

Opinion

Ethical Issues in Smoking and Prioritization of Vaccines for the Prevention of Communicable Respiratory Tract Infections

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Abstract: While vaccination is an aid, at least temporarily, for all emerging infectious diseases, not just COVID-19, fair distribution is an issue. Vaccine distribution to smokers is one such example. The provision of vaccine preference to smokers is consistent with the maximum life-saving principle and is justified on utilitarian grounds. However, the following five possible objections can be presented: (1) self-responsibility for smoking; (2) support from non-smokers; (3) preference for those who maintain social function; (4) identification of smokers and inducement to smoking behavior; (5) consideration for passive smokers. However, arguments against prioritizing vaccination based on self-responsibility downplay the social factors of smoking. (1) Smokers should be provided with treatment, not punishment. (2) To understand non-smokers and enhance social cohesion, communitarian explanations based on the reciprocity of care should be carefully provided to non-smokers. (3) The principle of maintaining social functioning does not supersede the principle of maximum life-saving. (4) Support for smokers should be based on self-reporting. (5) Severe cases of COVID-19 caused by passive smoking are among the most important cases to avoid. The extensive implementation of testing should actively identify victims of passive smoking. This will be evidence of the damage caused by passive smoking.

Keywords: COVID-19; vaccines; public health; ethics; distributional justice



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1. Introduction

As of November 2022, there is an adequate supply of COVID-19 vaccine relative to demand in Japan [1]. However, this situation is not universal, and there have been situations in Japan where the demand for vaccines has greatly exceeded the supply [2].

Concerning all emerging infectious diseases, not just COVID-19, the temporal gap between the spread of infection and vaccine development, the production time required, and the establishment of vaccination systems make vaccination a scarce opportunity, at least temporarily, and fair distribution a setback.

In Japan, the vaccination priority for COVID-19 was carefully reviewed by the Health Sciences Council (Subcommittee on Basic Immunization Policy, Subcommittee on Immunization and Vaccine), abiding by the law developed during the 2009 swine flu pandemic. The following priority levels were set: healthcare workers, the elderly (65 years and older), employees of facilities for the elderly, and persons with chronic diseases were prioritized for vaccination, in that order [3].

The order of priority for vaccination is an issue of public health ethics. This field of public health ethics is a young area of research and was developed as a branch of medical ethics in the 2000s [4]. The predominant dilemma of public well-being and individual freedom in public health policy and the fair distribution of resources in a just manner is addressed [5,6].

From the perspective of public health ethics, the proposed order of priority for vaccination proposed by the subcommittee of the Health Sciences Council seems reasonable. It is in line with the maximum life-saving principle, which is to maximize the number of

people whose lives can be saved. Evidently, the elderly and those with chronic diseases are at high risk of serious illness. Reducing the risk of infection among healthcare workers and workers in facilities for the elderly will also reduce the risk of infection among the elderly and those with chronic illnesses. Simultaneously, priority inoculation of healthcare workers and elderly facility workers is in line with the principle of maintaining social order. The principle of maintaining social order is a principle that requires prioritizing vaccine distribution to key workers who are responsible for social infrastructure (medical personnel, police officers, firefighters, transporters, etc.) to minimize social disruption. In the case of other infectious diseases such as H1N1 influenza, the life cycle principle, such as “taking into account the length of time a person enjoys life,” may be taken into account, considering the risk of serious illness among the youth [7]. In the case of COVID-19, disregarding the life-cycle principle is not unreasonable.

However, smokers are the other social group severely affected by COVID-19 [8–10]. Nevertheless, smokers were not included in the priority vaccination coverage. It raises questions such as what problems might arise if smokers were included in the priority vaccination program, and on what basis are smokers excluded from priority vaccination despite their risk of COVID-19 severity? Therefore, this paper will discuss the pros and cons of prioritizing the vaccine for smokers.

2. Approaches

As a premise for this paper, we set up a situation wherein demand for the COVID-19 vaccine exceeds supply. Although we focus on the COVID-19 vaccine, our discussion also addresses Disease X, which may occur in the future. We further presume that our discussion is limited to Japan. However, the research questions in this discussion can be applied to other regions outside of Japan. Based on the above background and assumptions, we summarize the issues in this paper with the following research question:

Should smokers be given priority in the allocation of COVID-19 vaccine when demand for COVID-19 vaccine exceeds supply?

We answer in the affirmative to the question, “Should smokers be allocated priority for vaccines?” Smokers, the elderly, and those with other chronic diseases should be preferentially allocated the vaccine for COVID-19. There is accumulating evidence that smoking is one of the factors contributing to the severity of COVID-19 [8,10–12]. Vaccination of smokers with the COVID-19 vaccine can reduce the risk of severe disease. It is quite reasonable to place the principle of maximum life-saving, which can be justified by utilitarianism, as the basic policy for allocating medical resources. The purpose of implementing COVID-19 vaccination as a policy is to reduce the number of deaths from COVID-19.

However, the counterargument could be that giving priority vaccination to smokers is unfair. Why is this unfair? And is it refutable? In the following, after clarifying our position, we list the following possible objections: self-responsibility; support from non-smokers; preference for those who maintain social function; identification of smokers and inducement to smoking behavior, and consideration for passive smokers. We further justify our arguments by attempting to refute them. We will present a possible solution to this problem based on this discussion.

3. Discussion

3.1. Possible Objections (1) Self-Responsibility

3.1.1. Antithesis

The health risks of smoking are widely known to the public, including those who smoke. However, they smoke based on their free will and self-determination. The execution of freedom produces an attribution of responsibility for the consequences. Smokers must assume for themselves the health risks caused by smoking. The smoker’s risk of COVID-19 severity was created by their intention, a risk that could have been mitigated. It is unreasonable to spend public funds to compensate for a risk resulting from self-determination. Therefore, it is unacceptable to give priority to vaccinating smokers against COVID-19.

3.1.2. Thesis

This self-responsibility argument against smoking is incorrect because it underestimates the social and economic factors contributing to it. The act of smoking cannot be said to be an action based on autonomous individual self-determination. Smoking is influenced by socioeconomic status. Smokers are pre-motivated to smoke by their residential, social, and economic status [13,14]. Many smokers wish to eliminate their smoking habit [15]. Due to the addictive nature of tobacco, many smokers have indulged based on lower-order intentions or desires, unable to realize their higher-order intentions. Self-accountability for smoking is punitive and unacceptable. Smokers should be provided care and treatment, not punishment [16]. Predominantly, public policy is improving socioeconomic disparity: the COVID-19 pandemic made the vulnerable more vulnerable and widened social disparities. Preferential provision of the vaccine to smokers may also affect the socioeconomic disparity. It can be justified from a liberal egalitarian perspective, as it would lead to a reduction in social and economic disparities.

3.2. Possible Objections (2) No Support from Non-Smokers

3.2.1. Antithesis

Non-smokers, who now constitute the majority, are not convinced about the priority provision of the COVID-19 vaccine to smokers, given that they are harmed by smokers daily. Passive smoking is the most prominent, but not the only one. Japan's "Health Promotion Law" stipulates that national and local governments shall take necessary environmental and other measures to prevent unwanted passive smoking. In other words, taxes are used to pay for the maintenance of smoking areas in public spaces, and arguably, non-smokers are partially paying for the costs of smokers. Public insurance is also used to pay for treating diseases caused by smoking [17], and non-smokers are also forced to bear the burden. Thus, non-smokers are directly or indirectly harmed by smokers. Nevertheless, if the COVID-19 vaccine is preferentially provided to smokers, the delay in providing the vaccine to non-smokers will result in an additional disadvantage to them. This is an additional burden placed on smokers, which is unacceptable.

3.2.2. Thesis

Careful public health communication to non-smokers is necessary if the priority provision of the COVID-19 vaccine to smokers is to be implemented as a policy. The communication should emphasize the utilitarian explanation that providing vaccine priority to smokers will reduce the number of severe cases of COVID-19. Simultaneously, its communication could usefully explain a communitarian perspective that appeals to the common good. Mutual miscommunication between these two groups is undesirable from the perspective of maintaining community. Non-smokers and smokers should be mutually inclusive. Naturally, smokers have a moral responsibility to avoid harming others, such as smoking indoors in the presence of non-smokers. Conversely, it is not appropriate to overestimate the incidental and indirect burdens on non-smokers, such as the social burden of medical costs and the costs of setting up smoking areas. To infinitely increase the responsibility of smokers by expanding the interpretation of such burdens as harm may be a perverse application of libertarian individualism. A communitarian explanation, based on a reciprocal relationship of care carefully offered to non-smokers, can reduce the frustration that non-smokers may have. Therefore, it is in the best interest of society as a whole to promote the COVID-19 vaccination of smokers.

3.3. Possible Objections (3) Principle of Maintenance of Social Functions

3.3.1. Antithesis

In Japan, 16.7% of the population is adult smokers (27.1% of men and 7.6% of women) [15]. If vaccines were to be provided to this population as a priority, the provision of vaccines to other populations would be delayed. A particular problem would be the delay in providing vaccines to social functionaries. While priority for providing

vaccines to medical personnel is a prerequisite, vaccines should be provided promptly to those who maintain social functions related to infrastructure essential to the lives of citizens (police, firefighters, water, gas, electricity, food distribution, finance, childcare, etc.). By doing so, civilian life can be maintained, and the disruption a pandemic would cause to society can be minimized. From this perspective, the preferential provision of the COVID-19 vaccine to smokers is not reasonable. At the very least, we should refrain from actively promoting it.

3.3.2. Thesis

Maintaining social functions, preventing economic losses as much as possible, and ensuring the quality of life of citizens are important policy issues in a pandemic. Therefore, maintaining social functions is a principle in public health resource allocation. However, this principle of maintaining social functions does not take precedence over the principle of maximum life-saving. The fundamental principle of infectious disease control in a pandemic is to save as many lives as possible. Positions responsible for maintaining social functions should not be prioritized because they have value in themselves but because they have instrumental value in helping to save more lives. Furthermore, the maintenance of social functions should be respected as long as it is compatible with the principle of maximum life-saving [18]. To disregard this fundamental value of maximum life-saving is to degenerate into a variant of eugenic thought. In other words, only economic productivity will be emphasized, and the socially vulnerable may be devalued.

The following rejoinder may be offered by those who emphasize the importance of maintaining social functioning.

Pandemic countermeasures, including vaccination, may reduce deaths among the elderly. However, if economic activity stagnates, the number of suicides, especially among the working generation, may increase. Subsequently, pandemic countermeasures, including vaccination, will cause more losses than benefits.

These objections are ageism and unfounded economic supremacy. Saving people from committing suicide due to economic problems caused by COVID-19 makes sense. But that is only possible if adequate social and economic support is provided by the government to those who are economically impoverished as a result of the COVID-19 pandemic response. Consequently, this is compatible with reducing the number of severe cases and deaths directly due to COVID-19.

3.4. Possible Objections (4) Difficulty in Identifying Smokers; Messages Encouraging Smoking

3.4.1. Antithesis

Preferential vaccination of smokers is problematic from a feasibility standpoint. How will smokers be identified? Who will identify smokers? If smoker identification is self-reported from a feasibility perspective, a non-smoker might try to obtain the right to priority vaccination through false claims. Even if they do not falsely claim to be a smoker, they might smoke one cigarette and claim themselves as a smoker. This would create two problems: first, priority vaccination for smokers would become a back door to vaccination, rendering the ranking of vaccine preferences meaningless; second, it might encourage smoking, which is a problem that is not addressed in the “right-to-privacy” provision of the vaccine. A non-smoker might start smoking to obtain the right to receive the vaccine, and while it would be nice if he could quit after one cigarette, it might trigger the formation of a smoking habit. If such a situation arises, this smoking habit and the resulting health hazards will have been created by the policy.

3.4.2. Thesis

It is possible to identify smokers using a saliva-based cotinine test or an exhaled carbon monoxide concentration test. Further, there is no problem, from the feasibility point of view, with implementing such tests on all smokers. However, the government should use a variety of methods to announce the following thoroughly: Smokers are at risk of

developing COVID-19, that this risk can be reduced by vaccination, that smoking cessation is recommended for the prevention of COVID-19 severity and other health maintenance, and that the vaccine is a scarce medical resource. This is a policy that appeals to the goodwill of citizens. Such a policy entails the existence of free riders. However, the desirable society expects goodwill from its citizens, takes care of its smokers, and moves toward a smokeless society through the voluntary awareness of its smokers. In this sense, smoking is not a matter of justice and punishment. It is a matter of maintaining the common good in the community formed by smokers and non-smokers and the care provided to smokers for that purpose.

3.5. Possible Objections (5) Preferential Vaccination of Passive Smokers

3.5.1. Antithesis

If the priority provision of vaccines to smokers is to be given, passive smokers should be allowed the same priority provision of vaccines. However, it is difficult to identify the range of passive smokers. All members of society are exposed to the risk of passive smoking. If priority provision of vaccines to passive smokers were to be allowed, it would mean that vaccines would be provided to almost all people, and the concept of priority provision of vaccines would be lost. Therefore, passive smokers cannot be given priority for vaccine provision. Furthermore, if vaccines are preferentially provided only to smokers, it would be unfair to passive smokers. Therefore, to correct such unfairness, the preferential provision of vaccines to smokers should be restrained.

3.5.2. Thesis

The severity of COVID-19 caused by passive smoking is tragic, and in the interest of justice, society must minimize it. In general, governments must always strive to minimize the damage caused by passive smoking and provide appropriate support for victims of passive smoking. Japan's "Health Promotion Law" also stipulates this as a responsibility of the national and local governments. To clarify the damage caused by passive smoking, it is feasible to require a cotinine test using saliva for those suspected of passive smoking, to set a certain threshold, and give priority to passive smokers for a vaccination with COVID-19 based on this threshold. In addition, the widespread use of saliva-based cotinine testing among passive smoking victims will help to visualize the damage caused by passive smoking, which is otherwise hidden. This will lead to public awareness of passive smoking, and society can take action against it, thereby reducing the number of passive smoking victims.

Preventing the severe development of COVID-19 in victims of passive smoking is consistent with the principle of maximum life-saving and is justified on utilitarian grounds. Simultaneously, if victims of passive smoking develop severe cases of COVID-19, they should be provided with the most priority compensation and support. In other words, the priority provision of vaccines to victims of passive smoking is recommended from the perspective of liberal egalitarian justice.

4. Conclusions and Recommendations

Considering the above, we argue that smokers, the elderly, and those with other chronic diseases should be given priority in vaccine allocation for COVID-19. In addition, properly screened victims of passive smoking should also be given priority for the COVID-19 vaccine. Rather than socially sanctioning the act of smoking, society should provide care to smokers. In doing so, our society needs to become more cohesive as a community by progressively reducing the number of smokers.

We answer in the affirmative the question of whether smokers should be allocated priority for the COVID-19 vaccine in situations where demand for the COVID-19 vaccine exceeds supply. The priority provision of vaccines to smokers is consistent with the maximum life-saving principle and is justified on utilitarian principles. We examine five possible objections to this proposition. (1) self-responsibility, (2) support from non-smokers,

(3) preference for social functionaries, (4) identification of smokers and inducement to smoking behavior, and (5) consideration of passive smokers.

Arguments against prioritizing vaccination based on self-responsibility downplay these social factors of smoking. (1) Smokers should be provided care and treatment, not punishment. (2) To gain an understanding of non-smokers, communitarian explanations based on the reciprocity of care should be carefully provided to non-smokers, thereby enhancing social cohesion. (3) The principle of maintaining social function does not supersede the principle of maximum life-saving. The socially vulnerable should not be devalued by excessively emphasizing economic productivity. (4) Support for smokers should be based on self-reporting. Governments should provide sufficient information and appeal to the goodwill of community members. (5) Severe cases of COVID-19 caused by passive smoking are among the most important cases to avoid. The extensive implementation of testing should actively pick up victims of passive smoking. This will make the damage caused by passive smoking visible. In light of the above, the priority provision of vaccine preferential vaccinations to smokers and passive smokers is justified, which is inextricably linked to the fact that we aim for a society in which care and support for the act of smoking increase communal cohesion and reduces the harm of smoking to zero.

Our proposal has a major limitation in terms of the research methodology. In particular, we conducted a theoretical study and assumed five hypothetical objections concerning prioritizing vaccine provision for smokers. Despite our careful consideration of these objections, they might not be exhaustive. Therefore, our arguments leave scope for further discussion in future research. Nonetheless, we presented the first ethical discussion on the prioritization of vaccine provision to smokers, focusing on communitarianism and concern for vulnerable populations. We hope our discussion will serve as a valuable reference for future vaccine administrations.

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References

1. Ministry of Health, Labour and Welfare. Vaccinations Starting in Fall 2022 Number of Subjects, Number of Vaccinations, Vaccine Supply. Available online: <https://www.mhlw.go.jp/content/10900000/000880779.pdf> (accessed on 11 October 2022). (In Japanese).
2. Sakamoto, J. Vaccine Supply, Where is the Clog? The Government's Miscalculation in Not Grasping the Actual Situation. *Asahi Shinbun*. Available online: <https://www.asahi.com/articles/ASP766VV2P76UTFK01Q.html> (accessed on 11 October 2022). (In Japanese).
3. Ministry of Health, Labour and Welfare. 43rd Meeting of the Basic Immunization Policy Subcommittee, Subcommittee on Immunization and Vaccine, Health Sciences Council, Vaccination Order, etc. of the New Coronavirus Vaccine. 2020. Available online: <https://www.mhlw.go.jp/content/10906000/000711249.pdf> (accessed on 11 October 2022). (In Japanese).
4. Kass, N.E. Public health ethics: From foundations and frameworks to justice and global public health. *J. Law Med. Ethics* **2004**, *32*, 232–242. [[CrossRef](#)] [[PubMed](#)]
5. Faden, R.; Bernstein, J.; Shebaya, S. Public Health Ethics. In *The Stanford Encyclopedia of Philosophy*; Spring 2022 Edition; Zalta, E.N., Ed.; Available online: <https://plato.stanford.edu/archives/spr2022/entries/publichealth-ethics/> (accessed on 11 October 2022).
6. Siegel, A.W.; Merritt, M.W. An Overview of Conceptual Foundations, Ethical Tensions, and Ethical Frameworks in Public Health. In *The Oxford Handbook of Public Health Ethics*; Mastroianni, A.C., Kahn, J.P., Kass, N.E., Eds.; Oxford University Press: New York, NY, USA, 2019.

7. Persad, G.; Wertheimer, A.; Emanuel, E.J. Principles for allocation of scarce medical interventions. *Lancet* **2009**, *373*, 423–431. [[CrossRef](#)] [[PubMed](#)]
8. Liu, W.; Tao, Z.W.; Wang, L.; Yuan, M.-L.; Liu, K.; Zhou, L.; Wei, S.; Deng, Y.; Liu, J.; Liu, H.G.; et al. Analysis of factors associated with disease outcomes in hospitalized patients with 2019 novel coronavirus disease. *Chin. Med. J.* **2020**, *133*, 1032–1038. [[CrossRef](#)] [[PubMed](#)]
9. WHO statement: Tobacco Use and COVID-19. 2020. Available online: <https://www.who.int/news-room/detail/11-05-2020-who-statement-tobacco-use-and-covid-19> (accessed on 11 October 2022).
10. Matsushita, Y.; Yokoyama, T.; Hayakawa, K.; Matsunaga, N.; Ohtsu, H.; Saito, S.; Terada, M.; Suzuki, S.; Morioka, S.; Kutsuna, S.; et al. Smoking and severe illness in hospitalized COVID-19 patients in Japan. *Int. J. Epidemiol.* **2022**, *51*, 1078–1087. [[CrossRef](#)] [[PubMed](#)]
11. Zheng, Z.; Peng, F.; Xu, B.; Zhao, J.; Liu, H.; Peng, J.; Li, Q.; Jiang, C.; Zhou, Y.; Liu, S.; et al. Risk factors of critical & mortal COVID-19 cases: A systematic literature review and meta-analysis. *J. Infect.* **2020**, *81*, e16–e25. [[CrossRef](#)] [[PubMed](#)]
12. Vardavas, C.I.; Nikitara, K. COVID-19 and smoking: A systematic review of the evidence. *Tob. Induc. Dis.* **2020**, *18*, 20–24. [[CrossRef](#)] [[PubMed](#)]
13. Ministry of Health, Labour and Welfare, Smoking and Health—Report of the Study Group on the Health Effects of Smoking. 2018. Available online: <https://www.mhlw.go.jp/file/05-Shingikai-10901000-Kenkoukyoku-Soumuka/0000172687.pdf> (accessed on 11 October 2022). (In Japanese).
14. Hiscock, R.; Bauld, L.; Amos, A.; Fidler, J.A.; Munafò, M. Socioeconomic status and smoking: A review. *Ann. N.Y. Acad. Sci.* **2012**, *1248*, 107–123. [[CrossRef](#)]
15. Ministry of Health, Labour and Welfare. National Health and Nutrition Examination Survey. 2019. Available online: <https://www.mhlw.go.jp/content/10900000/000687163.pdf> (accessed on 11 October 2022). (In Japanese).
16. JCS Joint Working Group. Guidelines for Smoking Cessation (JCS 2010). *Circ. J.* **2012**, *76*, 1024–1043. [[CrossRef](#)]
17. Japan Medical Association, No Smoking Is Love (Pamphlet). 2021. Available online: <https://www.med.or.jp/forest/kinen/assets/pdf/kinen.pdf> (accessed on 11 October 2022). (In Japanese).
18. Emanuel, E.J.; Persad, G.; Upshur, R.; Thome, B.; Parker, M.; Glickman, A.; Zhang, C.; Boyle, C.; Smith, M.; Phillips, J.P. Fair Allocation of Scarce Medical Resources in the Time of COVID-19. *N. Engl. J. Med.* **2020**, *382*, 2049–2055. [[CrossRef](#)]