

THE NEED TO FORMULATE MULTI-FACETED STRATEGIES BY POLICY MAKERS TO IMPROVE THE ANNUAL INFLUENZA VACCINE UPTAKE AMONG THE MEDICAL STUDENTS IN SAUDI ARABIA.

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Dear Editor,

This letter is in response to the recently published article, 'Uptake of influenza vaccination among medical students from Saudi Arabia' in the Journal of Infection and Public Health (Abalkhail 2017). I intend to address the gaps left by the authors keeping in mind the arduous work and significant contributions made. Its findings shed light on potential non responsive behavior of the students towards vaccination. With the winter around, it is the precise time for articles related to influenza and its vaccination.

The kingdom of Saudi Arabia, being a pilgrim center, is on constant high alert towards the risk of transmission of infectious diseases, especially the air borne infections. For instance the famous 2009 'swine flu', pandemic influenza A (H1N1) affected 15850 people as laboratory confirmed cases with 124 reported deaths in Saudi Arabia (AlMazroa 2010). Such demanding situations necessitate the formulation and adoption of stringent policies on vaccination strategies of vulnerable groups to limit the spread. The Saudi Thoracic Society (STS), framed the influenza vaccination guidelines specific to Saudi Arabia with reference from International Guidelines and Best Practices, contemplating upon the challenges faced by the Kingdom due to huge influx of pilgrims and the mutagenic potential of the changing serotypes. The healthcare professionals are one of the target groups recommended by the STS for annual influenza vaccination and through whom the preventive strategies would be standardized within the region (Zeirouni 2015). Being a subject of major concern in the region of Saudi Arabia, the authors of the present study have attempted to highlight certain fundamental issues on influenza vaccination with a focused attention on the medical students whose long years of graduation studies and daily presence in the clinics make them highly susceptible for both acquiring and transmitting the infection. The three major findings of Abalkhail et al study, viz, the lower levels of knowledge of medical students on transmission of influenza, poor uptake rate of immunization and the reasons for denial of the vaccination uptake need follow up and urgent address. The three years low vaccine uptake rate

necessitates immediate action. Despite the unhindered availability of the vaccine and free services offered to the students, the reported uptake rates were far below the optimal levels while on the contrary Benjamin (2016) and Elias et al (2017) have reported non availability of vaccines and cost of vaccination as major potential barriers of vaccination in their studies. These findings reflect on the poor awareness and laxity on the importance of vaccination by the students which demand urgent attention by the concerned authorities. Nonetheless it is important to analyze the students with a previous history of vaccination but developed non adherence to immunization subsequently since systematic reviews have identified past vaccination as a powerful predictor for sustainability of uptake (Philipp 2017). Such data is important in identifying the chief reasons hampering the adherence to immunization. Addressing these barriers may help improve the uptake rate substantially.

The assumptions of not being at risk of acquiring influenza infections and lower confidence in vaccine efficacy highlighted by the authors as chief reasons for denial of uptake reflects on the negative attitude of students towards vaccination or an utopian feeling of remaining disease free. On careful analysis, it appears that these reasons fall under the category of psychological barriers (Philipp 2017). Effective coverage of vaccination depends on overcoming these misconceptions and increasing the confidence in efficacy of the vaccine by using multi faceted approaches to influence the uptake decisions. Lower knowledge and awareness among the students can jeopardize the prospects of a successful vaccination program hence efforts should be made towards considering revision of curriculum guidelines. Principi (2013) from his research stated that usual immunization campaigns have become stalemate and updated knowledge of vaccines and influenza transmission mechanisms of those involved in healthcare delivery plays a key role in achieving optimum immunization coverage for the population in general. Similar to Principi's results our study has also found that routine vaccination campaigns have failed to motivate the students suggesting behavior modification and positive reinforcement to increase vaccine acceptance rate depend on revising the curriculum guidelines, using evidence based scientific sources, which has been proven to be effective in other innovative program efficacy trials (Hakim 2011).

Abalkhail et al recommended adoption of innovative strategies and programs for greater coverage of medical students. No data exists from Saudi Arabia on the importance of such novel programs, signalling the priority to obtain evidence from clinical trials studying the efficacy of different strategies. Also, the effect of vaccination of healthcare personnel on risk reduction among patients must be prioritized. It is important to research and analyze these issues as the results may serve as crucial evidence for policy makers in order to effectively formulate, implement and sustain the new strategies. A systematic review of 8 studies on the effect of healthcare personnel vaccination on patients' morbidity and mortality outcomes published in 2014 by Faruque et al (2014) reported a relative risk reduction of 42% (pooled risk ratio of 0.58) for influenza like sickness and 29% reduction in mortality. It is necessary to obtain such statistics from Saudi Arabia in order to completely understand the effectiveness of vaccination. Such results may play a pivotal role in guiding and revising the policy guidelines by incorporating the adoption of the effective strategies involved in optimization.

Furthermore, the positive attitude of students towards intended vaccination on offering vaccine, raises the hopes that adoption of ingenious advocacy measures targeting improved coverage might achieve success. From the study, the two major sources identified to influence the uptake decision were health department guidelines and medical training, which point out

that optimal vaccination strategies require integrated efforts from the departments of Health and Education.

To conclude it can be said that there is an urgent need for enhanced efforts to redesign and reformulate the existing policies and programs by the policy makers using innovative multifaceted approach to improve the annual influenza vaccine uptake rate among the medical students.

Summary of Future Recommendations

- **Qualitative assessment of reasons for denial of annual vaccination among previously vaccinated group.**
- **Clinical trials to assess and evaluate the efficacy of different models of integrated motivation programs in improving vaccination uptake among the medical students.**
- **The efficacy of vaccination of medical students on prevention of influenza illness on patients.**
- **Considering mandating annual influenza vaccination based on the results of the above recommendations.**

Conflict of interest

There is no potential no conflict of interest reported.

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Declaration

I declare that all work is original and that the research and publication has not been published in a different journal.

ST conceptualized the idea of writing manuscript in the form of letter. ST is solely responsible for writing the manuscript.

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