

## **Evaluation of effectiveness of the 23-valent pneumococcal capsular polysaccharide vaccine for HIV-infected patients.**

Breiman RF; Keller DW; Phelan MA; Sniadack DH; Stephens DS; Rimland D;

December 30, 2000

Arch Intern Med. 2000 Sep 25;160(17):2633-8. Unique Identifier :

**BACKGROUND:** We conducted a retrospective case-control study to evaluate effectiveness of pneumococcal vaccine against invasive disease among adults with human immunodeficiency virus (HIV) infection in San Francisco, Calif, and Atlanta, Ga. **METHODS:** Case patients were 18- to 55-year-old subjects with HIV infection who were admitted to selected hospitals in Atlanta or San Francisco from February 1992 to April 1995 from whom *Streptococcus pneumoniae* was isolated from a normally sterile site. Controls were HIV-infected patients of similar age matched to cases by hospital of admission and CD4 lymphocyte count ( $\geq 0.50 \times 10^9/L$  [ $\geq 500$  cells/mm<sup>3</sup>]) or clinical stage of acquired immunodeficiency syndrome. Case and control subjects were restricted to persons known to have HIV infection before hospital admission. Analysis used matched univariate and conditional logistic regression. **RESULTS:** One hundred seventy-six case patients and 327 controls were enrolled. By univariate analysis, persons with pneumococcal disease were more likely to be black, be current smokers, and have close contact with children. Adjusted for these factors and CD4 cell count, pneumococcal vaccine effectiveness was 49% (95% confidence interval [CI], 12%-70%). Adjusting for all variables and key interaction terms, vaccine effectiveness among whites was 76% (95% CI, 35%-91%), whereas effectiveness among blacks was 24% (95% CI, -50% to 61%). Among controls, vaccination was significantly less common among blacks (29% vs 45%;  $P < .001$ ). **JOURNAL ARTICLE** Adult Analysis of Variance AIDS-Related Opportunistic Infections/\*PREVENTION & CONTROL Bacterial Vaccines/\*THERAPEUTIC USE Case-Control Studies Confidence Intervals CD4 Lymphocyte Count Female Georgia Human Logistic Models Male Middle Age Pneumococcal Infections/\*PREVENTION & CONTROL Pneumonia, Pneumococcal/PREVENTION & CONTROL Polysaccharides/THERAPEUTIC USE Retrospective Studies Risk Factors San Francisco *Streptococcus pneumoniae*/\*IMMUNOLOGY/ISOLATION & PURIF Treatment Outcome

[See the topic on aegis.org](http://aegis.org)