

Covid-19 vaccination in a teaching hospital in Rome: preliminary results from a retrospective study

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Healthcare workers (HCWs) are on the frontline fight against the ongoing pandemic with an increased risk of infection from COVID-19. As of December 27, 2020, approximately 89,879 COVID-19 cases had been reported among HCWs in Italy. Vaccination plans recommend that initial supplies of COVID-19 vaccine be allocated to HCWs because their early protection is crucial to preserve capacity to care for patients. The aim of this study is threefold: to investigate the factors influencing the likelihood towards vaccination, to estimate the vaccine efficacy (VE) in a hospital setting and to assess the frequency of adverse reactions (AR). This retrospective study was conducted in an Italian teaching hospital from December 28, 2020 to March 31, 2021 (before the introduction of mandatory vaccination for HCWs). A total of 6,649 individuals was included. HCWs were divided into physicians, nurses and other HCWs. Univariate analyses and a multivariate logistic regression were run with an alpha of 0.05. VE was estimated as the proportionate reduction in disease attack rate between the unvaccinated and vaccinated. Out of 6,649 HCWs, 5,162 were fully vaccinated against COVID-19. Among the selected job categories, 82% of physicians, 79% of nurses and 68% of other HCWs were vaccinated. The findings of the logistic regression depicted that the 41-60 years old age class, compared with the youngest age class, was statistically significant (OR 1.17, 95% CI 1.03-1.33) in influencing vaccination, as well as being nurses (OR 0.80, 95% CI 0.69-0.92) or other HCWs (OR 0.45, 95% CI 0.39-0.52) in comparison with physicians. VE equaled 92.83% ($p < 0.05$). The frequency of serious and not serious AR was 0.03% and 2.9%, respectively. Sustaining and boosting COVID-19 vaccination campaigns is effective for preventing SARS-CoV-2 infection in real-world conditions. COVID-19 vaccination among HCWs is a critical public health measure to safeguard HCWs themselves, patients and the hospital community.

Key messages:

- In light of the encouraging efficacy and safety of COVID-19 vaccination, it represents an essential strategy to protect

HCWs themselves, their patients and the hospital community.

- Despite the introduction of mandatory vaccination, policy-makers should set up tailored strategies of clear communication to reduce reluctance to vaccination among HCWs.