

Abstract ▾

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[Clin Infect Dis](#). 2015 Feb 10. pii: civ096. [Epub ahead of print]**Effectiveness of 23-Valent Pneumococcal Polysaccharide Vaccine Against Invasive Disease and Hospital-Treated Pneumonia Among People Aged ≥65 Years: A Retrospective Case-Control Study.**Leventer-Roberts M<sup>1</sup>, Feldman BS<sup>2</sup>, Brufman I<sup>2</sup>, Cohen-Stavi CJ<sup>2</sup>, Hoshen M<sup>2</sup>, Balicer RD<sup>3</sup>.

## + Author information

## Abstract

**BACKGROUND:** Streptococcus pneumoniae contributes considerably to the burden of pneumonia and **invasive pneumococcal disease (IPD)**, with the effectiveness of the 23-valent pneumococcal polysaccharide vaccine (PPSV23) for preventing all-cause pneumonia still undetermined. The aim of this study was to control for common biases and confounders associated with previous observational studies and to assess PPSV23 vaccine effectiveness in preventing IPD and the most resource-intensive type of community-acquired pneumonia, **hospital-treated pneumonia (HTP)**.

**METHODS:** This was a retrospective case-control study nested in a population-based cohort, with age-, sex-, and risk-matched controls as the base case. Demographic information, laboratory data, and diagnoses were extracted from the chronic disease registry and from inpatient and outpatient records in the Clalit Health Services database. Vaccine effectiveness for PPSV23 was assessed using multivariable conditional logistic regression. Subgroup, sensitivity, and secondary analyses were conducted to validate findings.

**RESULTS:** A total of 470 070 individuals aged **≥65 years** were members of Clalit Health Services during the study period (1 January 2007 through 31 December 2010). The case cohort consisted of 212 participants with IPD and 23 441 with HTP. The adjusted association between vaccination and **IPD was protective (odds ratio [OR], 0.58; 95% confidence interval [CI], .41-.81)**, whereas there was no demonstrated **protective effect between vaccination and HTP (OR, 1.01; 95% CI, .97-1.04)**. The sensitivity analysis and all but 1 subgroup analysis provided consistent results to the base case.

**CONCLUSIONS:** **The PPSV23 vaccine is effective against the most severe invasive forms of pneumococcal disease, but the lack of effectiveness of PPSV23 in protecting against all-cause HTP should be considered for future vaccine policies.**

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肺炎球菌ワクチンは侵襲的疾患（肺炎球菌による菌血症等）は抑制できるが（危険率0.58）、肺炎の入院率は抑制出来ず65歳以上の人で。

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