Editorial

Vaccination Across the Lifespan: A Public Health Imperative

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Introduction

Vaccination is an essential public health intervention, preventing infectious diseases, saving millions of lives globally, and reducing the burden on the healthcare system. Currently, vaccines prevent between 3.5 and 5 million deaths annually from diseases like diphtheria, tetanus, pertussis, influenza, and measles.[1] It not only protects individuals but also contributes to herd immunity, safeguarding entire communities. Maintaining high vaccination coverage across all age groups reduces the burden of preventable illnesses and safeguards public health.

Childhood immunization is a cornerstone of preventive healthcare, providing protection against various life-threatening diseases during the most vulnerable years of life. Key vaccines include the DTP, MMR, IPV, Hib, and pneumococcal.[2] Global immunization coverage has stagnated since 2022, with 14.5 million children missing all DTP doses and 6.5 million not completing follow-up doses. There is an urgent need for innovative solutions to meet the Immunization Agenda 2030 targets of 90% vaccination coverage. [3]

Vaccination has a pivotal role in women's healthcare, especially during pregnancy. The CDC recommends the inactivated flu and Tdap vaccines for protection of both mother and baby, with the flu vaccine best administered by the end of October and Tdap between 27 and 36 weeks of gestation. The HPV vaccine is recommended for girls aged 9–14 (two doses) and women over 14 (three doses) to protect against cervical cancer and genital warts, but it should not be given during pregnancy due to insufficient safety data.[4]

Regular vaccinations are crucial for adults aged 50–64, including COVID-19, influenza, shingles, and Tdap/ Td. Hepatitis B is recommended for those up to 59 years old, and MMR for those born in 1957 or later. For those 65 and older, COVID-19, influenza, pneumococcal, and shingles vaccines are essential, with an RSV recommended. Healthcare providers should be consulted to determine additional vaccines for older adults, as regular vaccinations are important to prevent serious health issues due to immune decline and chronic conditions.[5]

A comprehensive vaccination strategy is important for community health, encompassing children, women, adults, and older adults. A strong public health infrastructure that guarantees vaccine access and affordability should serve as the foundation for this strategy. In order to improve vaccination coverage, public awareness campaigns must be customized to address the concerns of all age groups. Children's immunization programs must be implemented in schools and coincide with routine physical examinations while women, particularly those who are of reproductive age, require special attention. Adult immunization programs must to prioritize occupational health, and older people need to remain

Production and Hosting by KEMU

https://doi.org/10.21649/akemu.v30i3.5843

updated. Considering immunization as a top public health priority, policy makers and healthcare professionals must work together to ensure continuous monitoring and evaluation of vaccination campaign's coverage and effectiveness in order to spot gaps and launch prompt interventions.

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