


Strategies to Increase the Percentages of Vaccination Coverage

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In 2012, the WHO proposed the Global Vaccine Action Plan (GVAP) 2011–2020 to promote essential or routine vaccines among all children of the world [1]. National vaccination programs must administer the essential vaccines to children and the recommended vaccines to adolescents, adults and specific population groups [1,2].

Sustained high percentages of vaccination coverage are necessary to achieve high levels of individual protection and sufficient herd immunity levels to successfully control vaccine-preventable diseases [3–5]. For this reason, the WHO proposed to achieve at least 90% vaccination coverage with three doses of diphtheria–tetanus–pertussis (DTP) vaccines by 2015 and at least 90% vaccination with all vaccines in national programs by 2020 [6]. However, the percentages of vaccination coverage registered in the target vaccination population in many developed and undeveloped countries remain below these recommended levels [3,4].

For the vaccines not included in the GVAP, the percentages of vaccination coverage in the target population groups (adults, high-risk individuals, specific population groups) were also below the recommended levels in most countries. In European countries and in developed countries worldwide, the objective for influenza vaccination is 75% in individuals aged more than 55–65 years, individuals with a high-risk of influenza complications, healthcare professionals, and pregnant women [7]. Nevertheless, in 2018 (or nearest year), the percentages of influenza vaccination coverage reported among individuals aged 65 and over were less than 50% in the majority of European Union countries [8].

The question is therefore: How can the percentages of vaccination coverage be increased? The strategies to increase the percentages of vaccination coverage can be focused on the following aspects: resources available for vaccination programs; vaccine hesitancy and confidence; access to vaccines; organization and management of vaccination programs; immunization information systems; and health policy. The articles published in this Special Issue present interventions and suggest strategies to increase the percentages of vaccination coverage.

Several articles published in this Special Issue were focused on the access to vaccines. Anastasiou et al. [9] found that having to pay out-of-pocket for vaccination was one of the factors associated with a lower influenza vaccination coverage in European citizens aged 55 or older. Kalucha et al. [10] found that having to pay for the influenza vaccine was also one of the reasons for rejecting influenza vaccination among young health-care workers in Poland. Bianchi et al. [11] found that a catch-up vaccination strategy of vaccination during hospitalization increased the vaccination coverage for the diphtheria tetanus and inactivated polio vaccine (DT-IPV) in individuals aged 65 years or more in France.

Vaccine hesitancy is defined as a “delay in acceptance or refusal of vaccines despite availability of vaccine services” [12]. The factors that have been associated with vaccine hesitancy include the perceived risk of disease, confidence in the vaccine’s efficacy, the vaccine’s effectiveness and safety, and the accessibility of vaccination [13]. The strategy to increase vaccination coverage by reducing vaccine hesitancy must be based on the implementation of health education and communication activities to reduce vaccination hesitancy and increase vaccination confidence and acceptance [13].



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Several articles published in this Special Issue were focused on vaccine hesitancy and confidence. Anastasiou et al. [9] found that influenza vaccination was associated with a high knowledge about the effectiveness and safety of the influenza vaccines. Rodriguez-Blanco et al. [14] found that a good perception of the influenza and Tdap (tetanus, diphtheria, pertussis) vaccines administered during pregnancy was associated with vaccination acceptance among pregnant women in Spain. Qamr et al. [15] found that a campaign to increase vaccine confidence among parents increased the vaccination coverage for the typhoid conjugate vaccine in children in Pakistan. Popa et al. [16] found that the lack of vaccine information and the fear of vaccine side effects were important negative factors against vaccination programs in Romania. Guaraldi et al. [17] found that COVID-19 vaccination among type 2 diabetic patients in Italy was associated with having been vaccinated against influenza and a high education level. Constantino et al. [18] found that a positive attitude towards vaccinations among celiac patients in Italy was associated with the belief in the positive return of vaccine-preventable diseases with declining vaccination coverage.

Several of the articles published in this Special Issue were focused on the health policy measures. Walkowiak et al. [19] found that the implementation of strict health policy measures (COVID-19 passport) led to higher percentages of COVID-19 vaccination coverage in Lithuania compared to the vaccination outcomes in Poland.

More resources should be allocated to national vaccination programs to achieve higher percentages of vaccination coverage [3–5]. The WHO [20] has recommended the following investments to improve national vaccination programs: (1) invest in the management of national vaccination programs; (2) invest in advanced immunization information systems able to track each person's immunization status; (3) invest in strategies to immunize under-vaccinated and unvaccinated persons; and (4) invest in modernizing vaccine supply chains.

The articles published in this Special Issue suggest strategies to increase the percentages of vaccination coverage for routine and non-routine vaccines mainly in developed countries. Future research should be focused on the analysis of specific strategies to increase vaccination rates.

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