

The most recent version of this article [civ096] was published on 2015-03-05

Effectiveness of 23-valent pneumococcal polysaccharide vaccine against invasive disease and hospital-treated pneumonia among people aged 65+: A retrospective case-control study

Maya Leventer-Roberts^{1,2}, Becca S. Feldman¹, Ilan Brufman¹, Chandra J. Cohen-Stavi¹, Moshe Hoshen¹, and Ran D. Balicer^{1,3}

[+ Author Affiliations](#)

Corresponding Author: Dr. Maya Leventer-Roberts, Clalit Research Institute and Chief Physician Office, Clalit Health Services, Arlozorov 101, Tel Aviv, Israel, maya.roberts@gmail.com, Tel: +972-36925816, Fax: +972-3-692582

Alternative Corresponding Author: Chandra J. Cohen-Stavi, MPA, Clalit Research Institute, Clalit Health Services, chandraco@clalit.org.il, Tel: +972-3-6925814, Fax: +972-3-6925821

Abstract

Background. *Streptococcus pneumoniae* contributes considerably to the burden of pneumonia and invasive pneumococcal disease (IPD), with the effectiveness of the polysaccharide 23-valent 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 the PPSV23 vaccine effectiveness in preventing IPD and the most resource intensive type of community-acquired pneumonia, hospital-treated pneumonia (HTP).

Methods. This is a retrospective case-control study nested in a population-based cohort, with age-sex-risk matched controls as the base case. Demographic information, laboratory data, and diagnoses were extracted from the chronic disease registry and inpatient and outpatient

regression. Sub-group, sensitivity, and secondary analyses were conducted to validate findings.

Results. There were 470,070 individuals aged 65+ who were members of CHS during the study period (January 1, 2007–December 31, 2010). The case cohort consisted of 212 participants with IPD and 23,441 with HTP. The adjusted association between vaccination and IPD was protective (OR=0.58, 95% CI:0.41–0.81), while there was no demonstrated protective effect between vaccination and HTP (OR=1.01, 95% CI:0.97–1.04). The sensitivity analysis and all but one subgroup analysis provided consistent results to the base case.

Conclusion. The PPSV23 vaccine is effective against the most severe

UNCORRECTED PROOF

This Article

Clin Infect Dis. (2015)
doi: 10.1093/cid/civ096
First published online: February 10, 2015

» Abstract **Free**
Full Text (PDF)
Supplementary Data

All Versions of this Article:
civ096v1

civ096v2 most recent

Classifications

MAJOR ARTICLE

Services

Alert me when cited
Alert me if corrected
Alert me if commented
Find similar articles
Similar articles in PubMed
Add to my archive
Download citation
Request Permissions

+ Citing Articles

+ Google Scholar

+ PubMed

- Share



What's this?

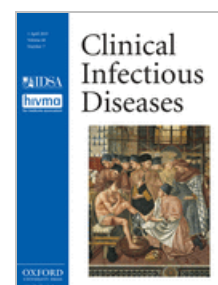
Search this journal:



Advanced >

Current Issue

April 1, 2015 60 (7)



Alert me to new issues

Published on behalf of

Infectious Diseases Society of America



HIV Medicine Association



Society Members: For your free access to this journal, log in via the IDSA members area.

Impact Factor: 9.416

5-Yr impact factor: 9.177

Editor-in-Chief

Sherwood L. Gorbach, M.D.

Archival Material

Browse the archive
Supplement archive
Cover archive
Free Editor's Choice Collection

For Authors

Instructions to Authors
ICMJE Form
Submit Now!
OUP Services for Authors
Rights & Permissions
Self-archiving Policy

invasive forms of pneumococcal disease, but the lack of effectiveness of PPSV23 in protecting against all-cause HTP should be considered in future vaccine policy.

Received September 22, 2014.

Accepted February 1, 2015.

© The Author 2015. Published by Oxford University Press on behalf of the Infectious Diseases Society of America. All rights reserved. For Permissions, please e-mail:

journals.permissions@oup.com.



This journal is fully compliant with the RCUK and Wellcome Trust Open Access policies
[For more information click here](#)



For Reviewers

[CME Information](#)
[Conflict of Interest disclosure form](#)

For the Media

[Press Room](#)

Alerting Services

[Email table of contents](#)
[CiteTrack](#)
[XML RSS feed](#)

Most Read **Most Cited**

- ▶ [Practice Guidelines for the Diagnosis and Management of Skin and Soft Tissue Infections: 2014 Update by the Infectious Diseases Society of America](#)
- ▶ [Vaccines and Autism: A Tale of Shifting Hypotheses](#)
- ▶ [Infectious Diseases Society of America/American Thoracic Society Consensus Guidelines on the Management of Community-Acquired Pneumonia in Adults](#)
- ▶ [Clinical Practice Guidelines by the Infectious Diseases Society of America for the Treatment of Methicillin-Resistant Staphylococcus aureus Infections in Adults and Children](#)
- ▶ [International Clinical Practice Guidelines for the Treatment of Acute Uncomplicated Cystitis and Pyelonephritis in Women: A 2010 Update by the Infectious Diseases Society of America and the European Society for Microbiology and Infectious Diseases](#)

[» View all Most Read articles](#)

Disclaimer: Please note that abstracts for content published before 1996 were created through digital scanning and may therefore not exactly replicate the text of the original print issues. All efforts have been made to ensure accuracy, but the Publisher will not be held responsible for any remaining inaccuracies. If you require any further clarification, please contact our [Customer Services Department](#).

Online ISSN 1537-6591 - Print ISSN 1058-4838

Copyright © 2015 Infectious Diseases Society of America

OXFORD

[Site Map](#) [Privacy Policy](#) [Cookie Policy](#) [Legal Notices](#) [Frequently Asked Questions](#)

UNIVERSITY PRESS

Other Oxford University Press sites:

Oxford University Press

