International Federation on Ageing

Vaccines 4 Life

Influencing Policy to Improve Adult Vaccination in Germany

Expert Meeting Report

18-19 February 2020
Munich, Germany

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Background

Older people and those with underlying chronic conditions experience a disproportionate burden of disease for vaccine preventable diseases (VPDs) such as influenza, pneumonia, pertussis, and shingles (herpes zoster).[1] There is evidence that intersecting risk factors such as a natural decline in immune function with age (immunosenescence), low likelihood of being vaccinated as a child and underlying chronic diseases such as cardiovascular disease, type-2 diabetes, and chronic obstructive pulmonary disease increase the incidence and severity of VPDs with age.[2,3] In Germany, pneumonia alone leads to an estimated 300 hospitalizations per 100,000 people annually,[4] while in the last decade, seasonal influenza was responsible for 19,000 excess deaths per year.[5]

Alongside an increased burden of disease for VPDs, at-risk groups are more likely to experience physiological and cognitive decline with infection.[6,7] Reduced functional ability can seriously impact the ability to care for oneself, resulting in life-long consequences for the individual, and pressure on already constrained health and social care systems. A study published by High et al (2005) found a significant number of influenza-related disabilities occurred as a direct outcome of longer periods of hospitalization. Although physiological function wanes naturally with age, common infections such as pneumonia and influenza can be more deleterious for older adults, often accelerating the rate of functional decline.[8]

Vaccination is an effective, preventative health measure that has proven successful in decreasing the risk for VPDs and their associated complications.[9] In addition to the health benefits, there is a return on investment and economic benefit for society in avoiding disability, hospitalizations and death by increasing vaccination uptake rates.[10] As a consequence of increased uptake rates of adult vaccination, German studies have shown decreased admission rates to hospitals, length of hospital stay and mortality.[11]

Immunization health policies in Germany have been effective in bringing prevention and control of VPDs to the forefront of public health. Laws such as the "German Protection against Infectious Disease Act" (2001), were important in defining the basics for vaccinations and charging the relevant scientific bodies with the surveillance and control VPDs in the population.[12] The current vaccination schedule for older adults, and those at increased risk for VPDs in Germany includes among others, pneumococcal, pertussis and influenza vaccinations. However, adult uptake rates for these vaccines remains low across the country,[13,14] with slightly lower rates observed in western Germany when compared with the East.[15]

Expert Meeting

The "Influencing Policy to Improve Adult Vaccination in Germany" attracted a multidisciplinary group of experts, including health care professionals, and representatives from the fields of health economics, behavioural science, communications and health policy.

The overarching goal of the expert meeting was to increase adult vaccination uptake rates in Germany to allow older people to live into later life in good health and with high functional ability with specific objectives addressing:

- An increased understanding and attention to the topic of adult vaccination and its health and economic benefits in at-risk patient groups and age-related organizations
- Barriers preventing at-risk groups from being vaccinated
- How best to shape adult vaccination policy through a multisectoral approach

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Understanding the Barriers to Adult Immunization in Germany

Challenges in Immunization Monitoring

As immunization programs have become more complex and additional vaccines have been introduced across the life course, and as the lifespan of older people and people with chronic diseases increase, the need for better data on vaccination continues to grow.[16] Germany faces a unique challenge in the current context of population ageing in addressing the gaps in adult vaccination uptake rates as the country does not have a central immunization registry. Adult vaccination uptake rates are instead gathered using a variety of methods such as surveys and information from health insurance claims.[17]

National immunization registries are crucial to keeping track of life course vaccination efforts, as they produce evidence required to perform vaccination program analysis. Reliable and up to date immunization data is needed for informing effective policies regarding resource allocation for the delivery of vaccines and the development of targeted public health programs.

Accessible registries can also provide an entry point for specialists working with at-risk populations to discuss vaccination, as many people with chronic diseases are seen by disease specialists, but rarely by physicians whose role it often is to recommend vaccines.[18] Thus, the centralization of vaccine registries can increase the sharing of information among HCPs and may further help to improve communications about recommended vaccinations.

Knowledge and Awareness

Public awareness and education are essential for achieving higher vaccination uptake rates. In Germany, a lack of knowledge on vaccinations and a skewed perception of risk for VPDs are commonly stated reasons for older people and those with chronic diseases not being vaccinated.[19] Limited access to information is a significant barrier for at-risk groups and has resulted in a decline in vaccinations for infections such as influenza.[20] Although available, vaccination related information is not effectively communicated to those who most need it. Thus, there is an urgent need for public health messages and a campaign that includes messages specific to the most vulnerable populations.

The Role of Health Care Professionals

As in many European countries, an individual's decision or choice to be vaccinated largely depends on their physician's recommendation. Yet, a survey found that one in every three German physicians fail to encourage older people and those with chronic diseases to be vaccinated against influenza.[21] The lack of guidance and encouragement from health care professionals can greatly limit the extensibility of vaccination programmes.

With the exception of the Measles Protection Act, there is no formal acknowledgment of the shared responsibility to vaccinate amongst specialists and general practitioners. This lack of clarity in responsibility to vaccinate can present an additional barrier to vaccination uptake in adults.

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Life Course Approach to Immunization

Along with other Western European countries, Germany's population is rapidly ageing. A life course approach to health considers preventative health to be an ongoing process of illness prevention and health promotion. Contrary to popular belief, the process of ageing begins in early life, with decline in physiological function often occurring after the age of 30.[22] An effective vaccination strategy planned around protecting older people, and implemented across the life course, can have profound social, health and economic benefits. Not only do vaccines protect against a range of diseases, but they directly relate to the maintenance and improvement of a person's function.

Despite providing cost-effective protection against diseases for individuals and their communities, vaccinations remain an underused and underfunded branch of public health. Spending on vaccinations constituted less than 0.5 per cent of healthcare spending in Germany.[23] Although general health care expenditure increased by 4.2 per cent between 2008-2014, the amount spent on vaccinations decreased by 6.2 per cent.[24] To respond to the rapidly ageing population, policy makers must consider the far-reaching public health benefits of increased investment in reorienting towards prevention and promotion.

Enhancing the national immunization strategy to prioritize vaccination for older adults and those at increased risk for VPDs will deliver a significant return on investment toward a sustainable healthier population for a longer period.

Although initially not targeted for older people, the recent Measles Protection Act serves as an important national step towards prioritizing preventative health. Beginning March 2020, all children, kindergarten staff, and personnel working in medical and community-based facilities (born after 1970) will be vaccinated against the measles virus.[25] At-risk groups might also benefit from interdisciplinary vaccination by any HCP and from intensified awareness campaigns by authorities as well as from the increased vaccination uptake surveillance.

Vaccination Communication

A person's beliefs[26] are often linked to their level of health literacy and the decisions they make surrounding vaccination. A framework commonly used in assessing health behaviours is the Health Belief Model developed by Irwin Rosenstock and colleagues in 1960. A person's willingness to act to protect or promote their health is dependent primarily on their perception of the disease threat; knowledge about the disease; perceived risk for developing the disease; perceived efficacy of treatment; and, then if the perceived benefits of taking action outweigh the costs or barriers.[27]

In Germany, a fear of potential side effects, along with perceived risk of danger of vaccinations and limited understanding of the risk and consequences of VPDs, are among the most stated reasons for vaccination refusal in at-risk groups.[28]

Influencing vaccination health behaviour is a challenging and complex process that requires careful analysis of a populations' access to vaccines, as well as their beliefs, attitudes and knowledge of VPDs. Vaccine communication can play an important role in catalyzing change and can be an effective tool if it is evidence-based and well integrated into the national immunization programme.

Drawing on the Health Belief Model, social data collected from the target population including beliefs and perceived risks, can contribute to effective and targeted messages, while cross-sectoral collaboration is critical for its delivery. To illustrate, in Thuringia, a state in east-central

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Germany, an influenza vaccine campaign targeting older adults was based on formative research, including epidemiological and social data about the target group.[29] This campaign was grounded in evidence and guided by theory. For this reason, experts from the fields of behavioural sciences and communications were as much a part of its development as immunization experts and health care professionals.

Carefully devised and thoroughly informed communication strategies are integral to an effective immunization programme. A strong vaccination communication strategy not only guides vaccination behaviour but also builds trust in the national vaccination recommendations and limits the opportunity for miscommunication and misinformation.

The Role of Health Care Professionals

Health care professionals play a key role in the successful implementation of vaccination programmes. Chronic disease specialists, for example, are a valuable resource; trusted, and in a privileged position to reduce the burden of VPDs. Nevertheless, limited harmonization in vaccination delivery in Germany has led to uncertainty over vaccine responsibility among physicians and other health care professionals. While specialists are qualified vaccinators, there is no formal acknowledgement of the distinctive role these health professionals play in vaccination.

An important factor in the improved delivery of vaccines for at-risk patients is the coordinated action between government and health care professionals. Through formally clarifying and reiterating the shared responsibility of vaccination delivery among HCPs, policymakers can help to encourage multiple points of access to vaccinations for at-risk groups.

Encouraging Health Care Professionals

HCPs can often lack the tools to effectively prioritize vaccine risk communication with patients. As is the case with other areas of medical decision-making, providing extrinsic motivators for the time it takes to counsel patients on vaccines could improve the quality and frequency of such conversations.[30]

In a United Kingdom (UK) study, an audit and governance-based incentive was effective in encouraging clinicians to monitor and report pneumococcal and influenza vaccination data in patients with chronic conditions and those over the age of 65 years. The value of such a strategy is supported by the resulting increase in uptake rates (24 per cent) observed among patients 65 years and older, and a mean vaccination rate for this group that surpassed the World Health Organization (WHO) recommendation of 70 percent.[31]

Education and Training

Another important determinant of vaccination uptake rate is the knowledge and attitudes of HCPs surrounding vaccinations.[32] In their cross-sectional study, Betsch and Wicker (2014) found that occupational physicians with poor attitude towards vaccines and more misconceptions, recommended fewer vaccinations. Similarly, non-receipt of the influenza vaccination among HCPs has been closely associated with physician knowledge and attitudes towards influenza and the vaccine.[33]

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As many HCPs work with at-risk groups, viewing vaccination as a professional responsibility contributing to reduced morbidity and mortality in these populations, rather than a personal choice may be a step to increasing uptake rates.[34] Tools such as continuing professional development (CPD) programs that build on clinical and non-clinical competencies can help strengthen HCP knowledge and potentially decrease reliance on attitudes in making medical judgments.[35] As HCPs are gateways to vaccine information for patients, it is imperative they rely on official recommendations rather than personal beliefs and misconceptions to guide vaccination conversations, and that the proper tools are available to support them in doing so.

Actionable Steps towards Increasing Adult-Vaccination Rates

This expert meeting acted as a platform to advance conversation on the complex vaccination landscape of Germany. It enabled knowledge sharing and robust multidisciplinary discussion on immunization education and public health promotion based on the common understanding of vaccination throughout life. Actions conferred upon by the meeting delegates were.

1. Greater Investment in Education and Awareness Campaigns for At-Risk Groups

Improving population education is a complex, multi-tiered process that requires intersectoral and multidisciplinary collaboration. There is a general lack of public education for at-risk groups around the serious nature of VPD, the risks associated with low vaccination uptake rates, and the correlation between vaccine preventable diseases and decline in functional ability.[36] To effectively address the limitations in patient understanding and improve perceptions around vaccine effectiveness, there must be greater investment in vaccination campaigns and educational resources.

It is important for stakeholders invested in increasing adult vaccination uptake rates to collaborate on creating messaging that triggers action, as knowledge is not always enough to motivate change.[37] Vaccine educational resources that aim to positively change attitudes of at-risk groups should focus on correcting misconceptions, reducing fear and eliciting a sense of collective responsibility.[38] Key stakeholders involved in the development of these resources should include health care professionals, behavioural scientists, communication specialists and patient advocacy organizations.

2. Improved Vaccine Communication between Health Care Professionals and At-Risk Patients

As trusted sources for health information, health care professionals play a critical role in preventing and mitigating the impact of VPDs.[39] Simple and effective actions such as frequent monitoring of a person's Impfpass or "vaccination records", regular conversations with patients on the safety and efficacy of vaccines and sharing self-vaccination testimonials that can help inform their decision-making process, and vaccination behaviour.

Factors other than vaccine hesitancy can impact adult vaccine uptake rates. The lack of formal clarification of the responsibilities of HCPs such as specialists to vaccinate, for example, can result in fewer conversations with at-risk patients. The importance of shared responsibility among HCPs should be emphasized and encouraged in policies as part of a broader approach to improving adult vaccination rates in Germany.

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3. Apply a Life Course Approach to Adult Vaccination

Evidence to date shows that building intrinsic capacity in early life through a life course approach to immunization not only promotes herd immunity but leads to physiological and psychological resiliency in later life.[40] Thus, measurements adopted within the measles law such as interdisciplinary vaccination by any HCP and joint awareness campaigns by several authorities, have merit, and are conducive to building healthier populations.

To effectively support population health, however, a life course immunization strategy should promote vaccines for the health and functioning of adolescents, adults and older adults. There is an opportunity for governments to build on the current status in the promotion and delivery of adult vaccination through stronger communication and collaboration with stakeholders and increased investment in education and awareness.

4. Develop a Multidisciplinary Knowledge Exchange Strategy to Improve Adult Vaccination Uptake

Shaping sound adult vaccination policies and practices requires mutual collaboration between the various disciplines and sectors that influence the vaccination landscape. To promote the exchange of information and ideas between disciplines, a knowledge exchange strategy is needed. Such a strategy would address information gaps related to the interplay between vaccination, ageing, chronic diseases and functional ability, and aim to dispel misconceptions in at-risk groups. Knowledge sharing across a diverse body of expertise (including academia, industry, communications and behavioural specialists and patient and advocacy groups but also health care insurances) would not only lend credibility to vaccination resources but also promote the use of these resources within the different disciplines.

Expert-led virtual town halls are an effective knowledge exchange instrument that could mobilize multidisciplinary efforts to improve vaccination uptake rates in Germany. Town halls are an innovative, barrier free platform that can facilitate the exchange of information and good practices and promote cross-sectoral communication.

Conclusion

Healthy older people contribute socially and economically to the fabric of Germany. New investment in the health promotion and prevention of VPDs must address education, communication, vaccinator pathways and collaboration across professional associations.

Collectively, experts expressed the need to improve the tone and reach of public health messages related to vaccination; strengthen awareness strategies on vaccination for at-risk populations; foster cross-sectional and cross-disciplinary networks and increase cohesion in vaccine delivery and monitoring.

Strengthening immunization throughout life is central to a broad public health strategy that is built through multi stakeholder action and acknowledges the value of a life course approach to vaccination.

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"Vaccination in France: Changing the Public Perception" was supported by an unrestricted educational grant from Pfizer Global

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