

Peri-pandemic acceptance of influenza and COVID-19 vaccination by Swiss healthcare workers in primary care 2020/21: a cross-sectional study

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Epidemiology of Influenza*

- Estimated 1 billion cases of Influenza worldwide, of which 3 to 5 million are severe and resulting in 290,000 to 650,000 influenza-related respiratory deaths.
- In Switzerland, influenza vaccination is recommended for high-risk groups (such as elderly, and those with NCDs) and those in contact with high risk groups (such as HCW).
- Influenza vaccination uptake in Switzerland for flu season 2020/21 is 38% among seniors +65, 37% NCD patients and 26% HCW.
- In 2015/16, QualiCCare survey to evaluate influenza vaccination uptake in HCW, their recommendations and reasoning for and against vaccination (IJPH.2023; 68:1605175).

*WHO, John Hopkins, FOPH

Epidemiology of COVID-19*

- Worldwide between Jan 2020 - Jan 2023, an estimated 752 million people were infected with SARS-CoV-2 and of which 6.83 million people have died from or with it in 2020/21.
- There were > 4 million laboratory-confirmed cases of COVID-19 disease in Switzerland and Liechtenstein from June 2020 to October 2022, of which almost 12,000 died from or with COVID-19.
- COVID-19 vaccination was first recommended for high-risk groups (such as elderly, and those with NCDs) and those in contact with high risk groups (such as HCW); general recommendation afterwards.
- COVID-19 vaccination uptake in Switzerland in the general population is approx. 70% (as of June 2022; <https://www.covid19.admin.ch/en/vaccination/persons>).

Objectives

- To evaluate influenza vaccination uptake, recommendations and reasoning by Swiss HCWs in primary care during the COVID-19 pandemic in 2020/21 and compare it to the results from 2015/16.
- To assess COVID-19 vaccination uptake, recommendations and reasoning to compare these results with the respective influenza results.

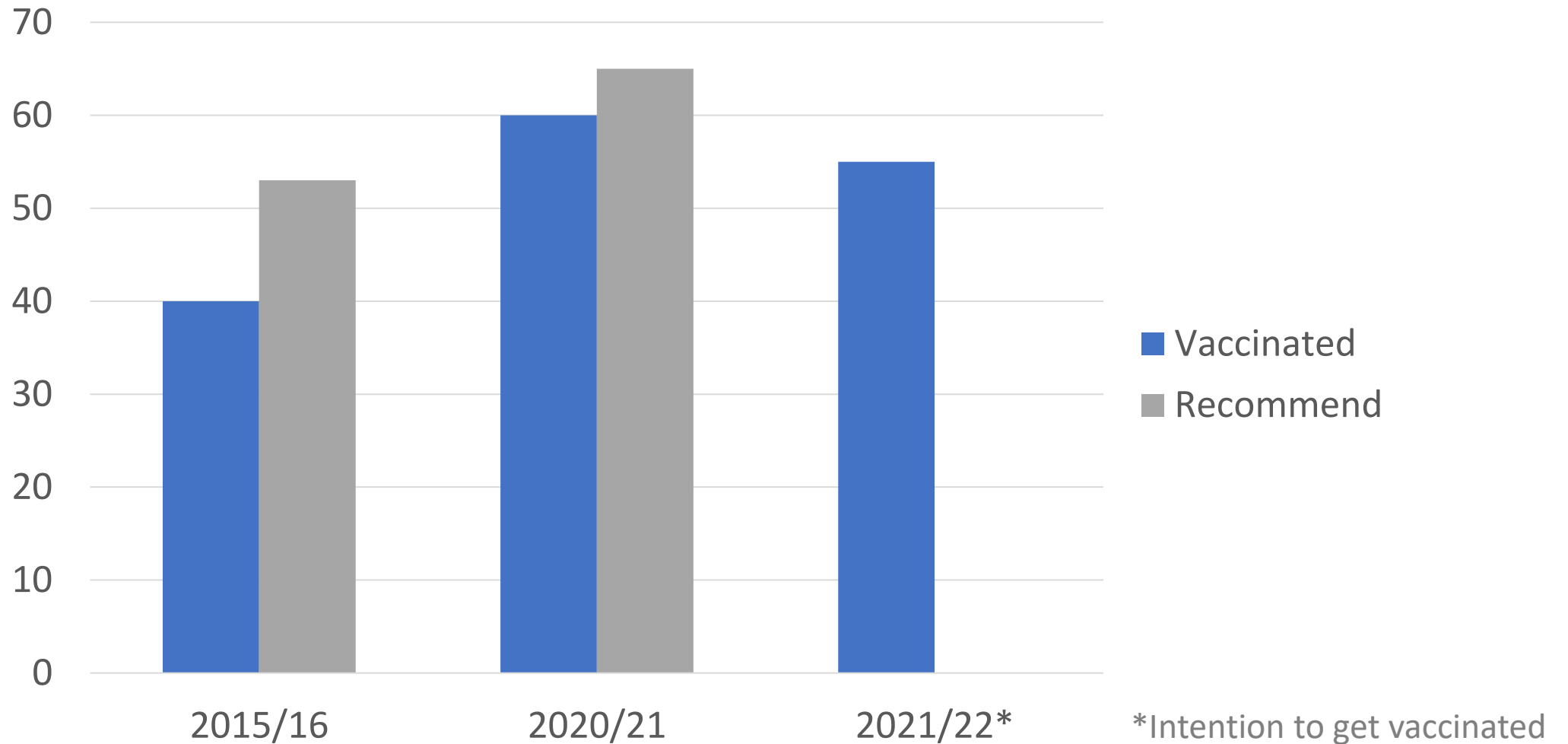
Methodology

- Replicated study design of the survey performed in 2015/16*
- Target population: primary care
 - Physicians, pharmacists, nurses, medical practise assistants (MPA) and pharmacy technicians as well as public health officers.
 - Recruitment via newsletters or direct mailings by QualiCCare, its member organisations, its influenza working group and other relevant organisations (e.g. healthcare leagues, Spitex Schweiz, pharmaSuisse, ARAM, SVA, mfe, HMOs)
- Online survey via Survey Monkey
 - Semi-structured questionnaire
 - Completion between November 2021 – February 2022
 - 2 reminders were sent

Participation

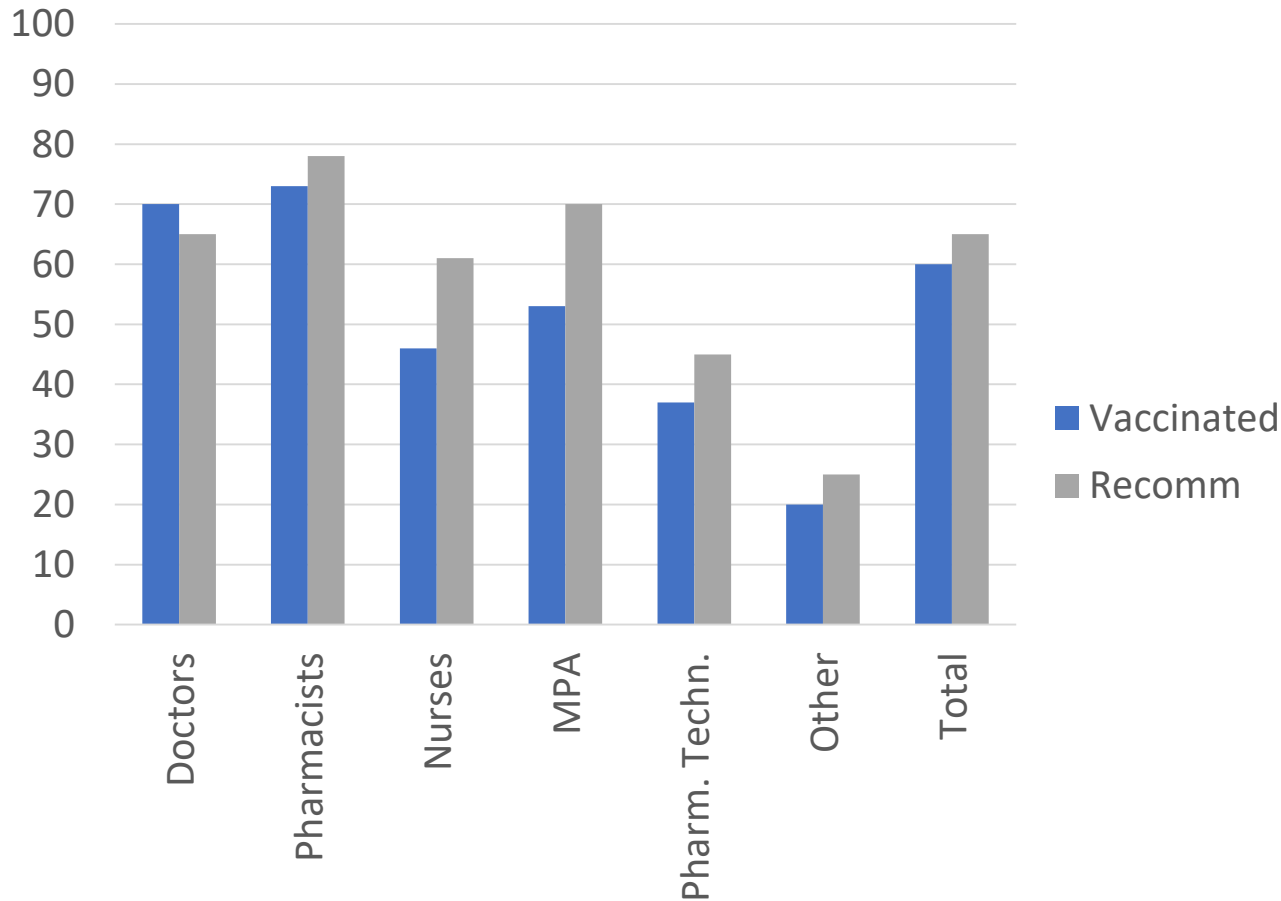
Demographics	n	Survey (n=1237)	Swiss population 2021
Language			
German	834	67%	62%
French	368	30%	23%
Italian	35	3%	8%
Sex			
Male	190	15%	50%
Female	1043	84%	50%
Diverse	4	0%	
Age group			
16-20	17	1%	5%
21-30	128	10%	12%
31-40	241	19%	14%
41-50	354	29%	14%
51-60	386	31%	15%
60+	111	9%	10%

Influenza vacc uptake and recommendation (%) of HCW

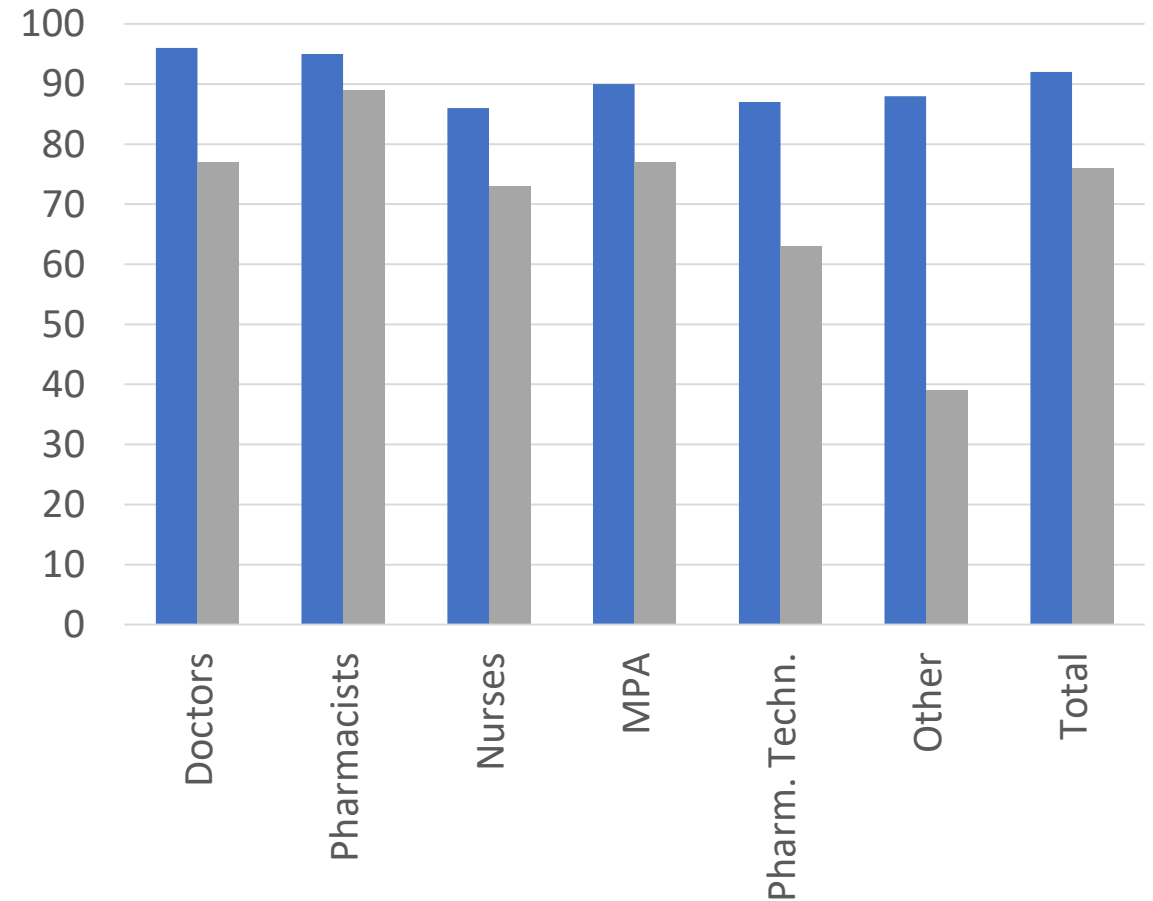


Vacc uptake and recommendations of HCW

Influenza



COVID-19



Factors affecting influenza vaccination uptake of HCW

Characteristics	n	AOR	95% CIL	95% CIU	p-value
Vaccination Training					
No	388	Ref			
Yes	849	1.77	1.29	2.43	<.001
Language					
German	834	Ref	-	-	-
French	368	0.93	0.70	1.24	.613
Italian	35	0.58	0.27	1.25	.164
Sex					
Male	190	Ref	-	-	-
Female	1043	0.79	0.52	1.20	.273
Diverse	4	2.05	0.23	18.62	.523

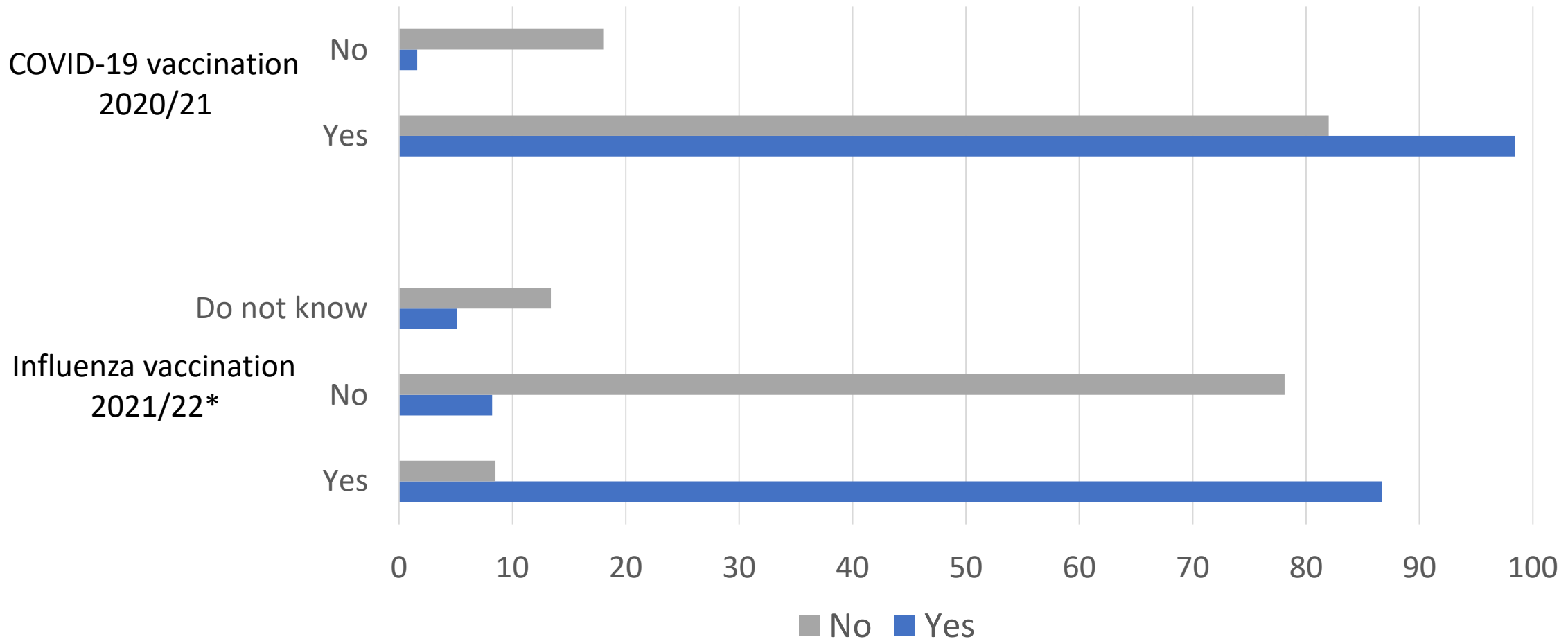
Characteristics	n	AOR	95% CIL	95% CIU	p-value
Age group					
16-20	17	Ref	-	-	-
21-30	128	4.12	0.86	19.65	.076
31-40	241	5.11	1.09	23.97	.039
41-50	354	5.77	1.24	26.90	.026
51-60	386	9.71	2.08	45.24	.004
60+	111	7.18	1.47	35.13	.015
Profession					
Nurse	17	Ref	-	-	-
Physician	128	6.10	3.12	11.92	<.001
Pharmacist	241	3.40	1.90	0.07	<.001
MPA	354	1.37	0.76	2.49	.300
Pharm.techn.	386	1.06	0.49	2.28	.884
Other	111	0.39	0.20	0.76	.006

Factors affecting COVID-19 vaccination uptake of HCW

Characteristics	n	AOR	95% CIL	95% CIU	p-value
Vaccination Training					
No	388	Ref			
Yes	849	1.48	0.88	2.50	.144
Language					
German	834	Ref	-	-	-
French	368	0.61	0.39	0.96	.034
Italian	35	1.86	0.24	14.16	.551
Sex					
Male	190	Ref	-	-	-
Female	1043	1.26	0.65	2.46	.493
Diverse	4	1.00	-	-	-

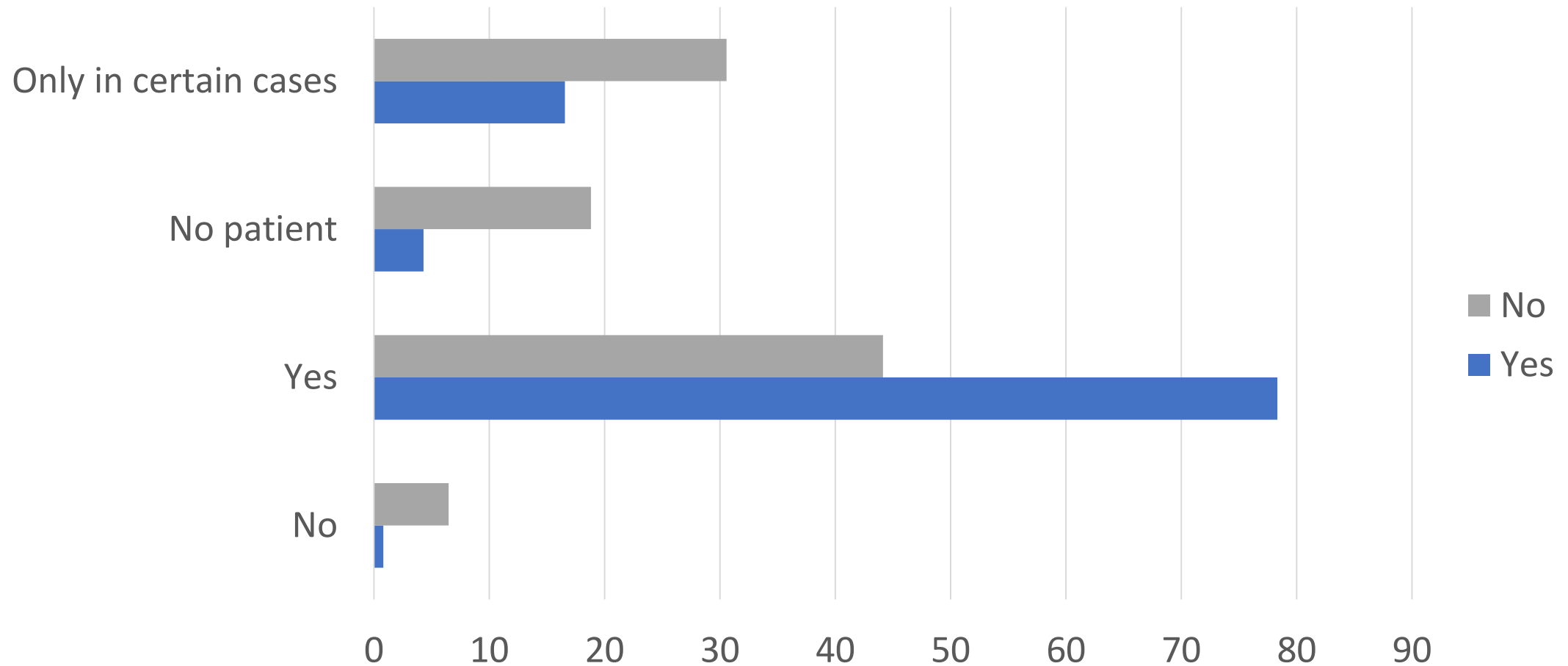
Characteristics	n	AOR	95% CIL	95% CIU	p-value
Age group					
16-20	17	Ref	-	-	-
21-30	128	1.04	0.26	4.14	.954
31-40	241	1.85	0.47	7.26	.376
41-50	354	2.16	0.56	8.29	.262
51-60	386	3.39	0.87	13.26	.080
60+	111	2.20	0.49	9.79	.300
Profession					
Nurse	17	Ref	-	-	-
Physician	128	3.40	1.19	9.73	.022
Pharmacist	241	3.27	1.33	8.03	.010
MPA	354	1.67	0.68	4.10	.265
Pharm.techn.	386	1.58	0.52	4.81	.420
Other	111	1.42	0.56	3.60	.458

Vaccination uptake (%) of HCW, based on vaccination history 2020/21

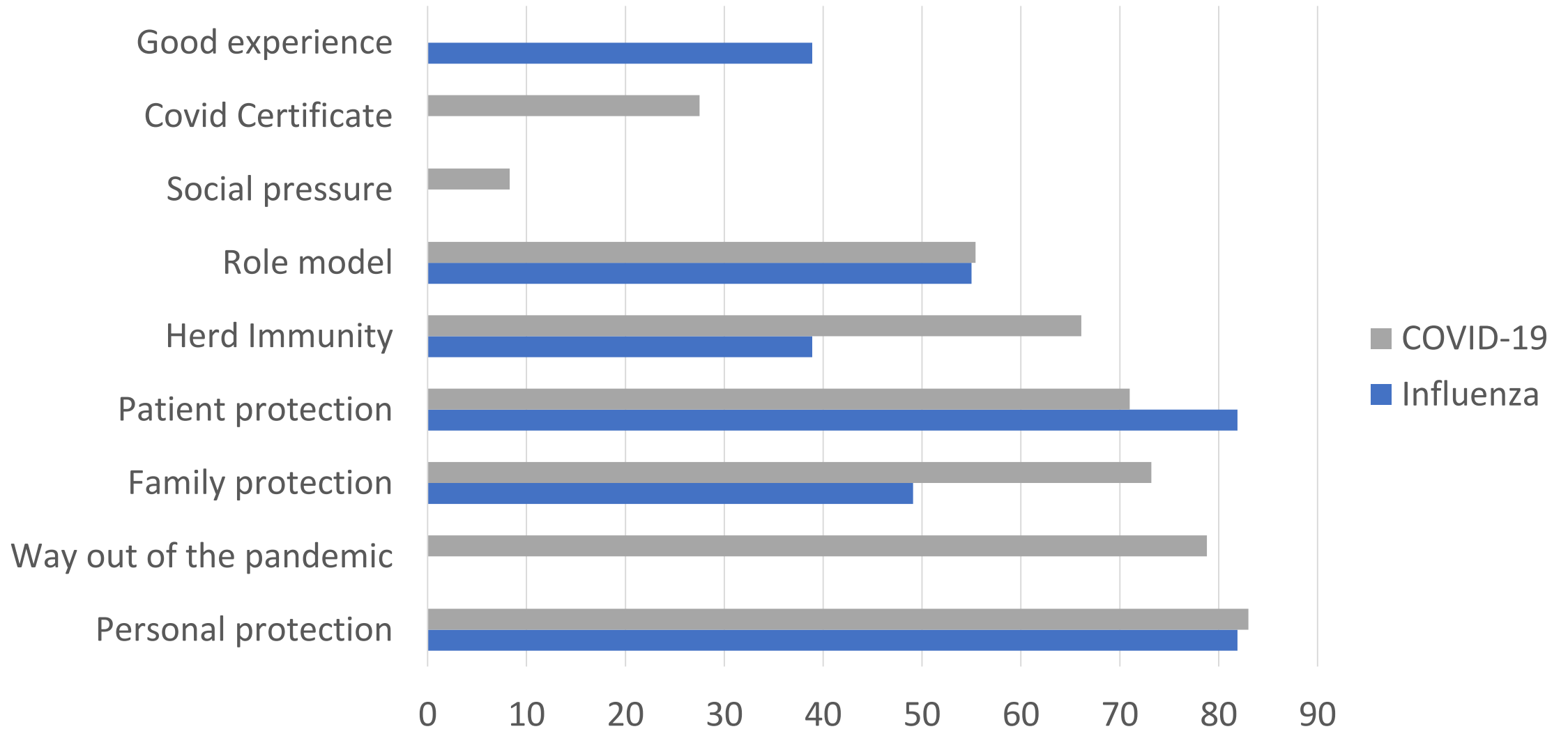


* Intention to get vaccinated

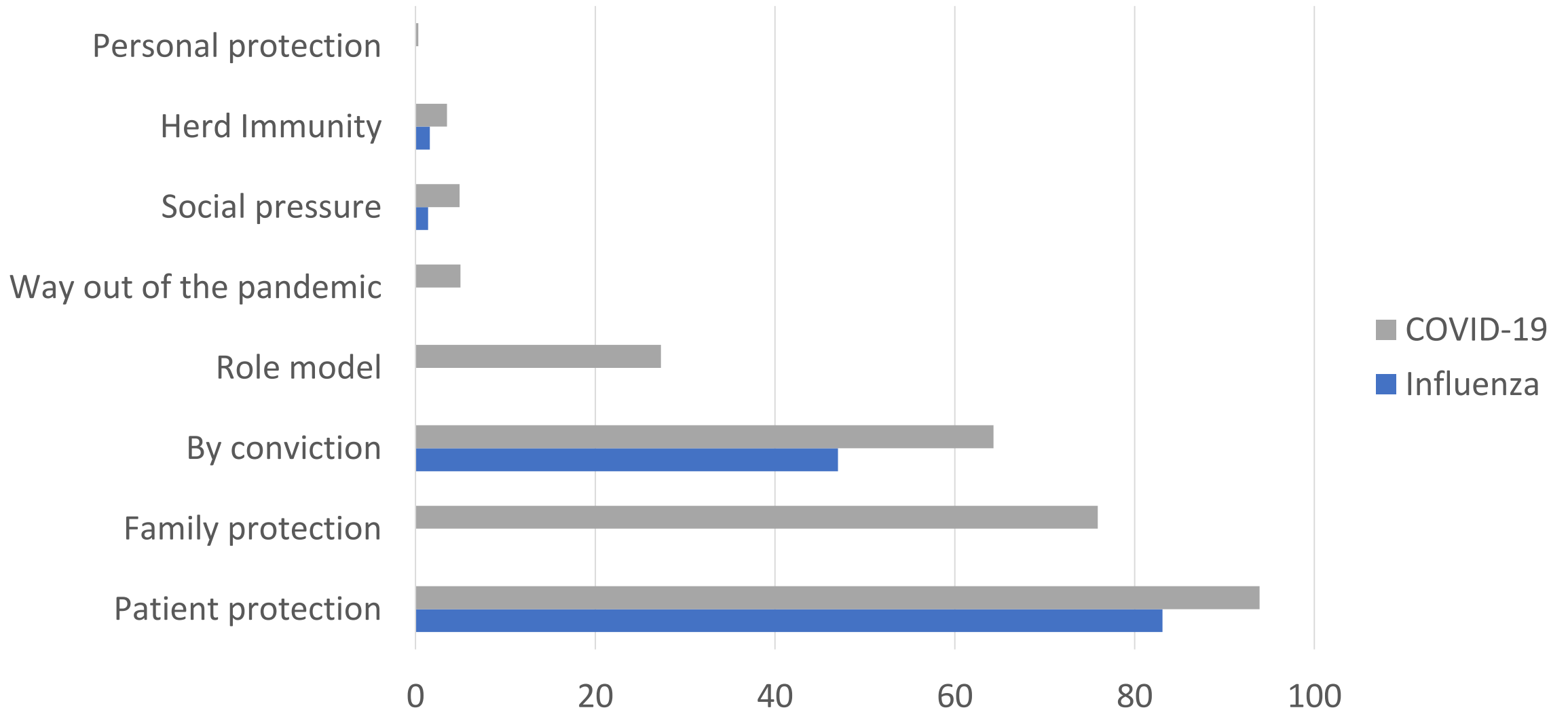
Influenza recommendation (%) of HCW, based on vaccination history 2020/21



Reasons for getting vaccinated against Influenza and COVID-19



Reasons for recommending Influenza and COVID-19 vaccinations



Conclusions

- Influenza vaccination among HCWs in the primary care sector has increased from 40% in 2015/16 to 60% in 2020/21; COVID-19 vaccination is high at 92%.
- Factors that affect influenza / COVID-19 vaccination uptakes are: vaccination training status, history of previous influenza vaccination, profession, (age). COVID-19 has an overreaching effect on vaccination uptake.
- HCW tended to be better vaccinated against COVID-19 than Influenza, with little variations across professions. Same observations apply for recommendations of vaccination.
- More HCW tended to be vaccinated against COVID-19 than their tendency to recommend the vaccination to their patients; vice-versa with Influenza.
- Reasons for vaccinations and recommendations of Influenza and COVID-19 are similar. But for COVID-19, other reasons also included herd immunity/solidarity, COVID-19 certificate and social pressure.

Recommendations

- Curriculum and training for HCWs need to emphasize vaccination-follow-up survey before and after training.
- Vaccination campaigns need to be tailored to the target population to be effective.
- As vaccination history is a strong predictor of getting vaccinated against influenza, and recommendation of vaccinations, it is important to begin the effort to engage HCWs during their educational years to promote influenza vaccinations.

Thank you for your attention!

Acknowledgments:

- HCW who participated in the survey
- Participating healthcare organisations and QCC member organisations
- QualiCCare Working Group Influenza
- Funding provided by Astra Zeneca, Janssen, QualiCCare



National Influenza Vaccination Day
Nov 10, 2023

The results are submitted to be published in IJPH (currently in review)

<https://qualiccare.ch/projekt/laufende-projekte/grippe-und-covid-impfung-gesundheitsfachpersonen>