Incidence and characteristics of cutaneous reactions following Pfizer-BioNTech and Moderna COVID-19 vaccine administration reported in the adult population living in Puerto Rico

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INTRODUCTION

- The COVID-19 pandemic has challenged the skin barrier; the incidence of insults to the skin has risen dramatically with the use of face masks and hand sanitizer alone. This pandemic has also instigated numerous cutaneous reactions in individuals positive to COVID-19 and in those who received the vaccine against this virus.
- Severe allergic reactions, including anaphylaxis after receipt of the first dose, have been reported. Moreover, the media has played a role in alarming potential vaccine recipients by spreading misconceptions regarding these reactions and the hypothetical exclusion of people with an allergic predisposition to vaccines.

OBJECTIVES

- Study the incidence and characteristics of the cutaneous reactions following Pfizer-BioNTech and Moderna COVID-19 vaccine administration reported in the adult population in Puerto Rico.
- Address misinformation regarding the effects of the COVID-19 vaccines and gather information regarding the number of participants presenting the cutaneous secondary effects.

METHODOLOGY

Approximately 200 potential participants within the age range of 21 and up that received or have received their second or third dose of the Pfizer-BioNTech or Moderna COVID-19 vaccine.

Flyers of the questionnaires will be shared online through the REDCap platform. First one regarding demographic information, and the second, third, and fourth questionnaires regarding the first dose, second dose, and booster, respectively.

Booster questionnaire can only be filled out if the participant has received it. If participant has not received it, team members will ask for the participant's preferred contact methods and reach out to them in the future regarding the receipt of the third dose. If they agree, participants will proceed to fill the fourth and last questionnaires.

Collected data will be analyzed to determine and compare the incidence of cutaneous reactions after receipt of the COVID-19 vaccine.

ANALYTIC PLAN

- All collected data will be summarized using descriptive statistics (frequency, mean, standard deviation, among others), tables and graphs. T-test will be performed to measure statistically significant associations, which will be set at <0.05, between sociodemographic variables (age, sex, municipality, income, and health-plan) and previous adverse effects.
- Statistics will be used to compare health history with cutaneous reactions after receiving any of the two COVID-19 vaccines, Moderna or Pfizer-BioNTech.
- The key outcome or dependent variable that will be evaluated is the cutaneous reaction and the principal predictor or independent variable is the COVID-19 vaccine administered, either Moderna or Pfizer BioNTech.
- The gathered data that will help researchers evaluate the relationship between the two variables.

CONCLUSIONS

Goals of this study:

Expand our general knowledge concerning the COVID-19 vaccine.

Gather information regarding the characteristics of participants presenting these cutaneous manifestations.

Provide better and tailored recommendations regarding the vaccination process.

Future studies include:

1. The pediatric population
2. Other COVID-19 vaccines
3. Psycho-emotional factors

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