

Acceptability of the third dose of anti-SARS-CoV-2 vaccine co-administered with influenza vaccine: preliminary data in a sample of Italian HCWs

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KEYWORDS Booster dose of COVID-19 vaccine; vaccination hesitancy; co-administration of vaccine; vaccine attitude; active offer of vaccine

Since December 27, 2021, anti-SARS-CoV-2 vaccines are actively offered in European countries; in particular, in Italy, healthcare workers (HCWs) have been a primary target of the vaccination strategy, due to the significant occupational hazards they experienced during the pandemic wave.¹

According to latest evidence about the risk of anti-SARS-CoV-2 IgG waning among immunized people,² the European Center for Disease Control and Prevention (ECDC) recommended offering a booster dose for people who have already received a comprehensive immunization program but still remain at high risk of SARS-CoV-2 exposure, such as HCWs.³ Based on ECDC guidelines, the Italian Ministry of Health has planned to offer a booster dose of anti-SARS-CoV-2 for HCWs; as a result of the booster dose campaign that began in October 2021, the guidelines recommended the simultaneous administration of the third anti-SARS-CoV-2 dose and the influenza vaccine.⁴

Studies to assess the safety and immunogenicity of co-administration of COVID-19 vaccines with other vaccines are ongoing or in development. General recommendations on vaccination practice support that simultaneous administration of different vaccines has achieved similar levels of immunogenicity and safety as those observed when vaccines are administered separately.⁵

Despite definitive evidence on the safety and immunogenicity of COVID-19 vaccine co-administered with other vaccines are not available, the Center for Disease Control recently recommended that COVID-19 vaccines may be administered without regard to the timing of other vaccines and explained that this includes simultaneous administration of COVID-19 vaccine and other vaccines on the same day.⁶

The decision to support co-administration of the COVID-19 vaccine with other vaccines, particularly the influenza vaccine, is crucial at this phase of the pandemic and from a Public Health perspective. This strategy is intended to allow the third dose to be offered while avoiding the risk of decreased influenza vaccine coverage among HCWs. In the past, coverage for the influenza vaccine in the Italian HCWs was generally suboptimal; however, in this dramatic healthcare crisis, the attitude of HCWs toward flu vaccination has changed. COVID-19 outbreak increased flu vaccination adherence, reaching highest coverage in 2020/21 campaign.⁷ This is an important opportunity that Italian

Public Health cannot miss. The choice of co-administration of COVID-19 and influenza vaccine could represent a key strategy to consolidate the results obtained in the previous influenza season, as the third dose could be an opportune occasion to increase adherence to the influenza vaccine.

HCWs attitudes and acceptance of the co-administration is an under-researched topic in scientific literature; a survey conducted by our study group in 2009 showed that 20% of HCWs reported concern that co-administration of different vaccines increased the risk of adverse events.⁸

According to the recommendations of the Ministry of Health,⁴ on October 12, 2021, the campaign for offering the simultaneous administration of COVID-19 and influenza vaccines in Puglia Region (Southern Italy, approximately 4 million inhabitants) has started; HCWs were a priority target.

The Policlinico University Hospital of Bari is the most important hospital in Southern Italy, with about 6000 HCWs and 1000 beds, in which there is a vaccination clinic.

Since the beginning of the campaign, health care personnel have been invited to get the COVID-19 and influenza vaccines; appropriate counseling by physicians experienced in vaccinology has been ensured, and each HCW has had the choice of having simultaneous or separate administration of the two vaccines.

In the first 2 weeks (October 12–24, 2021), 2740 HCWs accessed the outpatient vaccination clinic, of whom 1643 (60%) chose simultaneous administration of the two vaccines, 718 (26.2%) chose to receive only the COVID-19 vaccine, and 379 (13.8%) only the influenza vaccine.

Acceptance of co-administration was higher among those subjects directly involved in patient care (odds ratio [OR] = 1.37; 95% confidence interval [CI] 1.17–1.60; $p < .001$); particularly physicians (OR = 1.93; 95% CI = 1.63–2.30; $p < .001$) and residents (OR = 2.10; 95% CI = 1.67–2.64; $p < .001$) were more prone to accept co-administration, whereas resistance was noted among nurses (OR = 0.75; 95% CI = 0.63–0.89; $p = .001$). Age was not related with adherence to vaccine co-administration ($p > .05$) which remained associated with male gender (OR = 1.43; 95% CI = 1.22–1.67; $p < .001$). Multiple regression confirmed the results of the univariate analysis.

These first results are encouraging because the majority of HCWs have accepted the simultaneous administration of the two vaccines and this may help to achieve optimal immunization

goals for influenza as well, a challenge never won in Italy in the past. The process needs to be continually monitored, considering that, in general, HCWs who have earlier access to vaccination clinics during the immunization campaign are more motivated than other groups, who are more likely to delay or refuse vaccination; thus, the general attitude for co-administration may change in the coming months. If this strategy receives appropriate adherence from HCWs, it will be proposed to the general population with high probability of success, because the example of the HCWs is one of the best ways to increase vaccine compliance.⁹

Disclosure statement

No conflict of interest was reported by the authors.

Funding

The author(s) reported there is no funding associated with the work featured in this article.

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