

## Epidemiology and Public Health 2020: Reasons Leading to Influenza Vaccine Acceptance and Decline among Tunisian Healthcare Workers

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### ABSTRACT

Despite of recommendations, influenza vaccine (IV) coverage among healthcare workers remains low in many countries. We aimed in this study to assess the main reasons leading to flu vaccine acceptance and decline among Tunisian healthcare workers through a study of knowledge, attitudes and practices towards influenza immunization. It was a cross sectional study conducted in Tunisian primary and secondary healthcare facilities from March to May 2019. Health professionals were enrolled according to a self-weighted multistage sampling. A face to face questionnaire was administered to participants. Reasons leading to IV acceptance and decline were assessed through open-ended questions. A total of 1230 HCWs were included in the study with a mean age of  $44.5 \pm 9.3$  years and a sex-ratio (M: F) of 0.25. Among participants, 43.1% (95%CI: [40.3-46.0]) were willing to receive the flu vaccine if recommended to caregivers and provided for free. According to participating healthcare workers, the main three reasons leading to vaccine acceptance were: self-protection (73.8 % [71.3-76.3]) and family and patients' protection (49.2% [46.4-52.0] and 28.2% [25.8-30.7] respectively). Regarding reasons leading to IV decline, fear of the vaccine side effects (48.0% [40.3-46.0]), feeling not concerned by the flu vaccine (31.8% [29.3-34.4]) and doubt about vaccine efficacy (31.6% [28.8-34.3]) were the most frequent cited reasons. Less than half of participants were willing to receive the IV. Fear of flu vaccine side effects was the most frequently reported reason leading to vaccine decline. Health authorities should thus organize regular training sessions in healthcare facilities aiming to educate caregivers about IV composition and safety.

**Keywords:** Vaccine; Influenza vaccine; Healthcare; Flu vaccine; Immunization

### INTRODUCTION

An antibody is surveyed by its viability – the degree to which it lessens danger of malady under controlled conditions – and its adequacy – the watched decrease in chance after the immunization is placed into utilization. On account of flu, viability is relied upon to be lower than the adequacy since it is estimated utilizing the paces of flu like ailment, which isn't constantly brought about by flu. Flu immunizations by and large show high adequacy, as estimated by the immunizer creation in creature models or inoculated individuals. Be that as it may, concentrates on the adequacy of influenza antibodies in reality are troublesome; immunizations might be defectively coordinated, infection commonness changes generally among years, and flu is regularly mistaken for other flu like ailments. Be

that as it may, in many years (16 of the 19 years before 2007), seasonal influenza antibody strains have been a decent counterpart for the flowing strains, and even a confused immunization can frequently give cross-assurance. The infection quickly changes because of antigenic float, a slight transformation in the infection that makes another strain emerge.

Rehashed yearly flu inoculation for the most part offer reliable year-on-year security against flu. There is anyway interesting proof that rehashed immunizations may cause a decrease in antibody adequacy for certain flu sub-types; this has no importance to current suggestions for yearly inoculations however may impact future inoculation strategy. Starting at

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2019, the CDC suggests a yearly antibody as most investigations exhibit in general viability of yearly flu inoculation.

In working grown-ups, an audit by the Cochrane Collaboration found that immunization brought about a humble reduction in both flu side effects and working days lost, without influencing transmission or flu related complications. In sound working grown-ups, flu antibodies can give moderate assurance against virologically affirmed flu, however such insurance is extraordinarily decreased or missing in certain seasons.

Proof for an impact in grown-ups more than 65 years of age is hazy. Methodical audits inspecting both randomized controlled and case-control contemplates found an absence of excellent proof. Surveys of body of evidence control considers discovered impacts against research centre affirmed flu, pneumonia, and passing among the network staying old.

The gathering generally defenseless against non-pandemic influenza, the older, benefits least from the immunization. There are various explanations for this precarious decrease in antibody viability, the most well-known of which are the declining immunological capacity and fragility related with cutting edge age. In a non-pandemic year, an individual in the United States matured 50-64 is almost multiple times bound to kick the bucket a flu related demise than a more youthful individual, and an individual over age 65 is more than multiple times bound to bite the dust a flu related passing than the 50-64 age gathering.

There is a high-portion influenza antibody explicitly planned to give a more grounded insusceptible reaction. Accessible proof shows that immunizing the older with the high-portion immunization prompts a more grounded insusceptible reaction against flu than the customary portion antibody.

An influenza immunization containing an adjuvant was endorsed by the US Food and Drug Administration (FDA) in

November 2015, for use by grown-ups matured 65 years old and more established. The immunization is advertised as Flud in the US and was most readily accessible in the 2016-2017 influenza seasons. The immunization contains the MF59C.1 adjuvant which is an oil-in-water emulsion of squalene oil. It is the first adjuvant occasional influenza immunization advertised in the United States. It isn't clear if there is a critical advantage for the older to utilize an influenza immunization containing the MF59C.1 adjuvant. Per Advisory Committee on Immunization Practices rules, Flud can be utilized as an option in contrast to other flu antibodies endorsed for individuals 65 years and more seasoned.

Immunizing medicinal services labourers who work with old individuals is suggested in numerous nations, with the objective of lessening flu episodes in this powerless populace. While there is no convincing proof from randomized clinical preliminaries that immunizing social insurance labourers shields old individuals from flu, there is speculative proof of advantage.

## CONCLUSION

In medicinal services labourers, a 2006 audit found a net advantage. Of the eighteen investigations in this survey, just two additionally evaluated the relationship of patient mortality comparative with staff flu antibody take-up; both found that higher paces of medicinal services labourer inoculation connected with diminished patient passing. A 2014 audit discovered advantages to patients when social insurance labourers were inoculated, as bolstered by moderate proof situated to some degree on the watched decrease altogether cause passing in patients whose medicinal services labourers were given vaccination contrasted and examination patients where the labourers were not offered antibody.