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The Challenges of Vaccinating Frail Older Adults Against COVID-19 In A Low-Incidence Country

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The approval and production of several coronavirus disease 2019 (COVID-19) vaccines holds out hope that the pandemic and its attendant suffering would be brought to an end soon. Many countries have begun vaccination programmes in earnest. Older adults who are most vulnerable to morbidity and mortality (1) from COVID-19 have been prioritised for vaccination by most national vaccination programmes (2).

The efficacy and safety of COVID-19 vaccines on older adults particularly those with multiple comorbidities and frailty are not well studied at present (3). Thus, despite recommendations to prioritise older adults, particularly those in care homes and vulnerable settings (4), vaccine hesitancy and mistrust are real issues that health authorities need to address to achieve high rates of vaccination amongst these patients.

In countries with higher incidence of COVID-19, the benefits of vaccination far outweigh any perceived risks or concerns with a relatively new vaccine, including for frail older adults. However, the risk-benefit calculus in countries with lower incidence of COVID-19 is not the same and these populations are not under the same 'pressure' (5) to get vaccinated early on.

Singapore started our COVID-19 vaccination programme on 30th December 2020 with frontline healthcare staff being the first to receive the vaccination. Vaccination for the public commenced on 27th January 2021 with those aged 70 years and older living in two pilot housing estates being invited for the vaccination. The government has made COVID-19 vaccines free and optional (6). Despite the low incidence of COVID-19 in Singapore, low mortality,

and negligible community spread for several months, vaccination is still crucial to the city-state to being able to open its borders for trade, tourism and economic activity. Till date, approximately 4.3% of the resident population has completed the full vaccination regimen (6). To achieve herd immunity (7), the country will need to convince the majority of its population to undergo vaccination.

Recognising the public's concerns about vaccination, public health authorities initiated public education programmes early on and continue to communicate clearly and in multi-faceted ways to the public (8). These include clear information on a dedicated government website with timely updates and responses to news reports on possible vaccine-related incidents. Carefully curated infographics in the 4 official languages and local Chinese dialects and languages were crafted with local celebrities engaged to educate the public and encourage vaccination. Political leaders, also stepped up to be publicly vaccinated. To further reach out to senior citizens in addressing their concerns, Silver Generation Ambassadors under the Agency for Integrated Care also do door-to-door visitations to publicise the immediacy of vaccinations for the elderly.

In particular, more work needs to be done to address the concerns of frail older adults. Given the paucity of data of COVID-19 vaccination effects on frail older adults, there are few international guidelines and recommendations for this age group (3). Frail older adults without absolute contraindications to receiving the COVID-19 vaccination may worry that their multiple comorbidities increase their risk of adverse reactions after receiving the vaccination. Whilst most vaccination programmes operate through vaccination centres with dedicated healthcare staff, many older adults with chronic comorbidities still prefer to seek the opinion of their long-term primary physician for advice and reassurance to proceed

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with vaccination. Thus, whilst vaccination centres are logistically expedient, older adults may prefer to be vaccinated after careful consultation with their primary physician. Primary physicians also need to be continuously educated and engaged on the recommendations for various comorbidities and drugs that older adults are commonly on. Sharing of data on outcomes and side effects on frail older adults by countries that have progressed much further in their vaccination programmes will help to facilitate confidence and uptake of the COVID-19 vaccine in other countries.

Whilst the advent of COVID-19 vaccines has brought much hope and excitement globally, countries need to work hard and consistently to engage their populations in order to achieve herd immunity and bring the pandemic under control (9). This may be harder for countries that have achieved success in controlling the COVID-19 pandemic, which diminishes the urgency of getting vaccinated even when vaccines are available. In a way, such countries could be seen as victims of their own success with regards to their low vaccination uptake rates. More data sharing and effective communication are needed especially for the most vulnerable groups in society. Given that there is no long-term data on the safety on the COVID-19 vaccines, many of those with a 'watch and wait' stance will take time and effort to convince. It is imperative that public health authorities seek to understand these groups' concerns and adapt vaccine programmes and policies to encourage higher uptake of the vaccination.

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Declaration of Competing Interest

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