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Background: Maternal immunization is an effective intervention to protect newborns and young infants from infections when their immune response is immature. Tetanus toxoid vaccination of pregnant women is the most widely implemented maternal vaccine in developing countries where neonatal mortality is highest. We identified barriers to maternal tetanus vaccination in developing African and Asian countries to identify means of improving maternal immunization platforms in these countries.

Method: We categorized barriers into health system, health care provider and patient barriers to maternal tetanus immunization and conducted a literature review on each category. Due to limited literature from Africa, we conducted a pilot survey of health care providers in Malawi on barriers they experience in immunizing pregnant women.

Results: The major barriers of the health system are due to inadequate financial and human resources which translate to inadequate vaccination services delivery and logistics management. Health care providers are limited by poor attendance of Antenatal Care and inadequate knowledge on vaccinating pregnant women. Patient barriers are due to lack of education and knowledge on pregnancy immunization and socioeconomic factors such as low income and high parity.

Conclusion: There are several factors that affect maternal tetanus immunization. Increasing knowledge in health care providers and patients, increasing antenatal care attendance and outreach activities will aid the uptake of maternal immunization. Health system barriers are more difficult to address requiring an improvement of overall immunization services. Further analyses of maternal immunization specific barriers and the means of addressing them are required to strengthen the existing program and provide a more efficient delivery system for additional maternal vaccines.