

LETTER TO EDITOR

Vaccination saves lives-Know your Vaccines.

Vaccine history dates back to the 18th century. Edward Jenner, a renowned physician known as the father of vaccination, discovered the smallpox vaccine and gave the world hope to reduce the morbidity and mortality from various diseases by way of vaccination not only from smallpox but from other infectious diseases over time. Among the few measures in public health over the last century, the impact of immunisation has been unparalleled. Vaccinations have reduced illness, disability, and death from various infectious diseases. The only human disease ever eradicated, smallpox, was eradicated using a vaccine, and a second, polio, is near eradication, also using vaccines^{1,2}.

Vaccines provide individual protection for vaccinated persons; they also offer community protection by reducing the spread of disease within a population. Person-to-person infection is spread when an infected case comes in contact with a susceptible person. If the transmitting case only comes in contact with immune individuals, the infection does not spread beyond the index case and is rapidly controlled within the population. Interestingly, this chain of human-to-human transmission can be interrupted, even if there is not 100% immunity, because transmitting cases do not have unlimited contacts; this is referred to as “herd immunity” or “community protection” and is an essential benefit of vaccination.

It's often said that vaccines save lives, but this is not strictly true; it is the process of vaccination that protects lives. A vaccine that remains in the vial is 0% effective even if it is the best vaccine in the world. Thus, we all must work together to ensure a high level of coverage among populations for whom vaccines are recommended. Diseases that once induced fear and sparked a desire for vaccines are now rare, and there is a false and dangerous sense of complacency among the public. In addition, in recent years, growing numbers of persons have become hesitant about

vaccines, fearing side effects and not appreciative of the enormous health and economic benefits that vaccines provide. Independent evaluation of the safety of the immunisation schedule has found it to be highly safe³. However, translating the science into information capable of influencing vaccine sceptics has been difficult. The current Covid-19 pandemic has again reignited the desire and campaign for vaccination.

The National Vaccine Advisory Committee (NVAC) in the United States issued a report in 2015 with 23 recommendations to assure high levels of vaccine confidence. And while we have focused on children, vaccine-preventable diseases exact a substantial health burden in adults and immunisation coverage rates for most recommended vaccines are substantially lower for adults than those achieved for recommended vaccines in children. Thus, there is a need to enhance immunisation rates in children and adults⁴.

The proportion of the global population aged 65 and older is rapidly increasing. Infections in this age group cause substantial morbidity and mortality. Influenza, herpes zoster, and pneumococcal infections cause significant morbidity and mortality in the elderly. Therefore, effective vaccines against influenza, pneumococcal infection, and herpes zoster have the most critical potential for preventing morbidity and mortality among people aged ≥ 65 ^{5,6}.

The current Covid-19 pandemic has a significant impact on the morbidity and mortality of the elderly population, especially among people with comorbidities of hypertension and diabetes. Considerable improvements have been made in vaccines for older people in recent times. The recombinant zoster vaccine has an efficacy of 90% that is minimally affected by the age of the vaccinated person and persists for more than four years. Increasing antigen dose or inclusion of adjuvant has improved the immunogenicity of influenza vaccines in older adults.

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Conjugate and polysaccharide pneumococcal vaccines have similar efficacy against invasive pneumococcal disease and pneumococcal pneumonia caused by vaccine serotypes in older adults. Co-administration of these vaccines is feasible and vital for maximal uptake in older people. During the covid-19 pandemic, where influenza infection may mimic or synergise with SARS-CoV-2 infection, optimal coverage of older populations with enhanced influenza vaccines in autumn and winter is essential.

In conclusion, vaccines are some of the most effective and cost-effective prevention tools we have. Therefore, it is incumbent upon all of us who work in the healthcare setting as Internists and community leaders to stress to our friends and colleagues the importance of vaccination both for the individual vaccinated and for the communities in which the individuals live. Also critically important, due to the current Covid 19 pandemic, greater emphasis should be made to vaccinate the elderly, those with comorbidities, and pregnant females to get vaccinated against infections caused by Influenza, Pneumococcal and Herpes zoster in time on the advice of your doctors to decrease the morbidity and mortality caused by these infections.

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Dr. Farhana Siraj, MD

**Assistant Professor, Department of Internal Medicine,
SKIMS**