

# Study of the Influence of Individual Characteristics on Possible Adverse Reactions Associated with Influenza and COVID-19 Vaccination

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**Background:** Vaccination is one of the main public health strategies for preventing the spread of infectious diseases and protecting against pandemics, reducing the number of hospitalizations and mortality [1,2]. When provided in community pharmacies, it improves adherence due to its easy accessibility. In the context of the national seasonal flu and COVID-19 vaccination campaigns in Portugal, it is free for people aged between 50 and 84 years old [3,4]. Therefore, it is important to assess whether and how individual factors can influence possible adverse reactions (AR) after vaccination. **Objective:** To analyze the influence of variables such as age, weight, body mass index (BMI), pre-existing pathologies and usual drug therapy on the occurrence of ARs following the administration of *Influenza* and COVID-19 vaccines. **Methods:** Observational study carried out in a community pharmacy, including 48 users vaccinated against *Influenza* and/or COVID-19 in the Fall 2024. Two questionnaires were administered, one before and the other 7 days after vaccination, collecting sociodemographic and clinical data, vaccination history and reports of possible AR to vaccines. The data was processed and analyzed using Excel and SPSS. **Results:** As anticipated, the participants were aged over 60 (73.19±5.98 years old) and were mostly retired (85.4%). Most were overweight (BMI ≥ 25 Kg/m<sup>2</sup>; 68.8%), and the most common pathologies were hypertension (64.6%) and hypercholesterolemia (52%). In total, 45,8% of users reported some possible AR, but of a mild and temporary nature. The most frequently reported were pain at the injection site and flu-like symptoms. No statistically significant associations were found between individual characteristics and the occurrence of possible ARs. **Conclusions:** Despite the limitations of the study, particularly the small sample size, the data suggests that the individual characteristics studied do not significantly influence the adverse effects of the flu and COVID-19 vaccination, proving to be safe in this population.

**Keywords:** vaccination; adverse effects; Influenza; COVID-19; individual characteristics

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