

ACTIVITIES TO FIGHT COVID 19 IN THE DEPARTMENTS OF PREVENTION OF THE A.S.L. AND VACCINATION OBLIGATION FOR HEALTH PROFESSIONALS OF THE CAMPANIA REGION

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ABSTRACT

The health authorities and the scientific community, recognizing in the vaccine the tool par excellence in the fight against Covid-19, being known as pandemics in the past centuries have been eradicated through vaccination, have immediately become strongly committed and on 27 December 2020 in Italy it is distribution of the COVID-19 vaccine has begun.

Legislative Decree 44/2021 provides for the obligation of vaccination against Covid-19 for health professionals and non-compliance determines the suspension of the right to carry out services or activities that involve interpersonal contacts or involve the risk of spreading the infection from SARS-CoV-2, for this reason reconnaissance is underway by all the ASL and A.O. of the SSN.

From the data published by the Ministry on the institutional website in the Campania region, there would be 108,621 health workers, of these 3,400 still unvaccinated of which we do not know the reasons for the lack of vaccination, if linked to individual and social behavioral determinants or simply linked to their own state of health (pathologies details, pregnancy status, etc.).

Based on the evidence derived from previous and current scientific studies, it was decided to orient the present study to observe the attitudes of the "health population" towards vaccination against COVID-19, to investigate the behavioral causes, to research which sources of information on the virus from which healthcare professionals draw, to obtain useful evaluations to define more effectively decisions to be taken by the institutions, in particular by the regional health services, in the face of difficult cases of "undecided and / or no vax" in a context of health emergency with few precedents.

This project provided for the administration of an online questionnaire to a sample of health professions in the Campania region, through the "Google" platform and the link was sent electronically to all the Presidents of the Health Professions Orders of the Campania region. For appropriate dissemination among its members and possible publication on the institutional website.

The survey - from June to August 2021 - involved 613 health workers, belonging to the different health professions, and explored issues of relevant relevance in the daily public debate between politics, experts and institutions at different levels: in a Section I it was observed the profile of the health professions surveyed; in Section II, measured the attitudes of health professions towards vaccination against COVID-19 and studied the relative importance of some factors in influencing the propensity to vaccinate against COVID-19; in Section III, what are the communication channels they want and whether they too require more information on the various issues relating to vaccination against COVID-19.

INTRODUCTION

Re-Modulation Of Prevention Activities In The Public Health Departments Of Aa.Ss.Ll. In Times Of Covid-19

The situation resulting from the SARS-CoV-2 coronavirus pandemic has led to a reshaping of the ordinary activities of the Public Health Services of the Prevention Departments of the A.S.L./A.T.S. of the NHS, engaging the Technical Prevention staff, and the other health professions, also in the control activities of the containment measures of the SARS-CoV-2 contagion in the living and working environments, in contact tracing activities and subsequently to collaborate with the HUB centers for the vaccination activities of the entire population.

The main role played by the Prevention Technicians is certainly represented by the surveillance and control activities in the living and working environments, especially carried out in health and social health facilities, beauticians, tattoo artists, gyms, tourist accommodation facilities, on construction sites, in the sector. agriculture, industry. etc., in order to also verify the adoption of measures to combat COVID-19 issued by the competent Authorities on the subject (Ministry of Health, Regions), first of all the measures provided for by the anti-COVID-19 protocols referred to in the Prime Ministerial Decree of 24 April 2020 and subsequent amendments; activities mainly carried out in collaboration with other police forces (Carabinieri of the NAS and NIL, Labor Inspectorate, Police Head-

quarters, Local Police, etc.).

These were immediately flanked by collaboration activities for contact tracing or contact tracing which involved various Prevention Technicians in the Public Health Services alongside doctors, nurses and other health professionals. It is an extremely useful activity to reduce and prevent the spread of the virus and a pandemic.

Finally, with the introduction of the anti Covid-19 vaccination campaign at the beginning of 2021, several Prevention Technicians in a moment of emergency have been used in the vaccination centres of the AA.SS.LL. for the various collaborative activities to be carried out with Doctors and other Healthcare Operators with the common goal of reaching herd immunity with 80% of the vaccinated population by October 2021.

Covid-19 Vaccination And Health Professionals

The health authorities and the scientific community, recognizing the vaccine as the tool par excellence in the fight against Covid-19, being known as pandemics in the past centuries have been eradicated through vaccination, immediately committed themselves strongly to this and on 27 December 2020 in Italy the distribution of the COVID-19 vaccine has begun.

With the Decree of 12 March 2021, the National Vaccine Plan for the execution of the vaccination campaign was adopted by the Ministry of Health, by the Extraordinary Commissioner for the emergency, ISS, AGENAS and AIFA, the aim of which is to achieve 500,000 administrations per day and coverage of at least 80% of the population by Sept - Oct 2021.

Difficulties in applying and understanding the provisions that have followed one another immediately emerged, not only among citizens, politicians and institutions, but also among health professionals, initially due to the fact that not in a few cases provision on the vaccination against covid-19 were changed, by the competent Authorities, subsequently the debate due to the obligation imposed by a law intensified.

On the basis of the scientific studies available, with respect to mortality from COVID-19, it was possible to certify that the age and the presence of pathologies represent the main variables, which dictated the order of priority for the vaccination campaign by dividing the population to be vaccinated in 5 categories, considering as a priority, regardless of age and pathological conditions, to vaccinate health professions, school staff, police forces, residential socio-health communities, RSA, etc.

Obviously, among these categories, particular attention was paid to all health professions and health professionals who are at the forefront in the diagnosis, treatment and care of COVID-19 in public and private health and social health facilities, in pharmacies, par-pharmacies and professional offices.

Covid-19 Vaccinations In The Salerno Asl And In The Campania Region For Health Professionals

From direct experience in the Salerno ASL, which has a population of 1,081,380 inhabitants over the entire province of Salerno, it was possible to verify that in the first ten days of August the vaccination centres of the Public Health and Hygiene Service had already subjected to complete vaccination about 700,000 people representing about 70% of the population, to this

it must certainly be added a significant figure which is represented by the 70,000 people recovered from COVID-19 in the province of Salerno (about 7% of the population).

With regard to the entire territory of the Campania region, from an extrapolation of the data from the institutional site, starting from a total population of 5,801,700 inhabitants, the vaccinated people with complete cycle result in approximately 3,350,000, representing approximately 65% of the regional population, to these it must be added the 438,000 people recovered from Covid-19 (about 7% of the population).

Therefore, in order to achieve the 80% target set by the Vaccination Plan or to achieve “herd immunity” at least 70%, it was necessary to intercept for the months of September and October at least another 15-20% of the population, that is about 1,000,000 people, primarily health professions who, to date, although obliged, have not yet undergone vaccination and obviously all the remaining school staff.

From an in-depth search on all the sites of the orders of the province of Salerno, the registered health professions are doctors and dentists (for about 7,700), veterinarians (about 700), pharmacists (about 2,300), biologists (about . 6,000), psychologists (about 1,000), nurses (about 9,000), midwives (about 400), technicians of medical radiology, rehabilitation and prevention (about 3,000), physicists and chemists (about 200), to these it must be added other Healthcare Professionals (eg Op. Socio Sanitari). Therefore it is estimated about 31,000 health professionals and other Op. Of health interest (about 3% of the population) in the province of Salerno and at least about 110,000 in the Campania region, but to date not everyone have undergone vaccination.

Assuming the numbers published on the website of the Presidency of the Council of Ministers for the Campania region (108,621), it is noted that the health personnel still not vaccinated stands at approximately 3,400 operators, of whom we do not yet know precisely in which health structures they provide their activities, as reconnaissance by general managers is underway, and it is not known whether the reason for the lack of vaccination is linked to individual and social behavioral determinants or simply linked to their health conditions.

Anti Covid-19 Vaccination Obligation

The mandatory nature of vaccines in Italy is not a new issue as it had already been addressed with the D.L. 73/2017 which had reintroduced the vaccination obligation for certain diseases, which was abolished at the end of the 1990s, provided for an administrative penalty for parents and the requirement of access for preschools.

Italy is the first nation to have imposed a COVID-19 vaccination obligation.

Legislative Decree 44/2021 which, albeit a temporary rule as it was limited in its operation to 31/12/2021 and limited to the specific health sector, is causing important repercussions on the employment relationship for those who do not intend to accept the obligation.

The co. 6 of the art. 4 of the aforementioned Legislative Decree in fact states that non-compliance with the vaccination obligation determines the suspension from the right to perform services or tasks that

involve interpersonal contacts or involve the risk of spreading the infection from SARS-CoV-2, with the possibility for the employer to work of assigning the health worker to different tasks, even lower ones, and, if this is not possible, no salary is due for the period of suspension.

The legitimacy of art. 4 can only be assessed in application of the constitutional principles and in particular of art. 32 of the Constitution which states that “The Republic protects health as a fundamental right of the individual and the interest of the community”.

No one can be obliged to a specific health treatment except by law, which cannot in any case violate the limits imposed by respect for the human person.

Therefore, there is a dual interpretation of the rules, on the one hand it protects the citizen in his right to health and in his freedom to choose treatments, on the other it recognizes a public interest in health, which may entail the obligation for individuals to submit to treatments arranged only by law and within the limits imposed by respect for the human person.

Current Status Anti Covid-19 Vaccine Obligation

From the major newspapers it has been learned that in this last period (May-August 2021) various Healthcare Organizations of the NHS are moving towards the application of the provisions on the obligation of the anti Covid-19 vaccine for Healthcare Workers.

Obviously, many are those who, during the sanctioning procedure of warning to get vaccinated, show up at the vaccination centres for administration.

The procedures implemented by the Health Authorities are well defined, first the health professions are formally invited by the Public Health Departments to undergo the administration of the anti Sars-Cov-2 vaccine, indicating terms and methods, and only if they do not they show up for scheduled appointments, the immediate suspension provision is triggered until vaccination is completed and in any case no later than 31 December 2021.

The person concerned, the employer and the professional order to which they belong are immediately informed of the non-compliance with the vaccination obligation, at the same time communicating the suspension from the right to perform services or tasks that involve interpersonal contacts or involve, in any another form, the risk of spreading the infection from Sars-Cov-2, the Order, once it receives the communication from the ASL, must take note of the lack of vaccination and suspend the professional.

The Ministry of Health itself clarifies how to proceed in a letter of reply to Fnomceo of 17 June 2021, which asked for information on how to apply the law.

With regard to the suspension provision, only administrative appeal to the Regional Administrative Court is allowed within the terms of 60 days. from the date of notification and in this regard, there are a number of health workers in service at the NHS, the affiliated structures and private structures, who are resorting to the TAR against the cancellation of the sanctions provided for by the ASL to which they belong (suspensions, demotions, etc.).

From the latest government data issued in mid-August 2021, there are almost 37,000 Italian health care professionals who are not vaccinated so-called “No vax” and among the Regions with the most “no vax” Friuli Venezia Giulia and Emilia Romagna stand out

with approximately 5,000 and 13,500 respectively 10% and 7.4% of unvaccinated workers and immediately after Puglia and Sicily which respectively count approximately 9,000 and 5,700 unvaccinated health workers.

From an in-depth publication of recent studies or surveys present on institutional sites with respect to the propensity for vaccination against Covid-19 by health professionals, no determination has yet been made, however three publications have been found to be relevant and very interesting from mention in the survey covered by this study.

A study was recently conducted to evaluate the attitude towards the COVID19 vaccine among Coronavirus patients hospitalized in a city in northern Italy and it emerged that more than half of the respondents in the selected cohort were hesitant or undecided about the vaccine (59.2%).

This result is in line with another survey recently conducted by AGENAS in collaboration with the Scuola Superiore Sant’Anna of Pisa which involved 12,322 residents of all Italian Regions and Autonomous Provinces. The survey revealed that 17.6% of those interviewed were unwilling to get vaccinated * 2. The other very interesting recent study, carried out by Agenas in collaboration with the Scuola Superiore Sant’Anna, is based on a survey conducted on the websites of the 21 Italian Regions and Local Health Authorities on the state of the art of online communication in this regard to the anti Covid-19 vaccination and it has emerged that receiving clear information on the COVID-19 vaccine can increase the propensity of Italian citizens to get vaccinated and how the internet represents one of the main sources of information on COVID-19 vaccination.

Objectives Of The Project

For the many contradictions and doubts on Legislative Decree no. 44/2021 about the compulsory vaccination against COVID-19 which is further causing discussion not only from the point of view of health, but above all for the ethical and legal implications that the precept entails, it was considered to consult a sample of the population of practitioners of the health professions and to administer a questionnaire in order to fully understand the main reasons that lead them to think that the obligation is wrong and that all this, by reaction, triggers even more fears and no-vax instincts or that the reasons are different and to be included in the investigation.

Based on the evidence resulting from the scientific studies specified in the introduction, the present study was aimed at observing the attitudes of the “health population” towards vaccination against COVID-19, at investigating the behavioral causes that may give rise to an implementation deficit in adherence to the vaccination campaign against COVID-19, at researching which sources of information on the virus drawn from health professions, to obtain immediate assessments of the attitudes and preferences of health professionals useful for defining more effectively decisions to be taken, by institutions, in particular the regional health services, in the face of difficult cases of “no vax”, while at the same time allowing to estimate the importance that health professionals attribute to the different characteristics of public interventions, for example making mandatory by law a vaccination

in conditions of management of health emergencies with few precedent compared to other actions that could be more effective.

In this regard it should be remembered that social influences and individual behavioral determinants are to be taken into due consideration in this type of investigation, so much so that several studies show how social networks have an impact, both positively and negatively, on the behavior of people even about the decision to get vaccinated.

The survey on the propensity to vaccinate against covid-19 and on the information borne by health professions, compared to the studies already conducted on citizens, is of great interest, in addition to the fact that there is a legal obligation for them to undergo vaccination, above all because ethically speaking these health workers have important responsibilities as they perform services or tasks that involve interpersonal contacts or involve a risk of spreading the infection from Sars-Cov-2.

METHODOLOGY

This project envisaged the administration of an on-line questionnaire to a sample of health professions in the Campania region. The survey questionnaire was developed following an accurate analysis of the relevant scientific literature, flanked by a benchmarking analysis of the most important surveys on the issues investigated.

The questionnaire, which saw the combined use of observational and experimental methodologies, is aimed at participants to express their degree of agreement with respect to a series of statements, on a scale whose extremes represent strong disagreement and strong agreement. In other observational questions, participants select one or more options from a predefined list of answers.

The questionnaire was administered through the “Google” platform and the link was sent electronically via e-mail to all the Presidents of the Orders of the Health Professions of the Campania region for appropriate dissemination and possible publication on its institutional website, also sent via the social channels to about 800 health professionals with direct knowledge of the authors of this research project and finally published on the institutional site of the Salerno ASL. Membership took place voluntarily between June and September 2021 and the data collected, in full compliance with the rights and anonymity of the participants, are treated in accordance with EU Reg. No. 2016/679 (GDPR), of the Legislative Decree n. 196/2003 “Code regarding the protection of personal data”.

The research project, which explored issues of relevant topicality in the daily public debate between politics, experts and institutions at different levels, provided for the subdivision of the questionnaire to be administered into 3 Sections:

- In a first section, the profile of the health professions subject of the survey was observed;
- In the second section, the questionnaire measured the attitudes of health professions towards vaccination against COVID-19 and studied the relative importance of some factors in influencing the propensity to vaccinate against COVID-19;
- In the third section, the survey investigated what are the issues related to vaccination against COVID-19 on which health professions also require more information and which communication channels are desired by them.

The survey involved 613 health workers, belonging to the various health professions recognized as such by the current legislation on the subject, which are specified below:

Surgeon, Dentist, Veterinarian, Pharmacist, Health

TABELLA 1: ETA' – SESSO - Titolo di Laurea - Tipologia dell'attività professionale						
ETA'	da 20 a 29 anni	da 30 a 39 anni	da 40 a 49 anni	da 50 a 59 anni	da 60 a 70 anni	> 70 anni
	19,5 %	27,9 %	15,1 %	25,5 %	11,8 %	0,2 %
SESSO MASHIO 39,7 %	7,2 %	11,3 %	5,3 %	10,4 %	5,3 %	0,2 %
FEMMINE 60,3 %	12,3 %	16,6 %	9,8 %	15,1 %	6,5 %	0,0 %
LAUREA TRIENNALE	1,8 %					6
MAGISTRALE BIENNALE	3,5 %					2
MAGISTRALE Ciclo Unico	14,7 %					
ATTIVITA' PROFESSIONALE	67 % SSN	16,3 % Strutture accreditate	9,3 % studio privato	1 % studio medico MMG	2,4 % prestazioni occasionali	4 % in cerca di 1^ occupazione

Tab 1

GRAFICO 1 – Informazioni cliniche rispetto all'Infezione da Sars-Cov-2

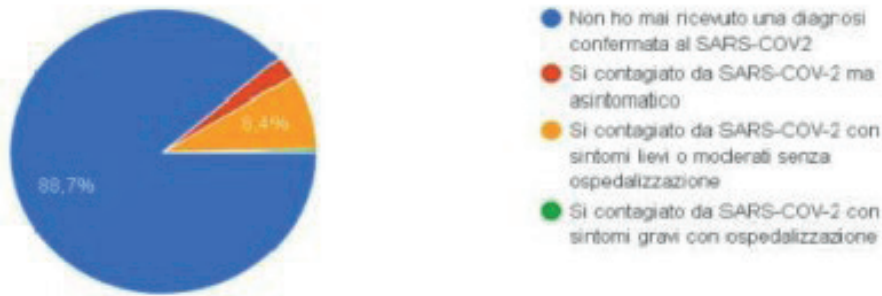


Fig. 1

Professions of the Nursing and Midwifery Area (CPS Nurse, CPS Pediatric Nurse; CPS Midwife), Health Professions of the Technical-Health Area (Health Technician of Medical Radiology, Health Technician of Medical Laboratory, Audiometrist Technician, Neurophysiopathology Technician, Orthopedic Technician, Audioprosthesis Technician, Cardiocirculatory Physiopathology Technician and Cardiovascular Perfusion, Dental Hygienist, Dietitian), Health Professions in the Rehabilitation Area (Podiatrist, Physiotherapist, Speech therapist, Orthopedic surgeon and Neuropedic Therapist) Developmental, Psychiatric Rehabilitation Technicians, Occupational Therapist, Professional Educator), Health Professions of the Prevention Area (Environmental and Workplace Prevention Technician, Health Assistant), Psychologist, Biologist, Physicist and Chemist.

Results And Discussion: The Profile Of The Healthcare Professional Subject Of The Survey

SECTION I identifies the profile of the professional, age (answers in graph 1), sex (answers in graph 2), the degree qualification that qualifies him for the profession and the type of professional activity exercised (answers in Table 1).

In line with their natural placement, 84% of the health professionals interviewed carry out their activity with an employment relationship, 67% in activity at the NHS (ASL / AO) and 18% at accredited or affiliated health facilities. at the NHS (clinics, nursing homes, rehabilitation homes, nursing homes, etc.), a small part of health professionals (about 12%) are freelance professionals in private practices and the remaining 4% is represented by new graduates or in any case graduates of the health professions looking for their first job.

The population surveyed is represented for approximately 59% by female exhibitors and for the remaining 41% by men, distributed evenly and equally representative of all the age groups interviewed (20/29, 30/39, 40/49, 50/59, 60/70 and > 71);

of these professionals about 35% have a single-cycle master's degree (doctors, veterinarians, pharmacists and others) or two-year master's / specialist degrees, the other 65% have a three-year degree in the health professions or they are in possession of the equivalent qualification.

The last two questions of the first section investigate the health status of the health population under study.

QUESTION 5 - "Health status with respect to Sars-Cov-2 infection" (answers in graph 1):

- He was infected with SARS-COV-2 but asymptomatic (2.5%);
- He infected with SARS-COV-2 with mild or moderate symptoms without hospitalization (8.4%);
- He became infected with SARS-COV-2 with severe symptoms with hospitalization (0.5%);
- I have never received a confirmed SARS-COV2 diagnosis (88.7%).

QUESTION 6 - "Temporal information with respect to Sars-Cov-2 infection" (answers to graph 2):

- I have never received a confirmed diagnosis at SARS-COV2 88.9%;
- Infected in the absence of vaccination or before vaccination (9.7%);
- Infected between the first and second dose (0.9%);
- Infected after vaccination against COVID-19 (0.5%);

GRAFICO 2 - Informazioni temporali rispetto all'Infezione da Sars-Cov-2

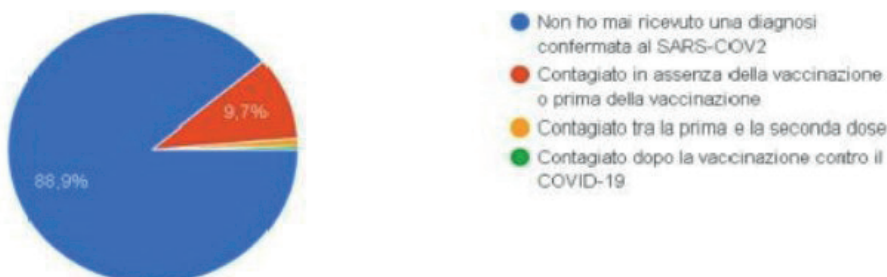


Fig. 2

GRAFICO 3 - Propenso alla vaccinazione anti Covid-19 ?

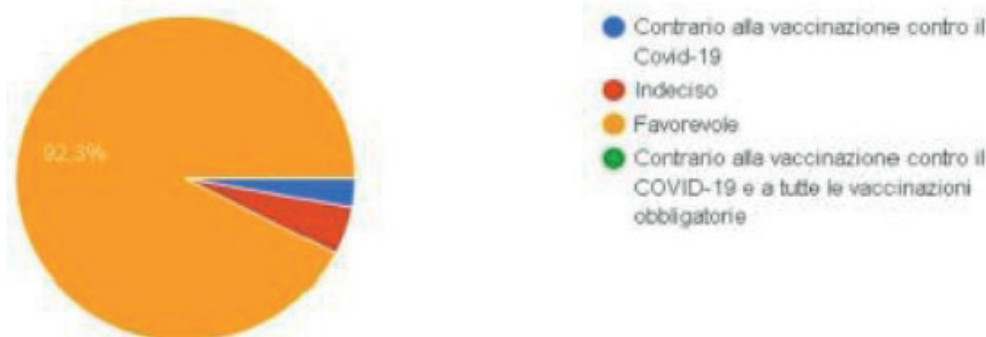


Fig. 3

From these two responses, the significant data is that about 10% of the health offices to date have been infected with Sars Cov 2, of these about 73% with mild or moderate symptoms and without hospitalization, 23% asymptomatic, only 4% had severe symptoms and were hospitalized.

The other relevant data that results from calculations on infected operators subject to the survey, is that about 97% of them took the virus before the complete vaccination course, more precisely 89% before vaccination, 9% between the I and II dose; only 2% of the interviewees contracted the Sars-Cov-2 virus after vaccination.

Results And Discussion: Attitudes On Vaccination Against Covid-19

Section 2 illustrates the questions that investigate the attitudes of health professions towards vaccination against COVID-19 and for each question there are graphs with the results relating to the perceptions of the sample with respect to macro-themes: risks of the disease and vaccination, vaccines and pharmaceutical companies, propensity to vaccinate themselves and more.

11 questions in this section were asked to respondents on a five-point Likert scale, other questions presented as statements against which the respondent had to express his or her level of agreement.

SECTION 2 - QUESTION N. 7 - "Are you inclined to vaccinate against Covid-19 ?" (answers in graph 3)

- To be Against vaccination Covid-19 (2.9%);
- Undecided (4.8%);
- In favor (92.3%);
- To be against all mandatory vaccinations.

QUESTION N. 8 - "Do you receive the anti covid-19 vaccination ?" (answers in graph 4):

- I took first and second doses (93%);
- I only performed the 1st dose (4.5%);
- I intend to get the COVID-19 vaccine as soon as possible (1.4%);
- I have no intention of vaccinating myself (1.1%).

From these two questions, the significant data to be noted is that about 3% are still opposed to this Covid-19 vaccination which could be the no vax of the interviewees and about 5% represent the undecided. Obviously, almost 93% of Healthcare Workers are decidedly in favor and have undergone the vaccination, only 4.6% have done the 1st dose and are waiting for the 2nd one.

The other relevant fact is that among the 3% of the no vax against there is a 1.2% of health professionals who we can call them "irreducible" who are not at all willing to get vaccinated, compared to 1.4% who instead they declare that they would also intend to get vaccinated, it would remain to understand the reasons that led them to postpone, and we will see this in the following questions and in graph n. 7. Data of the Health Operators not yet subjected to vaccination which are in line with the national average of 3% as

GRAFICO 4 - Ha effettuato la vaccinazione anti Covid-19 ?



Fig. 4

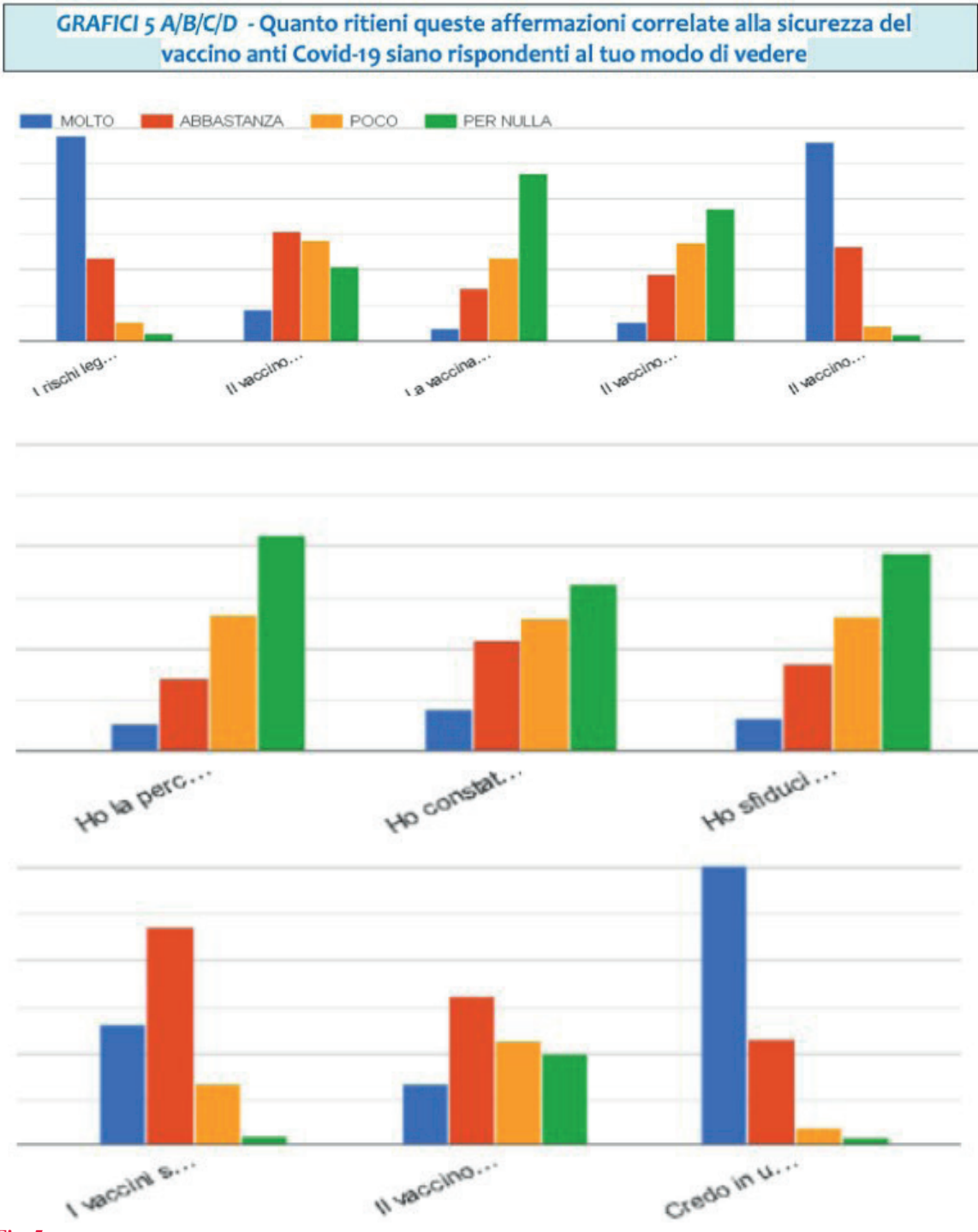


Fig. 5

also recorded in the Campania region, as published by the Ministry at the date of this survey.

Question n. 9 - “How much do you think these statements related to the safety of the Covid-19 vaccine are in keeping with your view” (answers in graph 5): VERY AGREE - ENOUGH AGREE - LITTLE = ENOUGH DISAGREE - NOT AT ALL = TOTALLY DISAGREEING):

- The risks associated with the COVID-19 disease are greater than the possible side effects of the vaccine;
- The COVID-19 vaccine was developed quickly to make sure it is safe and effective;
- Vaccination against Covid-19 is not needed if you follow safety procedures and protection systems

accompanied by healthy lifestyles or natural remedies;

- The COVID-19 vaccine is big business for pharmaceutical companies and cannot be trusted;
- The COVID-19 vaccine is the quickest way to get back to normal;
- Vaccines are among the safest pharmaceutical products;
- I do the covid-19 vaccine only to protect the people around me (patients, family members, etc.);
- I believe in a strong risk-reducing effect of SARS-Cov-2 infection in fully vaccinated versus unvaccinated people;
- I have the perception that this vaccination is not effective;

GRAFICO 6 - Pensì sia giusto introdurre obblighi di legge per la vaccinazione contro il COVID-19 (vedi DL n. 44/2021 convertito in legge)

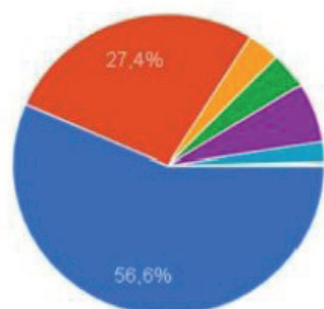


Fig. 6

- I noticed access problems (long waiting times or insufficient availability of vaccines);
- I have no confidence in the institutions and in particular in the services offered by public health;

The majority of healthcare professionals, between 75% and 94% are convinced:

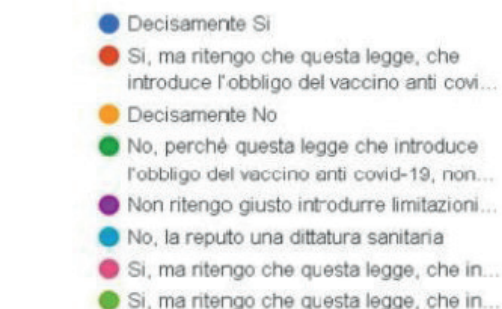
- in a strong SARS-COV-2 risk reduction effect of vaccinated versus unvaccinated (for 94%), which is the strongest way to return to normal (for 93%), that the possible risks related to COVID-19 disease are greater than the side effects of the vaccine (for 92%) and that vaccination cannot be replaced by other means of prevention (for 80%);
- moreover that vaccines are among the safest pharmaceutical products (for 83%) and that it is not a business for pharmaceutical companies (for 75%).

While the healthcare population is divided almost in half, between 46% and 53%, in arguing that:

- the Covid-19 vaccine was developed too quickly to be sure it is safe and effective (for 46%) and that they only undergo administration to protect their family members or patients (for 53%).
- On the other hand, only a minority of the Healthcare Professionals interviewed (between 1-2% and 5%):
- has the perception that the anti covid-19 vaccine is not effective (about 2%);
- less than 1% have no confidence in the institutions and in the offer of public health services, less than 2% have little confidence and only 5% have noted access problems and long waiting times at the NHS vaccination centres.

QUESTION N. 10 - "Do you think it is right to introduce legal obligations for vaccination against COVID-19" (see Legislative Decree no. 44/2021 converted into law) as already happened with the previous law 73/2017 which required vaccination for certain diseases" (reply in graph 6):

- Definitely Yes (56.6%);
- Yes, but I believe that this law on the obligation of the anti covid-19 vaccine is not an appropriate intervention, we should use other methodologies and individual and collective risk assessments to identify a more restricted and contained obligation



- on some categories of people and belonging to precise risk classes (26.9% + 0.4%);
- Definitely No (3.5%);
- No, because this law on the requirement of the anti covid-19 vaccine is not an appropriate intervention, other methodologies and risk assessments should be used as above (3.8%);
- I do not think it is right to introduce limitations for those who, even if they can, decide not to vaccinate against COVID-19 (6.5%);
- No, I consider it a health dictatorship (2%).

Significant data to be noted are that:

- about 56% believe it is absolutely right to introduce a legal obligation;
- a non-negligible fact is that about 27% of the interviewees answer "YES" but, from a legislative point of view, they believe it is right that more restricted risk classes could be identified to make the vaccine mandatory with a law, also on the basis of the evaluation of the risk on the part of the competent doctor of the work of the health facility where the activity of the health professional is exercised as required by Legislative Decree no. 81/2001 and subsequent amendments;
- 6.5% do not believe it is right to make Covid-19 vaccination mandatory;
- 2% consider it a health dictatorship, here comes out the "NO VAX" orientation of those who are not at all willing to get vaccinated, who do not believe that the Covid-19 vaccine is effective, in other words that part of the health workers who is opposed to Covid-19 vaccination (see in this regard also the results of questionnaires 8 and 9).

QUESTION N. 11 - "What is the main reason why you have decided to postpone the vaccination" (answer in graph 7):

- Diseases / health conditions that did not allow vaccination (4%) + Pregnancy and Breastfeeding (1%) + Allergies (0.2%) + Waiting 90 days after covid-19 virus negativization (0.2%) + Already Positive (0.2%) + For pathologies (0.4%) + other similar options;
- I was advised against joining the vaccination program by health professionals (0.5%);
- Doubts related to the usefulness of vaccinations (2%) + little time for experimentation (0.2%) +

GRAFICO 7 - Il motivo per cui ha deciso di POSTICIPARE la vaccinazione

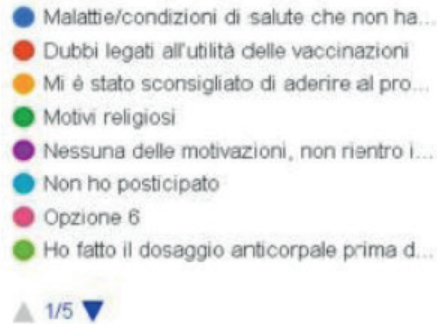
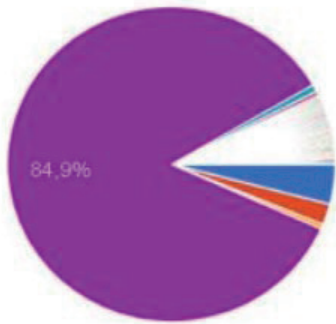


Fig. 7

strong doubts related to short and long-term side effects or side effects (0.4%), other similar ones;

- None of the reasons, I do not fall into this case history (84.9%) + I have not postponed (4.5%);

The significant health data to be noted is that of 9.9% of health workers who have postponed or who did not undergo vaccination, at the time of data collection from the interviewees, it is mainly due to their health status, specifically for:

- 5.5% is due to diseases and pathologies or in any case health conditions that did not allow vaccination,
- 1% of witch is due to pregnancy, 0.2% is due to breastfeeding, 0, 2% is due for side effects, therefore over 4% is for particular pathologies;
- 1% is due to waiting 90 days after the virus is negative or because it is positive for Sars-cov-2 or due to the fact that with the serological assay it already had antibodies against Covid-19.

The fact remains that over 3% of the health workers interviewed have doubts related to the usefulness of vaccinations and other similar reasons to always be identified among the “no vax” of the interviewees.

SECTION 3 asks questions about vaccine knowledge, possible incentives to get vaccinated, and sources of information related to the COVID-19 vaccine.

One of the questions in this section was presented to respondents as statements about which the respondent had to express his or her level of agreement or disagreement and for some questions posed on a five-point Likert scale.

QUESTION N. 12 - “On a scale of 1 (poor) to 5 (excellent), how do you rate the level of your knowledge on vaccination against COVID-19” (answers in graph 8):

- 5 (ottime);
- 4 (buone);
- 3 (sufficienti);
- 2 (mediocre);
- 1 (scarse);

QUESTION n. 13 - “Would correct information and greater insight into the risks of vaccination against Covid-19 in the short and long term give incentives to do it?” (graph 9):

- Yes (55.4%);
- Yes, because all the professionals give information only about the benefits of vaccination but not about the risks (24,7);
- No (7.7%);
- I don’t know (12.2%).

QUESTION n. 14 - “Who did you get more information about COVID-19 from?” (answers in graph 10):

- on the website of my Region / ASL Institutional sites (eg Ministry of Health, Istituto Superiore di Sanità, AIFA) for 53.6% + 0.4%;
- Through specific television programmes with virologists, epidemiological experts and institutions (30.8% + 0.2% +);
- on websites / forums that promote them (3.7%);
- on sites / forums that advise against vaccinations (0.7%) and more;
- Other (about 9%): scientific training / CME /

GRAFICO 8 - come valuta il livello delle sue conoscenze sulla vaccinazione contro il COVID-19

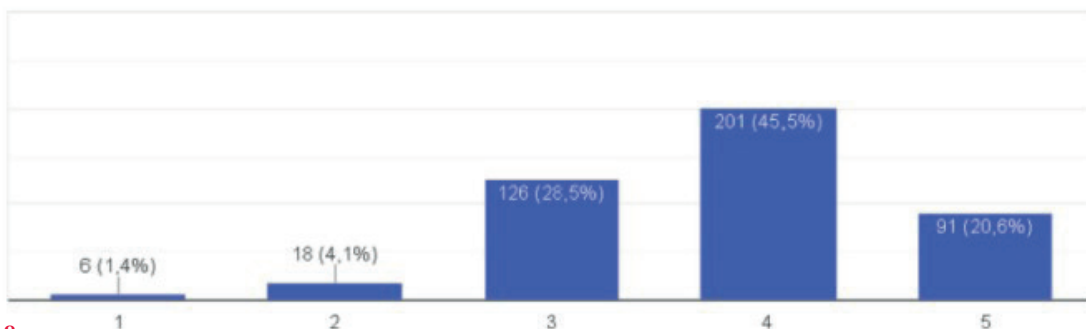


Fig. 8

GRAFICO 9 - Una corretta informazione e un maggiore approfondimento sui rischi della vaccinazione anti Covid-19 sul breve e lungo termine incentiverebbero a farla?

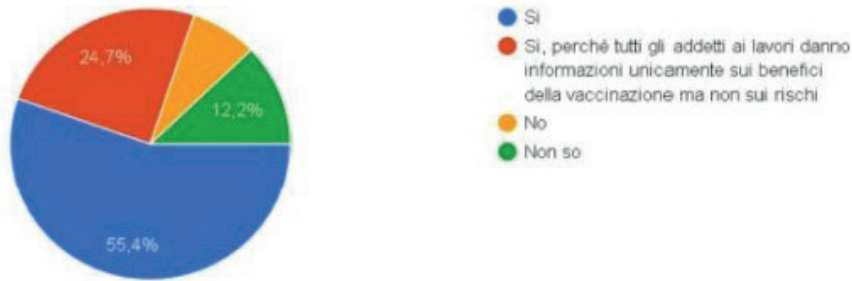


Fig. 9

scientific journals and specialized websites (5%) + from doctors and competent doctor where I work (2%) + from frontline work (2%) + from GPs (0, 4%) and more.

QUESTION N. 15 - "Have you found a discrepancy of opinions on the anti covid-19 vaccination from various health professionals and virological experts that you have consulted or listened to?" (graph 11):

- Yes (68% + 0.8%);
- No (19.7%);
- I did not consult any "health professionals" (11.5%).

QUESTION N. 16 - "Who would you like more information about COVID-19 from?" (answers in graph 12):

- Vaccination services of the ASL (37%);

- Family doctor (25%);
- Other trusted doctors (virologists or other specialists) for 20.4%;
- Associations or other specialized bodies also on the web (12.3%);
- Internet (2.4%); Other (3.9%).

From the results of the questions posed to the interviewees, it was found that 95% of health professionals declare that they have sufficient or good knowledge on the subject of vaccination against Covid-19, only 5% consider them scarce or mediocre;

- 80% believe that they would in any case be more incentivized to vaccinate if they were correctly and better informed about the risks of vaccination against Covid-19 in the short and long term, at the same time they require more information from the Vaccination Centres, General Practitioners and by

GRAFICO 10 - Da chi ha avuto maggiori informazioni sul COVID-19



Fig. 10

GRAFICO 11 - Ha trovato discordanza di opinioni sulla vaccinazione anti covid-19 da parte di diversi operatori sanitari ed esperti virologi che ha consultato o ha ascoltato



Fig. 11

GRAFICO 12 - Da chi avresti voluto maggiori informazioni sul COVID-19

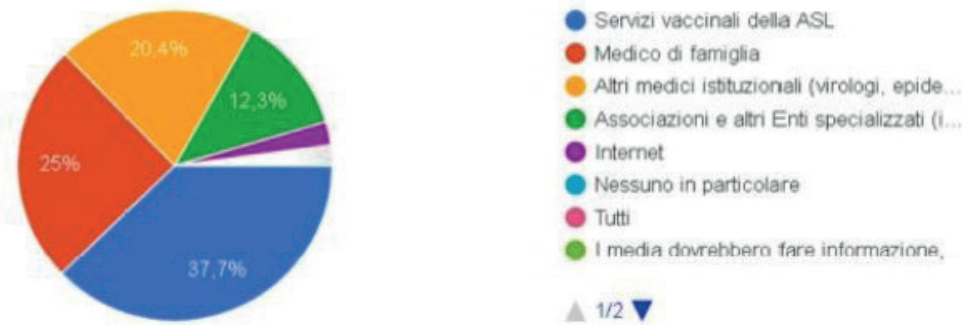


Fig. 12

the Doctors in charge of the health facility where they work;

- about 60% of the interviewees declare that the major sources of information were drawn on the internet from institutional sites (ministry, region, ASL, etc.) and other institutional sites for about 54%, from sites and forums that promote the campaign vaccine for about 4%,
- for more than 31% through specific broadcasts with experts and institutions,
- about 4% through CME scientific training and specialist scientific journals;
- only a minority of 1% received information from general practitioners and / or PLS, 1% from the company competent doctor and 1% from doctors or health workers at their work in health facilities.

A minority of 1%, on the other hand, identified in the so-called “no vax”, drew information from sites and forums that advise against vaccination against covid-19.

Another critical element is a large majority of 70% of respondents who declare that they have found a discrepancy of opinions on the anti covid-19 vaccination by various health professionals and virological experts who have consulted or listened to on social networks, TV and more.

CONCLUSIONS

Once the data collection was completed, not only an evaluation of the results was carried out but an analysis of the readability of all the data with the aim of highlighting and providing ideas for improving the communication process and approach of health professionals with the topic covered by the present study because the interviewees, each for its particular health activity, are at the forefront of fighting this pandemic. The results presented in this research may be useful for the Prevention Departments of the Health Authorities and Institutions to understand the propensity to vaccinate against covid-19 also of the health professionals and to monitor their perception of the information and communication methods, in order to identify useful strategies to sensitize health professionals and others, in particular the hesitant people and no vax, to raise the level of trust in the vaccination campaign, in the institutions and in the role of experts.

In fact, from our data also for health professionals, the receipt of clear and correct information on the COVID-19 vaccine would increase their propensity, as already noted for Italian citizens by the existing litera-

ture * 3 and by the statements made by the European Center for Prevention and Disease Control (ECDC) * 4 which report how the access to reliable information and adequate communication increases people’s willingness to undergo vaccines of any kind and leads to significant results in promoting vaccine acceptance. The doubt shown in this survey also by health professionals on the probable short and long-term side effects of covid-19 vaccination are by no means negligible, they represent about half of the interviewees, this mainly due to the confusion generated by media overexposure - in several contradictory occasions - of scientific experts and institutions in charge, although aware that the evidence on the efficacy and safety of vaccines authorized by the EMA and AIFA derives from controlled clinical studies and that the available knowledge on the benefit-risk profile of vaccines may gradually accumulate as the vaccination campaigns currently underway in the various countries continue. Our data suggest that, avoiding unnecessary clashes on clinical aspects by experts in the field but even more by politics can only help to overcome the skepticism of the undecided and to make the few opposed “no vax” think better even among the health workers. As far as knowledge and sources of information are concerned, even health professionals recognize the Internet and TV as the main information channels on COVID-19 vaccination, as well as assisting them in ECM training and reading scientific and specialized journals.

The latter data are also in line with the analysis conducted on the Italians by AGENAS in collaboration with the Scuola Superiore Sant’Anna, from which it emerged that 45.3% recognize the Internet as the second main channel of information on anti-vaccination COVID-19, after television and that in recent years an increasing number of citizens search for health information on the Internet (88%).

The Internet and the websites that populate it therefore represent a key channel for also informing health professionals on issues related to vaccination against COVID-19.

Just under half of the interviewees believe it is not right or at least inappropriate to introduce a legislative obligation for vaccination against covid-19 for health-care workers (DL 44/2021).

Neglecting 2% of the probable no vax who consider it a health dictatorship, a good part believes it right that more restricted risk classes could be identified to make the vaccine mandatory, also re-evaluating the

figure of the Competent Doctor as required by Legislative Decree no. 81/2001, so that there is an assessment of the risk of the health facility and of the particular activity carried out, avoiding to involve in the warning and suspension procedures provided for by paragraph 4 of art. 6 of the aforementioned DL, health workers with serious health problems or pregnant workers who do not allow them to join the anti covid-19 vaccination campaign.

Last but not least, we underline that 10% of the health workers interviewed were infected with the SARS-COV-2 virus and that only 2% became infected after complete vaccination, this in support of the many studies carried out so far on the population that lead us to understand the great efficacy of this anti covid-19 vaccination campaign.

The project therefore makes it possible to report a series of actions that policy makers and employers of public and private health structures could undertake to support good communication to their health professionals on COVID vaccination19.

In particular, the actions to be implemented in order to improve communication and the propensity to vaccinate against covid-19 for health professionals are:

- Increasing communication and information on anti-covid-19 vaccination, including on short and long-term side effects, by providing an information desk in each ASL of the NHS within

the prevention department and involving general practitioners in order to strengthen the information and sensitize their clients to the administration of the vaccine;

- Containing, as far as possible, discrepancies of views of the scientific world on the issue of vaccination against covid-19 in the major media (TV, etc.), on the other hand avoiding them by the institutions, by providing for a regulation on communication to be kept aside institutions and politics to avoid confusion between health professionals and citizens;
- organizing meetings and consultations with psychologists, epidemiologists, hygienists, occupational doctors, experts on vaccination against covid-19, in each ASL of the SSN for those health professionals who are against and “no vax”, in the same way also involving no vax citizens;
- convocation by the Competent Doctors of all health care workers of the health facility with partial or unsuitable suitability / ability or who are pregnant in order to assess the compatibility with the administration of the anti covid-19 vaccine even before starting the warning procedures and suspensions put in place by general managers and other employers to implement the legislative obligation.

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