**Supplementary Table 1. Pre-vaccination questionnaire items**

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| --- | --- |
| **Items** | **Response options** |
| Self-assessed overall health | Good  Fair  Poor |
| How many members are there in your family? | 0 to over 10 |
| Did you have a flu shot in the last year? | Yes  No |
| Do you think you will get the coronavirus within the next 6 months? | Yes – I think I will get seriously ill  Yes – I think I will get a mild case of the coronavirus  No – I don’t think I will get the coronavirus  I have already had the coronavirus |
| Do you want to get the coronavirus vaccine? | Willing (Yes)  Unsure (Not sure)  Unwilling (No) |
| If no: What makes you unwilling to get the  vaccine?  If not sure: What makes you unsure about  getting the vaccine? | 1. I’m concerned about the side effects or adverse reactions to the COVID-19 vaccine. 2. I am concerned about the safety profile of COVID-19 vaccine. 3. I’m not sure that the new COVID-19 vaccine is effective at all. 4. I’m not sure that the new COVID-19 vaccine is effective against SARS-CoV2 variants. 5. I don’t want to be a test subject for the new COVID-19 vaccine. 6. I don’t know what’s contained in the new COVID-19 vaccine. 7. General information about the new COVID-19 vaccine is insufficient. 8. I’m nervous about getting the new COVID-19 vaccination because I have (an) underlying illness(es). 9. I have a history of adverse reaction to vaccination. 10. I have food or drug allergies. 11. I don’t need the vaccination because the symptoms of COVID-19 are usually mild. 12. I do not think I will get COVID-19. 13. I’m generally skeptical of vaccines. 14. I’m generally afraid of getting vaccinated. 15. I won’t receive the new COVID-19 vaccine because of my religion or beliefs. 16. I feel that mass media coverage is against vaccination. 17. I don’t trust the Japanese government’s information about vaccine distribution. 18. I’m skeptical of the pharmaceutical companies that make vaccines 19. I think other people have a higher priority for receiving the new COVID-19. 20. I am concerned about the cost of the new COVID-19 vaccine. 21. I’m generally not keen on getting an injection. 22. I’ve already contracted COVID-19 prior to vaccination. |

**Supplementary Table 2. Post-vaccination questionnaire items**

|  |  |
| --- | --- |
| **Items** | **Response options** |
| Do you have any underlying illness? | Heart diseases  Renal diseases  Liver diseases  Diabetes mellitus  Hypertension  Any malignancies  Collagen diseases  Asthma  None |
| Did you have any symptoms within 48 hours after COVID-19 vaccination? | Anaphylaxis  Fever  Chills  Fatigue  Headache  Joint pain  Muscle pain  Nausea  Discomfort  Diarrhea  Pain at injection site  Itchiness at injection site  Lump at injection site  Redness at injection site  Swelling at injection site  Hotness at injection site  None |
| Did you have any symptoms within 7 days after COVID-19 vaccination? | Fever  Chills  Fatigue  Headache  Joint pain  Muscle pain  Nausea  Discomfort  Diarrhea  Pain at injection site  Itchiness at injection site  Lump at injection site  Redness at injection site  Swelling at injection site  Hotness at injection site  None |
| Antipyretic and analgesic agent use within 48 hours after COVID-19 vaccination | Yes  No |
| Antipyretic and analgesic agent use within 7 days after COVID-19 vaccination | Yes  No |
| Unexpected hospital visits within 48 hours after COVID-19 vaccination | Yes  No |
| Unexpected hospital visits within 7 days after COVID-19 vaccination | Yes  No |
| Did you care for COVID-19 patient for the last 3 months? | Yes  No |
| Usefulness of each intervention |  |
| Leaflet | Strongly agree  Agree  Neither agree nor disagree  Disagree  Strongly disagree  Not applicable because not see |
| Poster | Strongly agree  Agree  Neither agree nor disagree  Disagree  Strongly disagree  Not applicable because not see |
| Lecture by e-learning system | Strongly agree  Agree  Neither agree nor disagree  Disagree  Strongly disagree |
| Session regarding the COVID-19 vaccine in  pregnant or breastfeeding HCP | Strongly agree  Agree  Neither agree nor disagree  Disagree  Strongly disagree  Not applicable |
| Outpatient clinic for allergy tests of  polyethylene glycol | Strongly agree  Agree  Neither agree nor disagree  Disagree  Strongly disagree  Not applicable |
| What is your best factor for COVID-19 vaccination? | Information from the study institution (e.g., leaflet and e-learning)  Self-collected information (e.g., news and website)  Advice from one’s colleague  Advice from one’s supervisor  Advice from one’s family  Not an atmosphere where one can refuse the vaccination  Concern about being contracting COVID-19  Expectation of resuming economic activities (e.g., travel)  No specific reason  Not applicable because not vaccinated |
| Did you satisfy with COVID-19 vaccination? | Satisfied  Neither satisfied nor unsatisfied  Unsatisfied  Not applicable because not vaccinated |
| Do you recommend COVID-19 vaccine to your family or friends? | Strongly agree  Agree  Neither agree nor disagree  Disagree  Strongly disagree  Not applicable because not vaccinated |

Abbreviation: HCP, healthcare personnel

**Supplementary Table 3. Details of COVID-19 vaccination rate by occupation (N = 1,575)**

|  |  |
| --- | --- |
| **Occupation** | **n (%)** |
| Doctor (n = 333) | 300 (90.1) |
| Nurse (n = 847) | 755 (89.1) |
| Nursing aide (n = 41) | 34 (82.9) |
| Pharmacist (n = 53) | 49 (92.5) |
| Laboratory technician (n = 54) | 52 (96.3) |
| Clinical engineering technician (n = 16) | 15 (93.8) |
| Radiological technician (n = 49) | 47 (95.9) |
| Rehabilitation therapist (n = 26) | 24 (92.3) |
| Nutritionist (n = 11) | 9 (81.8) |
| Social worker (n = 16) | 14 (87.5) |
| Desk officer (n = 121) | 107 (88.4) |
| Others (n = 8) | 7 (87.5) |

**Supplementary Figure 2. An evaluation of usefulness of each intervention plan by HCP (N = 1,037)**

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Abbreviations: HCP, healthcare personnel