

Vaccination strategies between compulsion and incentives. The Italian Green Pass experience

Pasquale Stefanizzi, Francesco Paolo Bianchi, Nazario Brescia, Davide Ferorelli & Silvio Tafuri

To cite this article: Pasquale Stefanizzi, Francesco Paolo Bianchi, Nazario Brescia, Davide Ferorelli & Silvio Tafuri (2022) Vaccination strategies between compulsion and incentives. The Italian Green Pass experience, *Expert Review of Vaccines*, 21:4, 423-425, DOI: [10.1080/14760584.2022.2023012](https://doi.org/10.1080/14760584.2022.2023012)

To link to this article: <https://doi.org/10.1080/14760584.2022.2023012>



Published online: 13 Jan 2022.



Submit your article to this journal [↗](#)



Article views: 2002



View related articles [↗](#)



View Crossmark data [↗](#)



Citing articles: 15 View citing articles [↗](#)

EDITORIAL



Vaccination strategies between compulsion and incentives. The Italian Green Pass experience

Pasquale Stefanizzi ^a, Francesco Paolo Bianchi^a, Nazario Brescia^a, Davide Ferorelli^b and Silvio Tafuri^a

^aDepartment of Biomedical Science and Human Oncology, Aldo Moro University of Bari, Bari, Italy; ^bDepartment of Interdisciplinary Medicine, Aldo Moro University of Bari, Bari, Italy

ARTICLE HISTORY Received 7 November 2021; Accepted 22 December 2021

KEYWORDS COVID-19; immunization campaign; public health; vaccine hesitancy

Vaccination strategies have been able to change the global burden of COVID-19 in Italy and Europe. Universal Mass Vaccination for SARS-CoV-2 was initiated in Israel, UAE, Europe and the United States in December 2020, and post marketing studies have demonstrated that vaccines are highly effective in all age groups in preventing symptomatic and asymptomatic SARS-CoV-2 infections and COVID-19-related hospitalizations, severe diseases, and death, including those caused by emerging variants [1–3].

Although increased vaccination coverage has caused a sustained decline in the incidence of SARS-CoV-2, real-life data on the efficacy of COVID-19 vaccination are lower than expected from clinical trials, likely because of the lack of indirect protection for unvaccinated individuals [4].

According to data from the European Center for Disease Prevention and Control, as of 31 October 2021, 585,743,531 doses of vaccine have been administered and 80,3% of adults (18+) in the EU/EEA have received at least one dose of vaccine [5].

At the beginning of the vaccination strategy, the most important issue was the priority to be given to vulnerable populations, due to insufficient availability of vaccine doses and with the aim of reducing hospitalization and deaths resulting from COVID-19 [6]. According to scientific evidence, population groups at high risk of virus circulation, such as children, adolescents and young adults, must be prioritized at this stage of the strategy to achieve better control of SARS-CoV-2 transmission [7].

European experience has shown that these new target groups are the most difficult to reach. In fact, the percentage of EU/EEA citizens who have received at least one dose of COVID-19 vaccine ranges from 84.1% to 90% in persons aged >50 years, while it is 69% among persons aged 25–49 years and 15.9% among persons aged 12–24 years [5].

Universal mass vaccination began in Italy on 27 December 2020. In January and February 2021, vaccines were offered to health care workers, residents in long-term care facilities, and persons >79 years of age, with the aim of reducing overall mortality and avoiding abstentionism among healthcare personnel [8]. Since March 2021, the offering

covered the vulnerable population and, starting from June, all residents could access the vaccine [9].

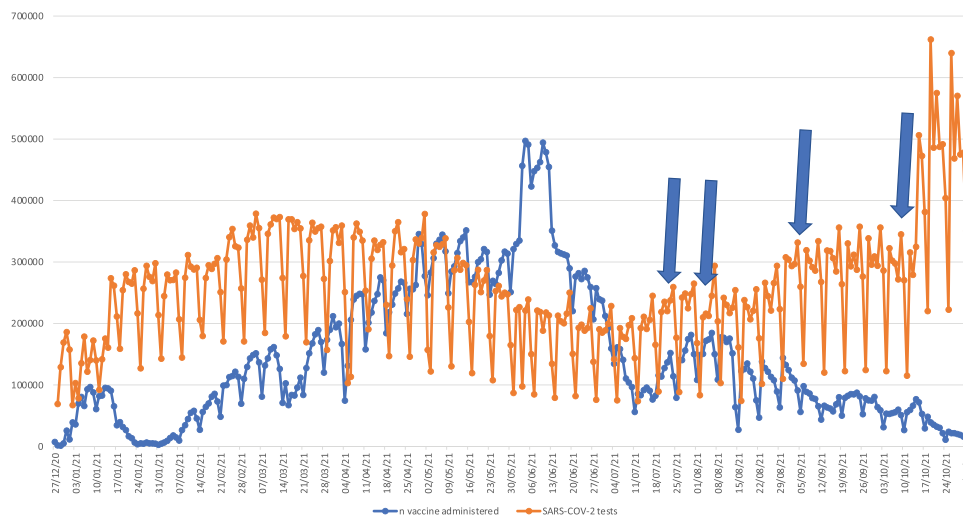
According to open data from the Italian Ministry of Health (<https://github.com/italia/covid19-opendata-vaccini>; Graph 1), since June 2021, a decreasing trend in the daily number of recipients of the first vaccine dose has been noted, although on 30 June 2021 only 34,065,747 Italians (57.5% of the total population and 63.8% of people aged >12 years) have received at least one dose of COVID vaccine.

Because the coverage achieved was not consistent with the goal of controlling the virus circulation, a debate arose in the scientific community and in Government about whether mandatory vaccination should be established by law. In Italy, a major political crisis began in 2011; from 2011 to 2021, Italy had 7 different Governments and 2021 Italian Government has a nonpolitical technocratic leadership, sustained by both left-wing and right-wing parties. The right-wing parties fiercely opposed the mandatory vaccination law.

To balance the need to avoid a government crisis during the pandemic with the need of increasing the COVID-19 vaccination coverage, particularly among young adults and adolescents, an alternative approach, consistent with the experiences of Israel, has been tested in Italy [10].

The idea of the Italian Government was based on the extensive use of the European Digital Green Certificate, also called 'Green Pass.' This certificate was provided by the Regulation (EU) 2021/953 of the European Parliament and the Council of 14 June 2021 in order to facilitate for holders to exercise their right to free movement during the COVID-19 pandemic. The Green Pass can be obtained by citizens who have been immunized against SARS-CoV-2 through natural infection (validity: 180 days) or vaccination (validity 1 year) or who have been tested by antigenic or PCR naso-pharyngeal swab (validity 48/72 hours) [11].

The approach chosen by the government was to avoid the mandatory perspective and use an incentive-based model. A 23 July 2021 Decree made the display of the Green Pass mandatory for access to restaurants, public events, sport competitions, gymnasiums, swimming pools, museums and parks for all individuals aged >11 years old. An 6 August 2021 Decree made



Graph 1. Number of Italians who had the first dose of vaccination against SARS-CoV-2 (blue line) and of people tested for SARS-CoV-2 by PCR or antigenic naso-pharyngeal swab, 27.12.2020–31.10.2021.

the Green Pass mandatory for all persons aged >18 years of age who have access to schools and universities. Finally, a 2021 Decree on September 10, ordered that all persons with access to work places must exhibit a Green Pass. Forced removal and pecuniary sanctions for transgressors have been established [12].

Because the Green Pass could be obtained with both full vaccination and SARS-CoV-2 testing, we examined the number of people who received the first dose of SARS-CoV-2 vaccination and those who took the SARS-CoV-2 test, day by day, using open data from the Ministry of Health (Graph 1). The rules were able to increase the number of people who had access to immunization in the 10 days before and after the laws were published (in general, the law was announced by the government a few days before publication).

Globally, the number of people who have received at least one dose of COVID-19 vaccine has risen to 46,630,490 (78.7% of total population and 87.3% of people aged >12 years); 12,564,743 Italian inhabitants have requested COVID-19 vaccination in the 'Green Pass era.' However, since September 2021, a decreasing trend in vaccine administration has been noted, whereas since October 15 there is a linear increase in people tested daily for SARS-CoV-2, ranging from 500,000 to 700,000 per day. Thus, we can assume that people who have refused vaccination are inclined to test every two or three days to obtain the Green Pass.

The Italian Green Pass experience showed good effectiveness of this approach in increasing immunization coverage. More than 20% of people did not have access to immunization, and this proportion is 22.6% (5,936,684 of 26,222,530) among people aged 12–49 years and 32.8% (1,520,192 of 4,627,514) among people aged 12–19 years. In view of the onset of winter, and considering that almost all people in this group are attending school, a new pandemic wave involving adolescents and young adults cannot be ruled out in this scenario. In fact, due to the opening of schools, a significant increase in the average reproduction rate has been documented in most European countries [13].

This scenario represents a public health issue that requires strategies to contain the spread of COVID-19, because circulation of the virus puts at risk both persons unvaccinated due to medical contraindication and subgroups of patients in whom vaccine efficacy is suboptimal [14].

In the past, mandatory vaccination for children has emerged as the only approach consistent with the purpose of achieving critical pediatric age group coverages [15].

Due to the fact that the Green Pass did not seem able to reach the last group of vaccine skeptics or No-Vax people, the Italian Government has now to consider the opportunity to introduce the mandatory SARS-CoV-2 vaccination, to better ensure the health of the most vulnerable population [16].

Declaration of interest

The authors have no relevant affiliations or financial involvement with any organization or entity with a financial interest or financial conflict with the topic or materials discussed in the manuscript. This includes employment, consultancies, honoraria, stock or options ownership, expert testimony, grants or patents received or pending, or royalties

Reviewer disclosures

Peer reviewers on this manuscript have no relevant financial or other relationships to disclose.

Author contribution

All authors contributed substantially to the conception and design of the review article and interpretation of relevant literature, and were involved in writing the review article or revised it for intellectual content.

Funding

This paper was not funded.

ORCIDPasquale Stefanizzi  <http://orcid.org/0000-0002-3279-0196>**References**

Papers of special note have been highlighted as either of interest (*) or of considerable interest (**) to readers.

1. Haas EJ, Angulo FJ, McLaughlin JM, et al. Impact and effectiveness of mRNA BNT162b2 vaccine against SARS-CoV-2 infections and COVID-19 cases, hospitalisations, and deaths following a nationwide vaccination campaign in Israel: an observational study using national surveillance data. *Lancet*. 2021 May 15;397(10287):1819–1829. Epub 2021 May 5. Erratum in: *Lancet*. 2021 Jul 17;398(10296):212. PMID: 33964222; PMCID: PMC8099315.
- of considerable interest
2. Suliman DM, Nawaz FA, Mohanan P, et al. UAE efforts in promoting COVID-19 vaccination and building vaccine confidence. *Vaccine*. 2021 Oct 15;39(43):6341–6345. Epub 2021 Sep 7. PMID: 34561138; PMCID: PMC8421098.
3. Lopez Bernal J, Andrews N, Gower C, et al. Effectiveness of COVID-19 vaccines against the B.1.617.2 (Delta) Variant. *N Engl J Med*. 2021 Aug 12;385(7):585–594. Epub 2021 Jul 21. PMID: 34289274; PMCID: PMC8314739.
- of considerable interest
4. Jabłońska K, Aballéa S, Toumi M. The real-life impact of vaccination on COVID-19 mortality in Europe and Israel. *Public Health*. 2021 Sep;198:230–237. Epub 2021 Sep 3. PMID: 34482101; PMCID: PMC8413007.
5. European Center for Disease Prevention and Control. COVID-19 vaccine tracker. [cited 2021 Nov 1]. Available from: <https://vaccine-tracker.ecdc.europa.eu/public/extensions/COVID-19/vaccine-tracker.html#uptake-tab>
6. Klimek P. Why we may need to rethink future SARS-CoV-2 vaccination strategies. *Lancet Regul Health Eur*. 2021 Nov;10:100214. Epub 2021 Sep 11. PMID: 34541566; PMCID: PMC8433029.
7. Li R, Bjørnstad ON, Stenseth NC. Prioritizing vaccination by age and social activity to advance societal health benefits in Norway: a modelling study. *Lancet Regul Health Eur*. 2021 Aug;15:100200. Epub ahead of print. PMID: 34568858; PMCID: PMC8448383.
8. Maltezou HC, Panagopoulos P, Sourri F, et al. COVID-19 vaccination significantly reduces morbidity and absenteeism among healthcare personnel: a prospective multicenter study. *Vaccine*. 2021 Nov 26;39(48):7021–7027. Epub 2021 Oct 30. PMID: 34740473; PMCID: PMC8556541.
9. Carini E, Cadeddu C, Castagna C, et al.; Organisational model and coverage of at-home COVID-19 vaccination in an Italian urban context. *Vaccines (Basel)*. 2021 Oct 29;9(11):1256. PMID: 34835187; PMCID: PMC8620176.
10. Wilf-Miron R, Myers V, Saban M. Incentivizing vaccination uptake: the “Green Pass” proposal in Israel. *JAMA*. 2021 Apr 20;325(15):1503–1504. PMID: 33720271.
11. Europe Union, Regulation (EU) 2021/953 of the European Parliament and of the Council of 14 June 2021 on a framework for the issuance, verification and acceptance of interoperable COVID-19 vaccination, test and recovery certificates (EU digital COVID certificate) to facilitate free movement during the COVID-19 pandemic. Available from: <https://eur-lex.europa.eu/legal-content/EN/TXT/?uri=CELEX%3A32021R0953>
12. Roncati L, Roncati M. COVID-19 “Green Pass”: a lesson on the proportionality principle from Galicia. *Eur J Health Law*. 2021 Oct;18:1–8. Epub ahead of print. PMID: 34706331.
13. Buja A, Zabeo F, Cristofori V, et al. Opening schools and trends in SARS-CoV-2 transmission in European Countries. *Int J Public Health*. 2021 Aug 18;66:1604076. PMID: 34483809; PMCID: PMC8408313.
14. Acquafredda S, Tafuri S. “My son can not attend the school because 5 classmates are unvaccinated.” On the question of compulsory vaccinations and the risk for immune-compromised children into the schools: the case of paediatric cancer patients. *Hum Vaccine Immunother*. 2019;15(3):643–644. Epub 2018 Nov 5. PMID: 30352002; PMCID: PMC6605721.
15. Bozzola E, Spina G, Russo R, et al. Mandatory vaccinations in European countries, undocumented information, false news and the impact on vaccination uptake: the position of the Italian pediatric society. *Ital J Pediatr*. 2018 Jun 14;44(1):67. PMID: 29898770; PMCID: PMC6001041.
16. Maltezou HC, Ledda C, Rapisarda V. Mandatory vaccinations for children in Italy: the need for a stable frame. *Vaccine*. 2019 Jul 26;37(32):4419–4420. Epub 2019 Jul 4. PMID: 31280946.
- of interest