

Pneumococcal Vaccination Rates

Subjects: **Others**

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Insufficient vaccination rates against pneumococcal disease are a major problem in primary health care, especially in adult patients. Shared decision-making (SDM) may address major barriers to vaccination.

pneumococcal

vaccination

shared decision making

1. Introduction

Pneumococcal infections account for a considerable burden of disease and associated economic burden worldwide ^[1]. For example, in the US pneumococcal infections are estimated to contribute to 25,400 deaths annually and account for \$3.8 billion of direct treatment costs per year ^[2].

2. History

Although pneumococcal infections can affect people of all ages, adults aged 65 years and above, as well as children below the age of two are at increased risk. Additionally, patients with chronic conditions have a higher risk for severe infections that can come with increased complications, long-term health constraints, and mortality ^{[3][4]}.

Pneumococcal infections can be effectively prevented through vaccination ^{[3][5][6]}. Internationally available vaccines today comprise polysaccharide (PPV) and conjugate vaccines (PCV) protecting against different serotypes of *Streptococcus pneumoniae* ^{[3][7]}. Despite the possibility to treat pneumococcal disease with antibiotics, prevention by vaccination can additionally establish herd immunity by lowering pneumococcal carriage rates in the population and can counteract antibiotic resistance ^[3]. The vaccination against *Streptococcus pneumoniae* is recommended for elderly patients and patients with chronic conditions in most health care systems, with different application schemes for these respective patient groups ^{[8][9][10][11]}.

Despite safety, accessibility and affordability of vaccines, pneumococcal vaccination rates remain below national targets in several high-income countries (e.g., in Germany 12.7% of the chronically ill and 50.9% of the elderly ^{[12][13][14]}). Pneumococcal vaccination rates tend to be especially low in high-risk patients (<65 years with a chronic health condition) ranging between about 13% in Germany and 30% in the US ^{[12][13][14]}.

3. Development

Insufficient vaccination rates are often a result of missed opportunities for vaccination (MOV), that might be attributable to health care provider (HCP) related factors, demand-related factors, and factors due to health system constraints [15][16]. Reported barriers to pneumococcal vaccination include missing recommendations and insufficient knowledge of HCP [17][18], as well as patients' lack of awareness, assumptions of unnecessary, and doubts about the pneumococcal vaccine and its efficacy and safety [19][20].

In the consultation, the recommendation to get vaccinated, and the communication of risks and benefits can be constrained by HCP's knowledge and confidence, communication style or lack of time [21][22][23]. HCP are recognized the most trusted source of health information for patients [20]. By taking into consideration that most patients are vaccinated in outpatient care [24], HCP in this setting are in a crucial position to inform and educate patients about vaccinations and to address patients' doubts and concerns.

A frequently recommended approach of patient communication is described as shared decision making (SDM), which describes the involvement of the patient in the whole process of decision making, in which HCP and the patient take health care decisions based on partnership. The SDM approach emphasizes patients' rights and autonomy and is considered as a strategy to reduce practice variations and promote evidence based medicine [25].

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