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Pneumococcal Vaccination of Elderly Adults: New Paradigms for Protection.

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Pneumococcal polysaccharide vaccine has been licensed for use in the United States for >30 years, and two-thirds of the elderly population in the United States have received this vaccine. Observational studies have demonstrated that pneumococcal polysaccharide vaccine reduces the risk of invasive pneumococcal disease in immunocompetent elderly individuals, but neither observational studies nor clinical trials have demonstrated consistent evidence for a reduction in the incidence of pneumonia in vaccinated older adults. The introduction of pneumococcal protein conjugate vaccine among children has led to a herd immunity effect that has resulted in a 38% decrease in the rate of invasive pneumococcal disease among elderly adults. The high efficacy of pneumococcal protein conjugate vaccine in children has renewed interest in evaluating pneumococcal protein conjugate vaccines in adults for prevention of invasive pneumococcal disease and pneumonia. Moreover, the recognition of the presence and function of noncapsular pneumococcal protein antigens and the increasing availability of adjuvants highlight the promise of new vaccination strategies to decrease the burden of pneumococcal infection in this high-risk population.

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