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Study title: Influenza vaccination coverage gaps and economic burden of flu in adults below 60 years of age with underlying conditions: a real-world analysis in Germany

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Study Title

Influenza vaccination coverage gaps and economic burden of flu in adults below 60 years of age with underlying conditions: a real-world analysis in Germany

Abstract

Background:

In 2003, the World Health Organization (WHO) set the goal of an influenza vaccination rate of 75% or higher among at-risk population (elderly, individuals with underlying chronic conditions (UC), pregnant women, and healthcare workers). It is especially important to vaccinate these at-risk groups because vaccination has been associated with improved clinical outcomes among these populations. Yet, in younger adults with underlying conditions, data on influenza vaccination coverage rates (VCR) and the economic impact of influenza is scarce.

Methods:

A retrospective nationwide representative claims data-based study covering data for the seasons 2016/17 to 2020/2021 was performed. Analyses are differentiated for age (<60 years, 60+ years), sex, and UC, defined according to specifications from the Robert Koch-Institute and the literature. VCR are reported descriptively. Parameters on healthcare resource utilization (HCRU) and costs are based on descriptive cohort comparisons. Two groups are compared: Vaccinated persons with UC below- and over-60 years of age. A descriptive approach was preferred over a statistical adjusting approach because the group of vaccinated persons under 60 years might be subject to selection bias due to unobservable vaccinations at the workplace.

Results:

VCR in persons below-60 years of age with UC (target population of the Standing Committee on Vaccination, STIKO, recommendation for influenza vaccination) ranges from 13.6% (season 2016/17) to 23.4% (2020/21). Thus, VCR are 2.2 to 3.0 times lower than in persons over-60 years of age with underlying conditions.

Across seasons, the influenza-associated hospitalization rate is 2.4 to 4.0 times higher in the over-60 years cohort compared to persons below-60 years; conversely, the cost of a hospitalized influenza case on average is higher in the below-60 years population. Mean hospitalization costs of the below-60 years population ranged from €3,250 to €5,730 across seasons and are across seasons on average 16.5% higher than the mean influenza-associated hospitalization costs of persons over-60 years (€3,500 to €4,170). ICU-quotas of hospitalized influenza cases are comparable between the two age groups.

Conclusions:

Influenza is responsible for substantial morbidity and mortality, with a large share of the total disease burden. In Germany, policy measures to reduce the impact of influenza disease recently focused on the population aged 60 and older. Overall, the disease-related impact is highest in this elderly population. However, even in a younger population with comorbid conditions, influenza infection can lead to substantial healthcare resource utilization and costs. Actions aiming at facilitating access to influenza vaccination, particularly in the non-elderly population with comorbid conditions, for example through vaccination in pharmacies,

should therefore be encouraged. The definition of quantifiable vaccination targets and measures to increase vaccination rates based on these targets should also be promoted.