

Preference on vaccination strategy against influenza and COVID-19 among nurses in Hong Kong: coadministration or combination?

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Background

- The asynchronous surge of influenza and SARS-CoV-2 viruses has complicated the **post-pandemic control** of seasonal epidemics
- Ensuring an adequate and timely vaccination against both is therefore important for individual protection against severe diseases
- As part of the high-risk populations, healthcare workers are offered free vaccination against influenza (limiting to the public sector) and COVID-19
- In the hope of boosting vaccination uptake, this study aims to **evaluate the healthcare workers' acceptability towards coadministration and combination** of influenza/COVID-19 vaccine in Hong Kong

Methods

- A cross-sectional study targeting local practising nurses**
- Recruitment through random dispatch of invitation letter to members of a major nursing association
- Online survey period: March – May 2025
- Content of the questionnaire:
 - Socio-demographics and nature of work
 - Reported influenza and COVID-19 vaccination
 - Drivers of vaccination
 - Preferred gap between the two vaccinations
 - Readiness to receive a pipeline combination vaccine
- Analysis:
 - Vaccination history and preferences were examined
 - Impacts of “coadministration” and “combination” on vaccination coverages were estimated
 - Factors and vaccination drivers associated with acceptance of each strategy were identified using multiple logistic regression adjusted for age and sex

Results (I)

- N=851 respondents (87% female; median age 40 years)
- Received influenza vaccine in the 2024/25 season: 59%
- Received COVID-19 vaccine in 2024 or thereafter: 9%
- 17% showed willingness to accept the two vaccines on the same day**, with most preferring a 30-day interval

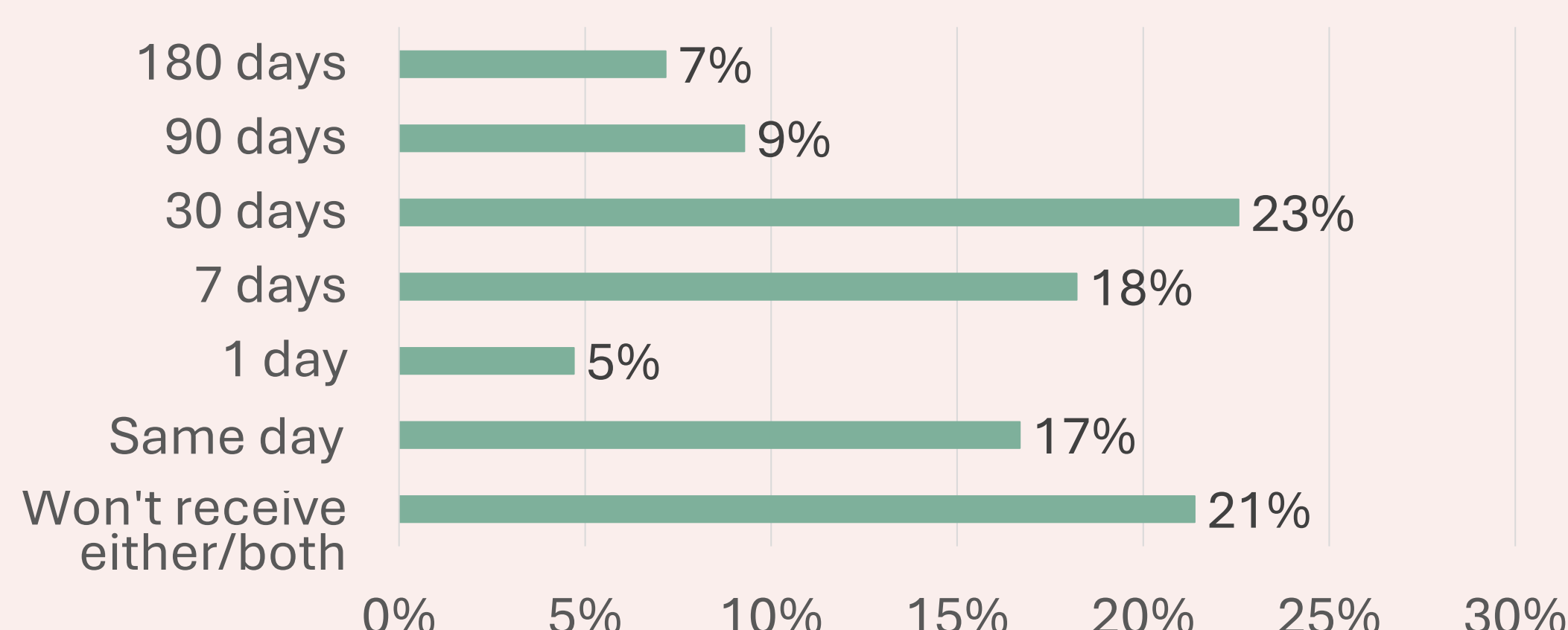


Fig 1. Preferred minimum interval between influenza and COVID-19 vaccination

Results (II)

- Proportion of nurses inclining to receive the pipeline combination vaccine under each scenario:
 - Under investigation in clinical trials: 22%
 - Availability in private market with subsidy: 6%
 - Recommendation by gov't with full subsidy: 27%**
 - Widespread use in the community: 30%
- An increase in COVID-19 vaccination coverage by 14-20% was estimated to result from the implementation of coadministration and combination scenario (c) strategy**

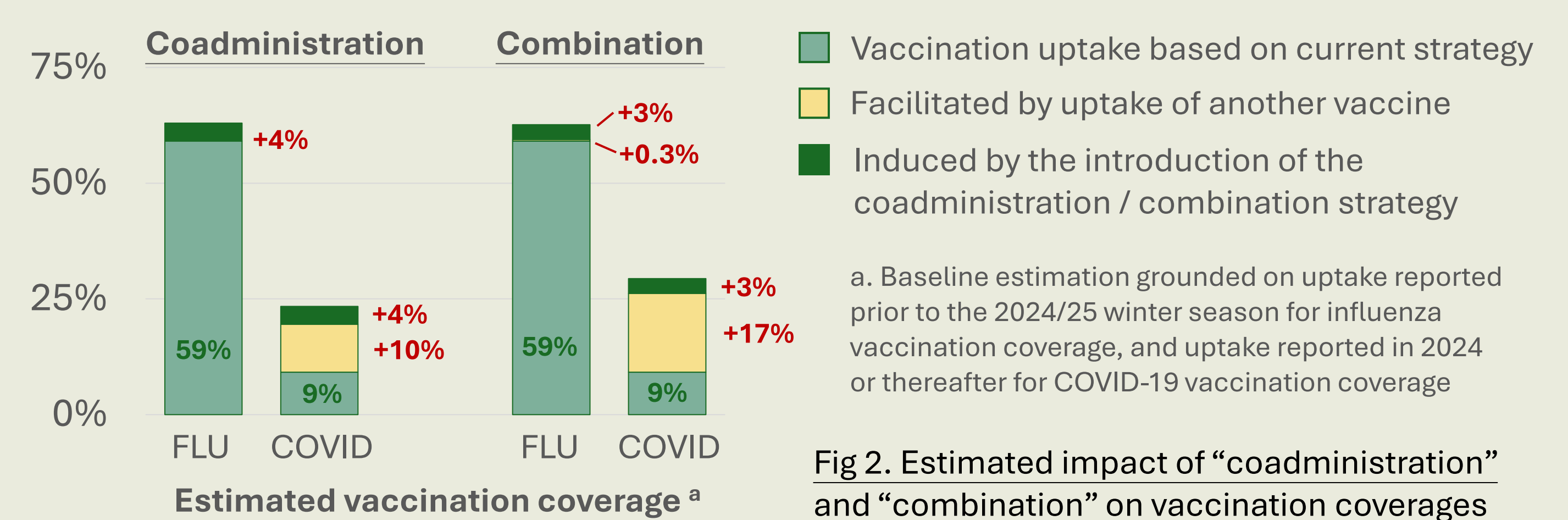


Fig 2. Estimated impact of “coadministration” and “combination” on vaccination coverages

- Both strategies were favoured by nurses with more years of work experience, frequent influenza vaccination and without reported history of associated adverse reactions

Table 1. Multiple logistic regression on preference for coadministration and combination strategy

	Coadminist- ration	Combination
Variables	adjusted OR	adjusted OR
10+ years of work experience ^a	1.72*	1.72**
Frequent patient contact ^b	1.66**	1.03
IV frequency in the past 5 seasons	1.14***	1.05***
Reported adverse reaction history	0.64*	0.61**
IV driver: venue accessibility	1.40	1.79**
IV driver: incentive provision	0.84	2.10***
CV driver: any virus mutations	1.16	1.76***
CV driver: gov't recommendation	1.46	1.56*
CV driver: venue accessibility	0.86	2.17*

a. Controlling for sex only due to strong correlation with age

b. Reported “always” for patient contact frequency in a 5-point Likert scale

OR = odds ratio; IV = influenza vaccination; CV = COVID-19 vaccination; p<0.05*; p<0.01**; p<0.001***

Conclusions

- Overall, nurses **preferred “combination”** over the “coadministration” strategy
- Before the rollout of combination vaccines, measures should be taken to **streamline vaccine coadministration for boosting COVID-19 vaccination uptake**

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