



# Pneumococcal vaccination in statutory health insurances (SHI) aged 60–64 years

## A regionalized analysis of the implementation of the Recommendations of the Standing Committee on Vaccination (STIKO) based on nationwide claims data

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### Abstract

#### Background:

Pneumococci can cause serious diseases or even death and pose a particular risk to individuals with a weak immune system, such as infants and toddlers, the elderly, and individuals with certain defined underlying diseases. Vaccinations against pneumococci offer one possibility of preventing pneumococcal diseases in the aforementioned target groups. In addition to primary immunization for infants and toddlers, the Robert Koch Institute's Standing Committee on Vaccination (STIKO) recommends vaccination against pneumococci (so-called "standard vaccination") for adults aged 60 or over, as well as for individuals with certain diseases regardless of age (so-called "indicated vaccination"). Since July 2007, one-time vaccination has been considered sufficient for persons aged 60 or over, while repeat vaccinations are recommended only for particularly high-risk groups. The present study examines the extent to which the STIKO's recommendations were implemented in adults aged 60 to 64 over the observation period from 2010 to 2014.

#### Methods:

A secondary data analysis was carried out based on claims data from the years 2009 to 2014 from SHI physicians pursuant to section 295 of Book Five of the German Social Code (SGB V). The study population included all adults who had reached the age of 60 in 2010 and visited a doctor at least once in the observation period from 2010 to 2014. Individuals with confirmed diagnosis of a vaccination-related disease according to the STIKO, or those who had been vaccinated against pneumococci in 2009 were excluded from the study population. Cross-sectional analyses were used to calculate cumulative annual vaccination rates at the national level and at the level of the Associations of Statutory Health Insurance Physicians (ASHIP-areas). The analyses were performed both for the study population as a whole and based on stratified samples according to gender and state of health.

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### Results:

At the end of the observation period, 10.2% of the overall study population (10.9% of women and 9.3% of men) had been vaccinated against pneumococci. Considerable differences were observed between regions. The highest rates of vaccination were generally found in the eastern German federal states, with the lowest rates of vaccination appearing in the southern federal states. Women were 19.4% more likely than men to receive vaccination in the five-year period. Individuals newly diagnosed with vaccination-relevant diseases during the study period were 97.3% more likely than persons without such diseases to receive a vaccination during the studied period. There was no significant difference in the frequency of vaccination between the subgroup of patients with high-risk diseases and the subgroup with moderate-risk diseases.

### Conclusion:

Individuals aged 60 to 64 exhibit relatively low rates of vaccination both at the national level and at the level of ASHIP-areas, while vaccination rates in the eastern federal states are considerably higher than in the western German states. Accordingly, there is still considerable potential for improved prevention through an increase of standard vaccination rates in the relevant target group, especially in the regions with hitherto lower vaccination coverage. Further research is needed regarding the rates of vaccination in younger and older age groups. More thorough investigation, including by means of qualitative survey methods, should also be carried out into the attitudes of physicians and patients that underlie the decision for or against pneumococcal vaccination. The aspects relating to gender also warrant further investigation.

### Keywords

gender aspects, infectious diseases, pneumococci, standard vaccination, STIKO recommendations, utilization, vaccination, vaccination rate

### Citation

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