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Influenza and Covid-19 Vaccination in 2023: a descriptive analysis in two Italian Research and Teaching Hospitals. Is the On-Site strategy effective?

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Abstract

Introduction. *Vaccinations represent an extremely effective tool for the prevention of certain infectious diseases - such as influenza and COVID-19 -, particularly for those categories at risk due to both their frail condition or professional exposure, such as healthcare workers. The aim of this study is to describe the course of the anti-influenza and anti-COVID-19 vaccination campaign at two Research Hospitals in Milan, Italy.*
Study design. *Multicentre, cross-sectional study.*
Methods. *For the 2023-24 vaccination campaign, the two facilities opted for two different approaches. At the Hospital A, two different strategies for vaccinating healthcare workers were implemented: a fixed-site vaccination clinic and two mobile vaccination groups run by Public Health residents of the University of Milan. At the Hospital B, on the other hand, a single fixed-site outpatient clinic run by Public Health residents of the University of Milan was used. On the occasion of the campaign, a survey was also carried out using anonymous online questionnaires to investigate healthcare workers attitudes towards vaccination.*
Results. *A total of 1,937 healthcare workers were vaccinated: 756 were immunized against influenza only, 99 against COVID-19 only, and 1,082 against both. The results show a substantial difference in vaccination adherence among medical and nursing staff compared to other professional categories. In particular, the category with the highest vaccination adhesion turned out to be that of medical doctors with 55.7% adhesion while, on the contrary, the category with the lowest adhesion turned out to be that of auxiliary personnel characterized by 7.4% adhesion. At the same time, the comparison between the two hospital facilities showed*

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a double adherence rate by the staff of Hospital A as regards both the flu vaccine (40.6% and 20.1%) and the anti-COVID-19 vaccine (26.4% and 12.3%). Finally, the survey showed that the attitude towards influenza vaccination is lower among auxiliary staff in terms of both knowledge and vaccination attitude.

Conclusions. *The results of the study show a vaccination adherence in line with that of previous years, although lower than the values recommended by the principal national and international Organizations. The analysis of the differences between the two facilities and the surveys carried out will allow for the implementation of targeted interventions to increase adherence in future campaigns.*

Introduction

Influenza is an acute viral respiratory disease caused by influenza viruses, a group of RNA viruses of the family Orthomyxoviridae. Among these, influenza B and C viruses circulate primarily among humans, while influenza A viruses infect mainly aquatic birds although they are widespread among mammals, humans included (1). Every year, the World Health Organization (WHO) estimates that seasonal influenza epidemics among humans – caused by two types of influenza viruses (i.e., seasonal influenza A and B viruses) – affect 1 billion people worldwide. Severe forms of influenza occur in 3-5 million people every year, resulting in on average on 300-600,000 deaths (2,3). In Europe, influenza is responsible for up to 50 million symptomatic cases and for about 15,000-70,000 influenza-related deaths (4). In Italy, during the last influenza season (i.e., 2022-2023), about 14 million people were diagnosed with influenza based on the Epidemiological Report by the RespiVirNet – a national Italian surveillance system based on influenza cases notification by General Practitioners and Paediatricians (5).

Among the influenza viruses, influenza A viruses have the potential to cause pandemics – the rapid spread of a new human influenza around the world – such as the one occurred on 2009 caused by the A(H1N1) pdm09 strain (6). Thus, seasonal influenza can represent a major public health issue, especially when large parts of the population are affected at the same time overwhelming national health systems.

Furthermore, seasonal influenza can heavily impact countries' economic systems because of a direct impact on countries' health systems as well as losses in productivity across sectors due to absenteeism from work and by staff functioning at reduced capacity even after they have returned to work (7). Among the direct impacts on health systems, seasonal influenza epidemics increase the demand for medicines, laboratory reagents, and personal protective equipment as well as increase costs for hospitalization and workload on healthcare workers (HCWs) (8–10).

Although influenza can affect virtually everyone, regardless of their age and sex, people at risk the most to suffer from its severe forms and eventually die because of it are the elderly, children under the age of 5 years, pregnant women, and people affected by non-communicable diseases (e.g., heart and pulmonary diseases (11–15). Therefore, a common prevention strategy is to offer vaccination against influenza to those most at risk as well as those working directly in contact with them, such as HCWs (16,17). Indeed, due to its intrinsic characteristics, vaccination is one of the most effective tools of preventive medicine (18). Influenza infection among HCWs, as a matter of fact, can rapidly spread among colleagues and to hospitalized patients suffering from other health conditions, such as non-communicable diseases, leading eventually to severe forms of influenza in vulnerable populations (19).

In Europe, among HCWs, the median VC in 2020-21 was 52% (range 16-71%), compared to 33% of the 2018-19 season (20). A similar increase in VC among HCWs was observed in all EU/EEA countries for the 2020-21 (21). In Italy, the influenza vaccination is recommended to all HCWs, irrespective of whether they have contact with patients, and influenza VC should be at least 75% (22). However, VC among HCWs was about 15-20% in the past few years, near to the one of general population (20.2 % in 2022) (23,24).

In the winter season 2020-21, during the coronavirus disease 2019 (COVID-19) pandemic, influenza VC among HCWs increased in different Italian hospital settings (25,26) also due to the new campaign organization models (27–30) sometimes mediated by the organizational experience of the anti-COVID vaccination campaign (31,32). However, in the following winter seasons, influenza VC dropped. Because of changes in VC trends among HCWs, it is important to identify and describe the determinants affecting influenza vaccination adherence so that prevention strategies focused on HCWs are strengthened.

We developed a study that aims to explore the reasons for influenza vaccine adherence among HCWs

working in two research and teaching hospitals (IRCCS) in Milan, Italy, during the winter season 2023-24 as well as to assess the influenza VC among different subsets of HCWs of these two hospital settings.

Methods

Our study focuses on the winter vaccination campaign against seasonal influenza implemented from October 1 to November 30, 2023, of HCWs of two IRCCSs in Milan. In both hospital with the influenza vaccination the possibility has been offered to be vaccinated also against COVID 19.

Hospital A's approach

At Hospital A, a pavilion hospital, two different strategies were implemented for HCWs vaccination: a fixed-site vaccination ambulatory and two mobile vaccination teams.

The fixed-site vaccination ambulatory was open every working day from 9:00 a.m. to 3:00 p.m. as it was very well-known by all HCWs to be the place where influenza vaccination is administered each year. While the mobile vaccination teams, composed by Public Health residents, were deployed to different pavilions of the hospital in order to be the closest possible to HCWs to increase the VC. Mobile vaccination teams went in each pavilion twice, between November 8 and 27 2023, from 9:00 a.m. to 2:00 p.m.

HCWs were informed about vaccination campaign against influenza and COVID-19 through the hospital's intranet, where information about times and locations of both the fixed-site vaccination ambulatory and the mobile vaccination team were available. HCWs were encouraged to book an appointment but were also let the chance to show up without a previous reservation.

Hospital B's approach

At Hospital B, a single-building hospital, HCWs were informed about the vaccination campaign via email to express their interest via a request form to be immunized either against flu, COVID-19, or both – either together or in different days. From November 6, 2023, all HCWs that filled the request form were contacted via phone calls to schedule the appointments.

The vaccine ambulatory was open all mornings from 9:00 a.m. to 2:00 p.m.

HCWs were encouraged to book an appointment for influenza vaccination but had also the chance to show up without a reservation, while this was not possible for vaccination against COVID-19.

Survey administration

From November 7 to 29, 2023, all HCWs were invited to fill an online, anonymous survey, after being immunized, to provide information on their date of birth, sex, hospital, professional category, and area of activity as well as their knowledge around influenza (i.e., three questions) and their attitudes regarding seasonal influenza vaccination (i.e., two questions).

The questionnaire was developed by a multidisciplinary team made by public health experts and sociologists of the Institute of health communication at the University of Italian Switzerland (Lugano) and included several elements of vaccination knowledge and misconception.

Respondents could select their professional category among the following: physician in staff, resident physician, nurse, technician, auxiliary staff, administrative staff, and others (e.g., social workers, nutritionists). Similarly, they could choose among these areas of activity: general medicine, general surgery, surgical specialty, medical specialty, intensive care unit (ICU), administration, and other (e.g., technical services).

HCWs were asked to rank their level of disagreement/agreement on five statements on knowledge about influenza and attitude toward influenza vaccination, from one (i.e., complete disagreement) to seven (i.e., complete agreement).

Data management and analysis

Data from self-administered questionnaires were collected through Google Form on November 30, 2023. Immunization records were retrieved from the online, regional immunization information system (SII) managed by the Milan's public health authority; while corresponding professional category was asked during the immunization sessions and collected on a separate Microsoft Excel file.

Aggregated data as of November 1, 2023, on hospital's staff by age (i.e., 18-29, 30-39, 40-49, 50-59, and 60+ years), sex, and professional category were retrieved from hospitals' human resources unit.

A new variable (i.e., age) was created from data extracted from the regional SII by considering the date of birth and the date of vaccination.

Categorical variables were summarized using the number of individuals and corresponding percentages,

while continuous variables were summarized, based on their distribution, either with mean and standard deviation (SD) or median and interquartile range (with first and third quartiles). Survey's scores were summarized with mean and SD.

Total and stratum-specific VC were computed using the total of the vaccine administered based on SII data divided by the total staff as of November 1, 2023, as per human resources databases. Furthermore, for Hospital A, HCWs' attributes of those immunized in the fixed-site vaccination ambulatory and those vaccinated by mobile immunization teams were summarized and compared.

All the statistical analyses were conducted with STATA v.18 (Stata Statistical Software: College Station, TX: Stata Corp LP).

No ethical approval was required for this study, according to the Italian Law (33).

Results

In the current influenza vaccination campaign held in both Hospital A (total staff of 3730 HCWs) and Hospital B (total staff of 1599 HCWs) 1937 HCWs were vaccinated: 756 were immunized only against influenza, 99 only against COVID-19, and 1082 against both.

The total number of HCWs immunized against influenza was 1838/5329 (VC=34.49%), while total of immunized against COVID-19 was 1181/5329 (VC=22.16%).

Baseline characteristics

The majority of HCWs immunized were female (1,256/1,937, 64.84%), physicians (775/1,937, 40.01%), were working in the Hospital A (1,597/1,937, 82.45%), and about half (898/1937, 46.36%) were aged below 40 years as described in Table 1. Among

Table 1 - Baseline description of the healthcare workers immunized in the 2023-2024 winter season in two research and teaching hospital in Milan, Italy (n=1937).

	Total (n = 1937)		Anti-COVID-19 (n = 1181)		Anti-influenza (n = 1838)	
	N1	**%1**	**N1**	**%1,2**	**N1**	**%1,2**
Sex						
Female	1256	64.84	735	58.52	1188	94.59
Male	681	35.16	446	65.49	650	95.45
Age (median, IQR)3	**42**	**32,55**	**41**	**31,56**	**42**	**32,55**
Age groups						
18-29 years	398	20.55	255	64.07	386	96.98
30-39 years	500	25.81	318	63.60	482	96.40
40-49 years	356	18.38	200	56.18	340	95.51
50-59 years	420	21.68	234	55.71	399	95.00
60+ years	263	13.58	174	66.16	231	87.83
Pregnancy status						
Pregnant	34	2.71	16	47.06	29	85.29
Non pregnant	1071	85.27	625	58.36	1028	95.99
Unknown	151	12.02	94	62.25	127	84.11
Role						
Physician	775	40.01	538	69.42	742	95.74
Resident	187	9.65	134	71.66	180	96.26
Nurse	253	13.06	145	57.31	238	94.07
Auxiliary staff	56	2.89	22	39.29	50	89.29
Technician	89	4.59	54	60.67	82	92.13
Administration	170	8.78	63	37.06	162	95.29
Others	400	20.64	219	54.75	377	94.25
Unknown	7	0.36	7	-	6	-
Hospital						
Hospital A	1597	82.45	985	61.68	1516	94.93
Hospital B	340	17.55	196	57.64	322	94.71

[1] Frequency (N) and percentage (%) are used when not otherwise stated. 2 Percentages, when not otherwise stated, are computed using the corresponding frequency divided by the total. 3 Median and first and third interquartile were used as the age distribution was not normal. Acronyms: COVID-19, coronavirus disease 2019; IQR, interquartile range.

those immunized, male HCWs were more frequently vaccinated against COVID-19 (446/681, 65.49%) compared to female HCWs (735/1,256, 58.52%).

Vaccine coverages

As summarized in Table 2, Hospital A had the highest VCs against influenza with 1,516/3,730 HCWs (VC=40.64%) vaccinated against it versus 322/1,599 (VC=20.14%) of Hospital B. Similar figures could be observed for anti-COVID-19 vaccinations, with 985/3,730 HCWs (VC=26.41%) of Hospital A against the 196/1,599 (VC=12.26%) ones of Hospital B.

By stratifying VCs for influenza by HCWs' role, physicians had the highest VC compared to other categories (i.e., 742/1,331, VC=55.75%), while auxiliary staff ranked as the lowest ones, with only 50/676 (VC=7.40%). Difference between hospitals were evident with 599/799 (VC=75.00%) physicians immunized against influenza at Hospital A against 143/532 (VC=26.88%) at Hospital B. Despite this, nurses and auxiliary staff had similar VCs in both hospitals, with 188/1,529 (VC=12.30%) vs. 50/392 (VC=12.76%) nurses immunized and 30/433 (VC=6.93%) vs. 20/243 (VC=8.23%) auxiliary staff vaccinated in Hospital A and Hospital B, respectively. It is interesting to note that in both hospitals the flu vaccination coverage has always been higher when compared to COVID vaccination in almost every professional category except the administration staff in hospital A ,where COVID vaccination coverage is three times higher than influenza vaccination, VC 8.25% and 2.75% respectively.

Fixed-site ambulatory vs. mobile teams

At Hospital A, 207/1,597 (12.96%) HCWs were vaccinated by mobile vaccination teams. Those most frequently immunized by such teams were younger than those vaccinated by the fixed-site ambulatory (41.50 vs. 43.66), irrespective of their sex with 146/1,081 (13.51%) females vs. 61/516 (11.82%) males. Among HCW categories by role, residents immunized by mobile teams had the highest proportion (50/175, 28.57%) followed by technicians (15/65, 23.08%), while the proportion of other categories ranged between 6.15 and 15.62%.

Survey responses

Overall, during the current campaign, 401 HCWs responded to the online, self-administered survey, as described in Table 3, corresponding to 33.95% of all HCWs immunized against influenza (n=1,181). Most frequently the respondents were female HCWs (270/401, 67.33%), aged between 30-59 years (274/401, 68.32%), physicians (131/401, 32.67%), working on medical specialties (87/401, 21.70%), and from Hospital A (271/401, 67.58%).

Looking at the mean scores on questions on knowledge about influenza and attitude toward influenza vaccination, four HCWs categories ranked below the total average as displayed in Table 4. Namely,

Table 2 - Total vaccination coverage and specific to influenza and COVID-19 by hospital and stratified by healthcare workers.

	Hospital A (n = 3730)					Hospital B (n = 1599)				
	Total	Anti-influenza		Anti-COVID-19		Total	Anti-influenza		Anti-COVID-19	
	N	N	%	N	%	N	N	%1	N	%1
Total	3730	1516	40.64	985	26.41	1599	322	20.14	196	12.26
Role										
Physician	799	599	75.00	439	54.96	532	143	26.88	99	18.61
Resident	-	168	-	127	-	40	12	30.00	7	17.50
Nurse	1529	188	12.30	122	7.98	392	50	12.76	23	5.87
Auxiliary staff	433	30	6.93	12	2.77	243	20	8.23	10	4.12
Technician	440	60	13.64	40	9.09	90	22	24.44	14	15.56
Administration	509	14	2.75	42	8.25	195	48	24.62	21	10.77
Others	-	357	-	203	-	107	20	18.69	16	14.95
Unknown	-	-	-	-	-	7	7	-	6	-

[1] Percentages are computed using the corresponding frequency divided by the total. Acronyms: COVID-19, coronavirus disease 2019.

Table 3 - Baseline characteristics of healthcare workers who responded to the online, self-administered survey (n=401).

	Total (n = 401)	
	N	*%*
Sex		
Female	270	67.33
Male	131	32.67
Age (median, IQR)3	**44**	**33,55**
Age groups		
18-29 years	79	19.70
30-39 years	90	22.44
40-49 years	95	23.69
50-59 years	89	22.19
60+ years	48	11.97
Role		
Physician	131	32.67
Resident	39	9.73
Nurse	60	14.96
Auxiliary staff	18	4.49
Technician	35	8.73
Administration	55	13.72
Others	63	15.71
Hospital area		
Administration	58	14.46
General Medicine	37	9.23
Specialized Medicine	87	21.70
ICU	10	2.49
General Surgery	12	2.99
Specialized Surgery	50	12.47
Neonatal and paediatrics	52	12.97
Radiology	28	6.98
Other	67	12.97
Hospital		
Hospital A	271	67.58
Hospital B	130	32.42

Acronyms: ICU, intensive care unit; IQR, interquartile range.

auxiliary staff (18/50, 36.00% of those immunized against influenza) ranked with the lowest scores in every item, especially for those on knowledge about influenza, followed by nurses (60/238, 25.21%) and technicians (60/82, 73.17%).

Discussion

Our study shows the relatively low adherence (~34%) among HCWs working in two major research and teaching hospitals in Milan, Italy, to the current vaccination campaign. Adherence was not uniform across the two hospital settings, with Hospital A having double the proportion of HCWs vaccinated than Hospital B (41% vs. 20%). A similar figure can be observed when looking at vaccine-specific figures for whom influenza had, generally, a higher VC compared to COVID-19. This may be due in part to fear of side effects from COVID vaccination despite extensive literature demonstrating the safety and effectiveness of this preventive tool (34–38).

Among HCWs, in both hospital, physicians were the ones with the highest VC, especially for influenza. This is aligned with the current body of knowledge (17,39,40). The reasons behind such a discrepancy might be explained by the differences in their social and formative backgrounds (e.g., different courses of study, lack of refresher courses).

Although observing that physicians have, in general, higher VC among HCWs these are far from being optimal and effective according to a public health perspective, also as highlighted by the Italian Ministry of Health (22). The importance of having HCWs vaccinated against influenza is, actually, its impact on their patients as those cured by unvaccinated physicians are more likely to not adhering to influenza vaccine campaign, as demonstrated by Godoy in 2015 (41).

Table 4 - Survey score means and standard deviations of all who responded to the on-line survey (n=400) and those self-reported roles that had average scores below in at least four of the survey items presented below.

	Total (n = 401)	Nurse (n = 60)	Auxiliary staff (n = 18)	Technician (n = 35)	Other (n = 60)
Knowledge questions					
Importance of vaccination	5.49 (1.48)	5.28 (1.68)	4.56 (1.95)	5.20 (1.37)	5.10 (1.65)
HCWs are the one most exposed	6.11 (1.31)	5.68 (1.81)	5.50 (2.07)	5.91 (1.25)	6.08 (1.09)
Severity of complications	5.75 (1.36)	5.62 (1.51)	4.61 (1.85)	5.74 (1.29)	5.53 (1.26)
Attitude questions					
Vaccinate next year	6.42 (1.26)	6.23 (1.56)	6.06 (2.01)	6.46 (0.98)	6.23 (1.38)
Recommend to other HCWs	6.39 (1.07)	6.17 (1.42)	6.17 (1.30)	6.31 (0.99)	6.27 (1.30)

Acronyms: HCWs, healthcare workers.

Conversely, in both hospitals, nurses and auxiliary staff had one of the lowest VC ever recorded. This, coupled with the survey score results – for which both HCWs categories ranked below the average – raises major concerns, especially for the nature of their job which requires close contacts with hospitalized and vulnerable people as frontline workers (42).

Similar poor levels of influenza VC among nurses and auxiliary staff were observed in another study in Italy (43), although elsewhere VCs seem to be much higher. Some studies attributed influenza vaccine hesitancy among nurses to the idea that other prevention measures (e.g., hand washing and wearing face masks) are more effective than influenza vaccine. Other researchers analyzed the personal decision-making process among nurses who consider influenza vaccination as a personal matter rather than a evidence-based measure (30,44), thus encouraging the employment of personal motivators (45). What we have seen can be associated in general with the reduced knowledge of the importance of vaccination as a preventive tool that is observed in many populations (46–51)

Comparing current influenza VC with past trends – only possible for Hospital A, a decreasing adherence back to pre- and early-COVID-19 figures (52,53) can be perceived with the 2020-2021 influenza season ranking as the one reaching the highest VC (i.e., 52%) (52). Similar trends can be seen in the general Italian population, whose influenza VC increased from ~17% in the 2019-20 influenza season to ~24% in 2020-21, and later plateauing at about 20% in recent years (54). Likewise, other studies have recorded, among different populations including HCWs, higher influenza vaccine rates (pooled rate 49%) compared to other influenza seasons (pooled rate 34%), including the 2009 pandemic (pooled rate 39%) sustained by the A(H1N1) pdm09 strain (55). The comprehensive VC of the influenza was about 34 %, and showed us a different data when we compared the two hospitals: 40.6% at Hospital A and 20.1% at Hospital B. At Hospital A results are lower than the 2021–22 influenza vaccination campaign, when VC was 52%. However, influenza VC among HCWs increased during the COVID-19 pandemic in Italy, consistent with a general increase in VC in the general population (over 20% in 2020-21) (54). Likewise, other studies have recorded among different populations, including HCWs, higher influenza vaccine rates (pooled rate 49%) compared to other influenza seasons (pooled rate 34%), including the 2009 pandemic (pooled rate 39%) sustained by the A(H1N1) pdm09 strain (21). The results show a relevant and pervasive difference in adhesion to campaign between physicians and other HCWs, as seen by Latorre et al in 2011 and Paoli et al in 2019 (43,56). Indeed in both the hospitals the physicians had the higher VC while the worst was registered by administrative and auxiliary staff.

Discrepancies in COVID-19 and influenza VCs between the two hospitals can be explained by the new strategy for vaccination administration implemented in Hospital B. Conversely, Hospital A has a relatively longer history of influenza vaccination campaigns, also employing different health promotion activities (39,52,53) , that might explain the higher coverages observed.

Conclusions

Although important aspects are covered by this article, several limitations are present and need to be considered. Firstly, by being a relatevely new facility, Hospital B has not adopted any health promotion activity to sensitize its HCWs in the past compared to Hospital A, which performed several immunization campaigns in the past. Secondly, data used in this study is limited to the vaccines administered in the two hospitals and does not include vaccination administered elsewhere e.g., in other vaccination centers and/or by general practitioners, or vaccine purchased in pharmacy. Thirdly, regarding the filling out of the online questionnaire, Hospital B displayed a very poor internet connection that prevented many potential respondents to complete it. Fourthly, the survey questionnaire was accessible to all individuals within Hospital A via the hospital's intranet, potentially leading to inadvertent completion by HCWs who were not compliant with the vaccination campaign. In contrast, at Hospital B, the survey QR code was exclusively provided to individuals who had been vaccinated. A limitation of the questionnaire study was the low number of responses due to participation in the survey on a voluntary basis. This combined with the wide range of responses based on a series of likert scales regarding knowledge related to vaccinations and interest in influenza vaccination, as well as the large subdivision of the responding population in a wide range of professional groups makes the inferential analysis and the achievement of statistical significance extremely complex. All of this then provides the basis for possible new studies to specifically investigate this area through different modalities or a different mode of operator involvement, such as a survey performed throught paper form offered in each

hospital ward presented by the research team to each health worker.

To our knowledge, this is one of the first studies presenting results from the current 2023-24 seasonal influenza vaccination campaign. Our results further stress the lack of adherence to influenza and COVID-19 vaccination and their respective VCs among HCWs in hospital settings, especially among nurses and auxiliary staff. Making use of the results of this study, we encourage healthcare planners to deliver more effective health education and promotion activities to draw attention on the relevance of the vaccination against seasonal influenza vaccination – as well as against COVID-19 – to the whole hospital population and with particular interest for the hard-to-reach subsets (57).

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Riassunto

Vaccinazione antinfluenzale ed anti-Covid nel 2023: un'analisi descrittiva in due Ospedali di Ricerca e Didattici italiani. La strategia On-Site è efficace?

Introduzione. Le vaccinazioni rappresentano uno strumento estremamente efficace per la prevenzione di alcune malattie infettive – quali influenza e COVID-19 –, in particolare per quelle categorie a rischio sia per le proprie condizioni di fragilità che per esposizione professionale come gli operatori sanitari. Scopo di questo studio è descrivere lo svolgimento della campagna vaccinale antiinfluenzale e anti-COVID-19 presso due ospedali di ricerca e di insegnamento milanesi.

Disegno dello Studio. Studio multicentrico, trasversale.

Metodi. In occasione della campagna vaccinale 2023-24 le due strutture hanno optato per due approcci diversi. Presso l'Ospedale A sono state implementate due diverse strategie per la vaccinazione degli operatori sanitari: un ambulatorio di vaccinazione in sede fissa e due gruppi di vaccinazione mobili gestiti da specializzandi di Igiene e Medicina Preventiva dell'Università degli Studi di Milano. Presso l'Ospedale B, invece, è stato utilizzato un unico ambulatorio in sede fissa gestito da specializzandi di Igiene e Medicina Preventiva dell'Università degli Studi di Milano. In occasione della campagna è stata, inoltre, svolta un'indagine tramite questionari anonimi online per indagare l'attitudine verso la vaccinazione del personale.

Risultati. Sono stati vaccinati un totale di 1937 operatori sanitari: 756 sono stati immunizzati solo contro l'influenza, 99 solo contro il COVID-19, e 1082 contro entrambi. Dai risultati emerge una differenza sostanziale di adesione alle vaccinazioni tra personale medico-infermieristico rispetto alle altre categorie professionali. In particolare, la categoria con la più alta adesione vaccinale è risultata essere quella dei medici con il 55.7% di adesione mentre al contrario la categoria a più bassa adesione è risultata essere quella del personale ausiliario caratterizzato dal 7.4% di adesione. Allo stesso tempo il confronto tra le due strutture ospedaliere ha mostrato una percentuale di adesione doppia da parte del personale dell'Ospedale A sia per quanto riguarda il vaccino antinfluenzale (40.6% e 20.1%) sia per quanto riguarda il vaccino anti-COVID-19 (26.4% e 12.3%). L'indagine, infine, ha mostrato come l'attitudine nei confronti della vaccinazione antiinfluenzale risulti più bassa tra il personale ausiliario sia per quanto concerne conoscenza che attitudine vaccinale.

Conclusioni. I risultati dello studio mostrano un'adesione vaccinale in linea con quella degli anni precedenti, sebbene inferiore ai valori consigliati dalle principali organizzazioni nazionali e internazionali. L'analisi delle differenze tra le due strutture e delle survey svolte permetteranno di implementare interventi mirati per aumentare l'adesione nelle prossime campagne.

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