

# Attitudes towards influenza vaccine and a potential COVID-19 vaccine in Italy and differences across occupational groups, September 2020

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**PAROLE CHIAVE:** Attitudine; vaccinazione; influenza; COVID-19; indagine; occupazione

## ABSTRACT

**Objectives:** We aimed at describing the attitudes towards influenza vaccination and a potential COVID-19 vaccine in Italy. **Methods:** A nationally representative survey based on 1055 Italians aged 15–85 years was conducted in September 16–28, 2020. **Results:** We found that 40.8% of the population reported the intention to be vaccinated against influenza next winter and 53.7% would accept to receive a potential COVID-19 vaccine. The percentages were higher among individuals aged 55 and over (58.8% for influenza vaccine and 58.2% for a potential COVID-19 vaccine) and among professionals, managers and teachers as compared to manual workers and farmers (36.1% vs. 27.6% for influenza vaccine and 51.6% vs. 44.8% for a potential COVID-19 vaccine). **Discussion:** These data confirm a certain degree of vaccine mistrust in Italy, especially among less qualified workers.

## RIASSUNTO

«Attitudine verso il vaccino antinfluenzale e un potenziale vaccino anti-COVID-19 in Italia e differenze tra gruppi occupazionali, Settembre 2020». **Obiettivi:** Descrivere l'attitudine verso la vaccinazione antinfluenzale e un potenziale vaccino per il COVID-19 in Italia. **Metodi:** Un'indagine nazionale rappresentativa, basata su 1055 Italiani di età compresa tra 15 e 85 anni è stata condotta tra il 16 e il 28 Settembre 2020. **Risultati:** Il 40,8% della popolazione ha riportato l'intenzione di vaccinarsi contro l'influenza il prossimo inverno e il 53,7% accetterebbe di ricevere un potenziale vaccino per il COVID-19. Le percentuali sono più alte tra gli individui di età ≥ 55 anni (58,8% per il vaccino antinfluenzale e 58,2% per un potenziale vaccino per il COVID-19) e tra i professionisti, i managers e gli insegnanti rispetto ai lavoratori manuali ed agli agricoltori (36,1 vs. 27,6 per il vaccino antinfluenzale e 51,6 vs. 44,8% per un potenziale vaccino per il COVID-19). **Discussione:** Questi dati confermano un certo grado di sfiducia nei vaccini in Italia, specialmente tra i lavoratori meno qualificati.

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## INTRODUCTION

Influenza vaccine has been made available free of charge by the Italian National Health Service to all population above age 65, and to selected workers, including most health workers. Due to the COVID-19 pandemic, the age limit has now been extended to all population 60 and over. Only a limited proportion of the population, however, accepted to be vaccinated against seasonal influenza.

The next winter, influenza vaccination has particular public health relevance, since the overlap of influenza and a persisting COVID-19 pandemic may overwhelm the health services.

This study aimed at describing the attitude towards influenza vaccine and a potential COVID-19

vaccine with a focus on differences across occupation categories.

## METHODS

We conducted a nationally representative survey of attitudes towards influenza vaccination, and a potential COVID-19 vaccine in the Italian population. We included five questions on influenza and a potential COVID-19 vaccine (including regular yearly use of influenza vaccine, use in the previous winter, vaccine advice by the GP, attitudes towards influenza and a potential COVID-19 vaccine this year) in weekly national surveys routinely conducted by Doxa (3). The present survey was conducted on September 16-28, 2020, and based on a sample of

**Table 1** - Attitudes towards influenza vaccine and a potential COVID-19 vaccine in Italy, September 2020

	Total	Women	Men	Age Group		
				15-34	35-54	≥55
	(No. 1055)	(No. 546)	(No. 509)	(No. 251)	(No. 360)	(No. 444)
Influenza vaccine						
Always	21.2	23.1	19.3	4.4	7.4	41.9
Some years	6.4	6.2	6.6	1.6	5.1	10.1
Never	72.4	70.7	74.2	94.0	87.4	47.9
Influenza vaccine, last year						
Yes	24.4	26.5	22.2	5.1	10.5	46.6
No	75.6	73.5	77.8	94.9	89.5	53.4
Influenza vaccine, advice by the GP						
Yes	32.8	34.8	30.6	5.9	17.5	60.3
No	60.1	58.4	61.9	83.8	74.1	35.3
Unknown	7.2	6.8	7.6	10.3	8.3	4.5
Influenza vaccine, this year						
Yes	21.7	24.8	21.7	3.7	10.2	41.3
Probably Yes	19.1	17.7	19.1	19.3	21.0	17.5
Probably No	29.8	28.3	29.8	33.5	33.6	24.8
No	29.3	29.2	29.3	43.5	35.3	16.5
Potential COVID-19 vaccine						
Yes	20.4	22.2	18.5	10.8	15.6	29.8
Probably Yes	33.3	32.8	33.9	40.6	34.3	28.4
Probably No	25.5	24.9	26.2	23.6	23.5	28.2
No	20.7	20.1	21.3	25	26.6	13.6

1055 individuals (546 women, 509 men), representative of the general Italian population aged 15-85 in terms of sex, age, geographic area and socio-economic status. Data were collected using computer assisted web interviews (CAWI).

We carried out a stratified analysis by sex, age group (15-34, 35-54,  $\geq 55$ ) and occupation category (1 - Professionals, managers and teachers; 2 - Office workers and merchants; 3 - Manual workers and farmers).

## RESULTS AND DISCUSSION

Table 1 gives the results on the total population, by sex and age group. In Italy, 21.2% of subjects reported to regularly undergo influenza vaccination, 6.4% only some years, and 72.4% never. The proportion of

ever influenza vaccine users was higher in women (23.1%) and particularly in the population 55 and over (41.9%). This was confirmed by the percentage of subjects reporting influenza vaccine last year, 24.4% overall and 46.6% at age 55 and over. Subjects interviewed reported that their GP recommended influenza vaccination to about a third of the sample, and to about 60% at age 55 and over. About 40% of the Italian population reported an intention to be vaccinated against influenza next winter (21.7% certainly, 19.1% probably), and the proportion rose to about 60% (41.3% certainly, 17.5% probably) at age 55 and over. A potential COVID-19 vaccine would be accepted by about 54% of the population (20.4% certainly, 33.3% probably), and the proportion rose to 58.2% (29.8% for certainly) acceptance above age 55.

**Table 2.** Attitudes towards influenza vaccine and a potential COVID-19 vaccine in Italy by occupation, September 2020

	Professionals, managers, teachers (No. 97)	Office and other non-manual workers (No. 268)	Manual workers, farmers (No. 127)
Influenza vaccine			
Always	9.3	9.3	7.1
Some years	10.3	5.2	3.9
Never	80.4	85.4	89.0
Influenza vaccine, last year			
Yes	14.4	12.3	8.7
No	85.6	87.7	91.3
Influenza vaccine, advice by the GP			
Yes	26.8	18.7	13.4
No	64.9	72.8	78.0
Unknown	8.2	8.6	8.7
Influenza vaccine, this year			
Yes	15.5	11.9	8.7
Probably yes	20.6	22.4	18.9
Probably no	29.9	30.2	33.1
No	34.0	35.4	39.4
Potential COVID-19 vaccine			
Yes	16.5	16.4	15.7
Probably yes	35.1	38.4	29.1
Probably no	22.7	20.5	29.1
No	25.8	24.6	26.0

Table 2 shows the results by occupation categories. The proportion of ever influenza vaccine users was higher among professionals, managers and teachers than among manual workers and farmers (19.6% vs. 11.0%) as well as the proportion of users who received influenza vaccination last year (14.4% vs. 8.7%). More than one-fourths of the professionals, managers and teachers were advised to be vaccinated by their GP, while the proportion was much lower among manual workers and farmers (13.4%). The percentages of workers who reported the intention to be vaccinated against influenza next winter (yes and probably) were: 36.1% among professionals, managers and teachers and 27.6% among manual workers and farmers. The percentages of workers who reported the intention to receive a potential COVID-19 vaccination were: 51.6% among professionals, managers and teachers and 44.8% among manual workers.

This survey indicates therefore that the attitude towards influenza vaccination tended to be more favourable this year as compared to the past, but still the large majority (about 60%) of the population, and almost over 40% of the subjects 55 and over do not intend to accept influenza vaccination for the next winter. At present, only about 50% of the Italian population has a favourable attitude towards a potential COVID-19 vaccine. Appreciable differences, in addition, exist between highly qualified and less qualified workers with the latter category having a less favourable attitude towards vaccination.

These data confirm a limited confidence, and a diffuse vaccine mistrust and hesitancy in Italy as well as in other countries (1, 2, 4, 5).

## REFERENCES

1. de Figueiredo A, Simas C, Karafillakis E, Paterson P, Larson HJ: Mapping global trends in vaccine confidence and investigating barriers to vaccine uptake: a large-scale retrospective temporal modelling study. *Lancet* 2020; 396(10255): 898-908. DOI: 10.1016/S0140-6736(20)31558-0
2. Dror AA, Eisenbach N, Taiber S, Morozov NG, Mizrahi M, Zigron A, et al: Vaccine hesitancy: the next challenge in the fight against COVID-19. *Eur J Epidemiol* 2020; 35(8): 775-779. DOI: 10.1007/s10654-020-00671-y
3. Negri E, Scarpino V, La Vecchia C: Prevalence of COVID-19-like symptoms in Italy and Lombardy, March-April 2020, and their implications on cancer prevention, diagnosis and management. *Eur J Cancer Prev* 2020; DOI: 10.1097/CEJ.0000000000000604
4. Palamenghi L, Barelli S, Boccia S, Graffigna G: Mistrust in biomedical research and vaccine hesitancy: the forefront challenge in the battle against COVID-19 in Italy. *Eur J Epidemiol* 2020; 35(8): 785-788. DOI: 10.1007/s10654-020-00675-8
5. Stecula DA, Kuru O, Albarracin D, Jamieson KH: Policy Views and Negative Beliefs About Vaccines in the United States, 2019. *Am J Public Health* 2020; 110(10): 1561-1563. DOI: 10.2105/AJPH.2020.305828

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