



Barriers to Acceptance of the COVID-19 Vaccine: A Study of Staten Islanders on Medicaid



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INTRODUCTION

- COVID-19 is a novel coronavirus, designated as a severe acute respiratory syndrome, that has now spread worldwide resulting in a global pandemic.
- For this study we partnered with Staten Island Performing Provider System (SI PPS) who is an organization that works to improve healthcare of Medicaid patients on Staten Island.
- SI PPS deployed an initial survey in August 2020 to identify who would accept the vaccine. 51% would get the vaccine, 37% would not get the vaccine, and 10% of participants had no opinion.

PURPOSE

- The purpose of this exploratory study aims to investigate which specific barriers prevent the Medicaid population on Staten Island from accepting the COVID-19 vaccine.

METHODS

- IRB approval was granted.
- An *a priori* power analysis revealed that the minimum sample size needed to achieve significance was **143** participants (G-power Version 3.1.9.6. Germany).
- An electronic survey was distributed through SI PPS to Medicaid individuals on Staten Island.
- Sample Size was **N = 173**.
- Data was analyzed with IBM SPSS Version 26 (Armonk, NY) with an alpha level set at 0.05.

Figure 1 & 2: Frequency Data

Figure 1. COVID-19 vaccine (N = 346)

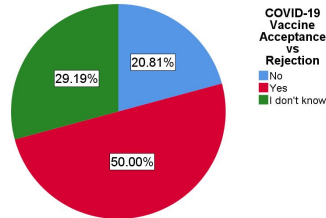


Figure 2. What steps can a person take to prevent themselves from getting COVID-19?

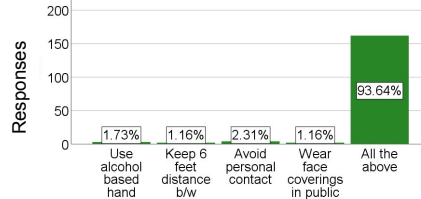


Figure 2: This chart shows our respondents have an appropriate understanding of the COVID-19 virus.

CONCLUSIONS

- In our study, we found that the driving forces to acceptance of the COVID-19 vaccine were participants trust in healthcare, receiving the 2020 Flu vaccine, and altruism.
- Factors that need to be addressed for participants rejection of the COVID-19 vaccine include time and transportation to vaccination sites, more information needed regarding the COVID-19 vaccine, and education that vaccines are not connected to Autism and other diseases.

PUBLIC HEALTH RELEVANCE

This data highlights specific topics that prevent Medicaid patients from accepting the COVID-19 vaccine and outlines areas where there is a lack of knowledge. With this information, clinicians can counsel patients appropriately, and thus increase the likelihood of COVID-19 vaccine acceptance.

RESULTS

Table 1. Spearman rho Correlation: Demographics and Barriers to COVID-19 vaccination

	Vaccine Safety/ side effects	First vaccine not effective	Trust in healthcare	Vaccine deferred for high risk individuals	More vaccine information required	Time/Transport
Age	-0.029	-0.002	-0.020	0.094	-0.034	0.075
Gender	0.093	0.05	-0.103	-0.036	-0.088	0.099
Race/Ethnicity	-0.047	-0.015	0.061	0.025	0.082	-0.01
Education	0.059	0.038	-0.082	-0.056	-0.215 **	-0.115
Employment	0.180 *	0.011	-0.001	-0.097	-0.065	-0.234 **
Flu vaccination	0.117	0.112	0.074	0.160 *	0.193 *	0.084
COVID-19 vaccine Accept/Reject	-0.229 **	-0.095	0.322 **	0.239 **	0.292 **	0.215**
Comorbidities	-0.001	0.037	0.121	0.027	0.088	0.106

Table 1: This table points out significant correlations between acceptance of the vaccine and barriers to vaccination.

Table 2 - Binomial Logistic Regression: Variables in the Equation

	B	S.E.	p-Value	Exp(B)
Vaccine defer to high risk individuals	0.576	0.268	0.032	1.778
Natural vs Vaccine immunity	-0.674	0.288	0.019	0.510
Safety and side effects	-1.069	0.286	0.000	0.343
Trust in Healthcare	1.015	0.291	0.000	2.758
Doubt due to news stories	-0.601	0.301	0.046	0.549
Flu Vaccination	1.634	0.543	0.003	5.123
COVID-19 spread	-1.379	0.602	0.022	0.252

Table 2: This table shows significant predictive factors of COVID-19 vaccine acceptance.

Note: Column "B" is the logart. Column "Exp(B)" is the exponential of the logart (odds ratio) which displays likelihood of events.

Inclusion Criteria

- Responded "No" or "Not Sure" to accepting the vaccine.
- Participants 18 years old and older.
- Completed survey.
- Resident of Staten Island.

Exclusion Criteria

- Responded "Yes" to accepting the vaccine.
- Participants less than 18 years old.
- Incomplete survey.
- Not a Staten Island resident.