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Letter to the Editor

Attitudes towards monkeypox vaccination among healthcare workers in France and Belgium: an element of complacency?

Sir,

By 13th September 2022, the Europe World Health Organization (WHO) region had reported 23,837 cases of monkeypox (MPX), with at least 91 infections in healthcare workers (HCWs) [1]. Although occupational exposure is not the primary source of infection in HCWs, cases of contamination at work have been reported [2,3]. WHO recommends immunization against MPX for HCWs at risk for occupational exposure [4]. Vaccine hesitancy affects HCWs and has an impact on their personal vaccination status [5]. After 2 years of the coronavirus disease 2019 (COVID-19) pandemic and vaccination, HCWs' attitudes towards vaccination against another emerging infection have not been analysed, particularly in France, where mandates were required to achieve high vaccine coverage in HCWs.

We carried out an anonymous online survey from 15th June 2022 to 8th August 2022 by snowball sampling in France and Belgium, aiming to evaluate attitudes towards MPX vaccination and to study factors associated with intention to get the vaccine [gender; profession; vaccination readiness evaluated with the 7C scale (confidence in vaccines, complacency, constraints, calculation, collective responsibility, compliance, conspiracy [6]); and confidence/trust in HCWs, colleagues, government, public health agencies, media and pharmaceutical companies]. Among the 690 responders, 397 were HCWs (mean age 43.3 ± 12 years, 260/397 women) (Table I). Acceptance of the MPX vaccination in HCWs was low, particularly in the case of a specific recommendation for HCWs: 99 (30.5%) of the 397 respondents stated that they would get vaccinated as soon as possible, 121 (24.9%) stated that they would probably get vaccinated, 88 (22.2%) were undecided, 49 (12.3%) stated that they would probably not get vaccinated, and 40 (10.1%) stated that they would definitely not get vaccinated. Overall, only 220 (55.4%) HCWs reported that they would accept vaccination. In the case of spread within the general population, 314 (79.1%) of the responders stated that they would accept vaccination. This observation suggests that there is low acceptance of the MPX vaccine among HCWs. In the context of a specific recommendation for the vaccination of HCWs, the proportion of respondents who stated that they would get vaccinated was significantly higher among physicians and pharmacists (65.3% vs 46.6% among nurses and assistant nurses or 43% among other professions such as midwives and physiotherapists). The same observation was made if the recommendation for vaccination was extended to the general population, with the following acceptance rates: 84.7% in physicians and pharmacists, 70.7% in nurses and assistant nurses, and 77.2% in other HCWs. After adjustment for gender and vaccination readiness, nurses and assistant nurses were less inclined to accept vaccination than physicians and pharmacists. This observation suggests that vaccination readiness is probably lower in nurses and assistant nurses than in physicians

Table I
Factors associated with intention to get vaccinated against monkeypox among healthcare workers, obtained with a multivariable binary regression model adjusted for gender, profession, coronavirus disease 2019 (COVID-19) vaccine eagerness, 7C vaccination readiness, confidence, and concern about monkeypox epidemics

Characteristics	aOR (95% CI)	*P*-value
Gender		
Female	Ref	0.15
Male	1.4 (0.9–2.4)	
7C vaccination readiness		
Confidence	1.2 (0.9–1.6)	0.28
Complacency[a]	1.3 (0.98–1.52)	0.07
Constraints	1.2 (0.94–1.5)	0.14
Calculation	0.8 (0.7–1)	0.06
Collective responsibility	1.2 (0.8–1.7)	0.3
Compliance	1 (0.8–1.3)	0.58
Conspiracy	0.9 (0.7–1.3)	0.64
Confidence[b]	1 (0.9–1.1)	0.83
COVID-19 vaccine eagerness[c]	2.5 (1.03–6.1)	0.04
Profession		
Physicians/pharmacist	Ref	
Nurses/assistant nurses	0.8 (0.4–1.4)	0.4
Others	0.7 (0.5–0.9)	0.02
Concerned about emergence of monkeypox	2.6 (1.3–5.3)	0.009

aOR, adjusted odds ratio; CI, confidence interval.
[a] A higher score indicates low responder complacency.
[b] A 30-point confidence score was obtained by adding the following six items: confidence in HCWs, confidence in government, confidence in pharmaceutical companies, confidence in public health agencies, confidence in media, and confidence in colleagues.
[c] COVID-19 eagerness was transformed into a binary variable: individuals vaccinated as soon as they were eligible or before they were eligible were classed as eager.

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and pharmacists. The high prevalence of vaccine hesitancy in nurses and assistant nurses is particularly challenging in the context of emerging infectious diseases, as they have frequent close contacts with infected patients [7]. Of note, HCWs who reported multiple sexual partners were not more prone to accept the MPX vaccine than HCWs who did not report multiple sexual partners.

Complacency may explain, in part, the low acceptance rate if MPX vaccination was to be recommended specifically for HCWs. At the beginning of the COVID-19 pandemic, self-perceived risk of infection was one of the most important drivers of intention to get the COVID-19 vaccine among HCWs [8]. Although MPX is also an emerging infectious disease, only 44 (11%) responders felt that they were at risk of MPX infection, and 87 (21.9%) expressed concern about the current MPX epidemic. Communication relating to mild infections, mainly affecting men having sex with men, may have generated feelings of complacency in HCWs. COVID-19 vaccine eagerness (defined by vaccination before eligibility or as soon as HCWs became eligible) was associated with intention to get vaccinated against MPX in HCWs. In addition, confidence in government, HCWs, public health agencies, media, colleagues and pharmaceutical companies (assessed by a 30-point score) was associated with intention to get vaccinated against MPX, if vaccination was recommended specifically for HCWs. In addition, HCWs may be suffering from pandemic fatigue, specifically in terms of vaccine recommendations, particularly in France where COVID-19 vaccination was mandatory for HCWs.

These observations suggests that better communication regarding potential professional exposure to MPX in HCWs may be required to increase acceptance of the MPX vaccine. The main limitations of this work are the lack of representativeness of the sample of HCWs in France and Belgium, and the relatively small sample size. Physicians and pharmacists were over-represented and, due to more favourable attitudes towards vaccination among physicians and pharmacists in general, the intentions of HCWs to accept the MPX vaccine were probably overestimated.

Conflict of interest statement
None declared.

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