

## Attitude towards COVID-vaccination among participants of Infectieradar

### Introduction:

Some insight in the possible uptake of COVID vaccination is important to shape communication strategies toward the general public, and plan for vaccination strategies. Within a large citizen science project we included a question whether participants were likely to take up a new COVID vaccine once available. The participants were self-selected. The answers were given between 15 of October and 11 of November.

### Methods:

We explore the answer on the question:

*When a vaccine is available against coronavirus, will you vaccinate yourself?*

- a) *Yes, certainly*
- b) *Yes, I might do*
- c) *I don't know (yet)*
- d) *No, I might not do*
- e) *No, certainly not*

Where we compare groups based on a positive attitude, therefore we created a dummy-variable in which both Yes answers were labeled as 1, and the other answers as 0.

For this dummy-variable we performed a logistic regression, using gender (men/women), age-group (15-35, 35-55, 55+), educational-level (Basis-MAVO-VMBO, HAVO-VWO-MBO, HBO-WOBachelor, WOMaster-PhD), profession (health care, service-with close contact, education, horeca, shop, public transport, knowledge work, administrative work, manual technical work, other), clinical-riskgroup (yes or no), likely-previous infected (yes/no). The largest categories were used as reference category.

When participants did not provide an answer for any of the variables they were excluded.

**Results:**

Total number of participants with information: 15702; 6102 observations deleted due to missingness in the regression)

Overall positive attitude towards COVID vaccine: 72% (11231/15699) of the participants is certain or likely to take the vaccine. However our self-selected sample in Infectieradar is perhaps biased towards a group with low-vaccine hesitancy, as distrust of the government is a predictor for vaccine-hesitancy, and Infectieradar is a study run by the government.

Table 1. Results of a logistic regression

Variable	OR	P-value
Female (ref)	1	
<b>Male</b>	<b>1.72 (1.55-1.90)</b>	<b>&lt;0.001</b>
Age 35-54 (ref)	1	
Age 15-34	1 (0.88-1.13)	0.963
<b>Age 55+</b>	<b>1.55 (1.40-1.73)</b>	<b>&lt;0.001</b>
HBO-WO Bachelor (ref)	1	
<b>Basis-MAVO-VMBO</b>	<b>0.70 (0.58-0.84)</b>	<b>&lt;0.001</b>
<b>HAVO-VWO-MBO</b>	<b>0.78 (0.70-0.87)</b>	<b>&lt;0.001</b>
<b>WOMaster-PhD</b>	<b>1.89 (1.67-2.14)</b>	<b>&lt;0.001</b>
Knowledge work (ref)	1	
<b>Contact</b>	<b>0.50 (0.34-0.73)</b>	<b>&lt;0.001</b>
Horeca	0.69 (0.47-1.04)	0.073
Shop	0.70 (0.52-0.96)	0.024
<b>Health care</b>	<b>0.76 (0.66-0.88)</b>	<b>&lt;0.001</b>
Education	0.82 (0.69-0.97)	0.023
Admin	0.85 (0.72-1.01)	0.056
<b>Manual technic</b>	<b>0.89 (0.70-1.14)</b>	<b>0.347</b>
Other	0.90 (0.78-1.04)	0.146
Public transport	0.98 (0.58-1.74)	0.952
Not in a risk group (ref)	1	
<b>In a risk group</b>	<b>1.68 (1.48-1.92)</b>	<b>&lt;0.001</b>
Has not had COVID	1	
<b>Has had COVID</b>	<b>0.66 (0.55-0.79)</b>	<b>&lt;0.001</b>

No interaction between sex and profession.

Health care we can differentiate further, however we don't have enough power for a logistic regression. Therefore just the results per sub-category.

Health care category	Absolute % positive attitude (n)
Hospital	63% (505)
Carehome (verpleeghuis)	56% (210)
Nursinghome (verzorgingstehuis)	46% (80)
GGZ	65% (326)
GP-practice	61% (119)
Other 1 <sup>st</sup> line	64% (173)
Other	62% (500)

There is a signal that within the different sub-categories in care there is a difference. Justifies some further research when care givers become a main target for vaccination.

**Conclusion:**

Different attitude between male and female, education, profession, risk-group and having had COVID. Follow-up studies on the attitude among people working in health care seems justified.