Seasonal influenza vaccination during a pandemic

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ABSTRACT
In the Northern Hemisphere, the persistence or re-emergence of coronavirus circulation into the 2020–2021 influenza season threatens to overwhelm health-care resources and systems and increase mortality and morbidity. Data from Australia show that stay-at-home policies have reduced both influenza and coronavirus cases early in the season, thus “flattening the curve.” However, influenza vaccination is critical to ensure the reduction in co-infection. Several policies, such as vaccination strategies to accommodate physical distancing measures, change population recommendations, and timing and location of vaccination have been implemented to increase influenza vaccine uptake during the pandemic. This commentary explores those policies.

Introduction
The persistence or re-emergence of coronavirus circulation into the 2020–2021 influenza season threatens to overwhelm health-care resources and systems and increase mortality and morbidity. Learnings from Australia, where concomitant responses to both influenza and coronavirus are ongoing, offer insights that may assist influenza vaccination planning and implementation in the upcoming Northern Hemisphere influenza season and beyond. These include changes to the timing and location of vaccine administration to accommodate social distancing, policies to ensure optimal management of public demand, access and uptake of available vaccines across the season, and the need for communications to be clear, frequent, and aligned among all stakeholder groups.

Learnings from the 2020 Australian influenza season
Data from the Southern Hemisphere show that stay-at-home policies have reduced both influenza and coronavirus cases early in the season, thus “flattening the curve.” However, as physical distancing measures such as shelter in place and lockdown restrictions are eased, influenza infections are likely to emerge and endure over several months. In recognition of this, the Australian government introduced several policy changes to increase influenza vaccine uptake and implemented new vaccination strategies to accommodate physical distancing measures, changing not only who gets a vaccine but also when, where, and from whom.

Expanding target populations
Australia provides free influenza vaccine each season for at-risk populations, with strong uptake in these groups. At the beginning of the pandemic, the Australian government recognized the importance of maintaining health-care visits and preventive care. Additionally, the government issued a requirement that by May 1, 2020, all individuals visiting, working, or living in an aged care/nursing/long-term care or assisted living facility must receive an influenza vaccine. The policy was also extended on April 1, 2020, to apply to childcare centers. These policy changes were designed to further protect vulnerable populations and recognized health-care workers and caregivers as critical target populations for influenza vaccination.

Modifying influenza vaccination timing
Influenza vaccines are manufactured and delivered in a timeframe that allows providers to start vaccination prior to peak circulation of the influenza virus. Policy changes in Australia, together with strong communication from public health agencies and media reporting about the risk of co-infection and importance of influenza vaccination, generated significant demand for influenza vaccines early in the season. As a result, the Australian government asked Seqirus to go back into production requiring education to the public about the need to extend the duration of the immunization program and urging the need to continue vaccination late into the season.

Changing vaccination location – thinking outside the clinic
Social and physical distancing requirements throughout the vaccination period in Australia have yielded novel approaches to vaccine administration within the traditional clinic settings and through alternative models for administration supporting safe, effective vaccination. These locations have included pharmacies, carparks/parking lots, offices, church or community halls, or parks and outdoor areas that would allow people to maintain a safe distance while being vaccinated.
Planning for these activities occurred expeditiously, as local solutions, rather than being organized by public health authorities. Immunization advisory groups, providers, and influenza vaccine manufacturers have worked together to share learnings and optimize vaccination during this pandemic. To achieve high immunization rates, the Australian government worked with industry to align delivery dates of vaccine to immunization sites upon availability, although demand was so great at times that short-term shortages occurred.

Planning for the Northern Hemisphere influenza 2020–2021 season

The Centers for Disease Control and Prevention (CDC), the White House Coronavirus Taskforce, and the WHO’s European Office have stated the need to use the influenza vaccine as a tool in the fight against co-infection. Receiving an influenza vaccine reduces the number of infected patients, thereby helping to “relieve pressures” in hospitals treating patients with coronavirus. In the European Union, seasonal influenza causes 4–50 million symptomatic cases each year. In the US, the CDC estimates that in any given influenza season, 140,000–810,000 hospitalizations occur due to influenza. The opportunity to increase influenza vaccination rates in the 2020–2021 season, to reduce the burden on health-care systems if a second coronavirus surge occurs, may lead to permanent, improved policy changes for influenza vaccination campaigns for years to come.

Early government planning

As the influenza season approaches, public health stakeholders have already begun to consider the potential impact of concurrent influenza with coronavirus and potential changes to target populations. For example, the United Kingdom and certain regions of Italy are considering expanding influenza recommendations for people under 65 y of age, while the German government is considering a recommendation for voluntary lifespan immunization. Other countries are looking to increase the health and social care worker vaccination. With changes to vaccine recommendations or mandates, it is critical that recommending bodies (National Immunization Technical Advisory Groups – NITAGS) coordinate with medical and health professional societies to manage and adequately communicate these changes to all stakeholders involved in influenza vaccination.

Influenza vaccine supply

Manufacturers are currently experiencing significant demand for influenza vaccines from many Northern Hemisphere countries. Meeting sudden, increased demand can be challenging as manufacturing preparations begin at least 12 months before each season. Nonetheless, manufacturers are responding by increasing and extending current production; however, the ability to dramatically increase supply in a short period of time is limited, and additional doses that are produced will require acceptance of later delivery compared to “normal” seasons. Policy changes and strong public education can potentially optimize influenza vaccine coverage as doses become available throughout the season but need to be sustained into future seasons to maintain vaccine uptake and achieve the required on-time supply of doses, including influenza vaccines that are specifically designed for certain populations.

The important role of communication

Clear and simple messaging about the influenza vaccine helps to play a role in spreading the word about the importance of influenza vaccination, particularly with the prospect of changes in demand, population recommendations, timing, and administration locations. In some countries, the coronavirus pandemic may result in many people seeking influenza vaccination who have not been vaccinated previously. These people may have new or additional questions that need to be considered. The opportunity for providers to communicate the right vaccine for the right individual within an opportune time frame may be advantageous for those at higher risk for co-infection. Further, as we have seen in Australia, the timing of vaccination will need to be extended well into the influenza season to align with vaccine availability, reaching as many as possible prior to the peak of influenza circulation. Therefore, the message to vaccinate early – without creating perceived shortages – and throughout the season, is vital to the effectiveness of the 2020–2021 campaign.

By working together, health officials, medical authorities, and medical journalists can help deliver effective messages about influenza vaccination during the pandemic, while being open to new and evolving questions based on the situation. Clear, consistent, frequent, and honest communication from public health officials to all influenza vaccine providers, and to the public, is the only way to manage expectations and ensure that continued attempts to “flatten the curve” and protect patients from influenza and coronavirus are achieved.

Seasonal vaccination as a pandemic preparedness measure

The case for seasonal influenza vaccination is very strong, yet vaccination rates remain suboptimal in most countries. Influenza vaccine policy changes during the coronavirus pandemic have the potential to improve coverage but are limited by the ability of manufacturers to significantly increase supply doses in a short period of time. Sustaining these policy changes will not only help to reduce seasonal influenza-related deaths and hospitalizations but assist government preparedness for the next pandemic, particularly an influenza pandemic, by balancing vaccine supply/demand at higher levels.

Conclusion

Influenza disease is an annual public health threat with or without the concurrent pandemic. Influenza vaccination is an
ongoing public health tool to reduce disease now and in the future. The potential for coronavirus to persist or resurge during the upcoming influenza season is generating significant demand for influenza vaccines, which may outstrip available supply, particularly early in the season, with limited time and ability to produce additional vaccine.

There is a current need to reconsider the timing of vaccination and differentiation among influenza vaccines to ensure that the best vaccine is available for each member of the population.

Increasing influenza vaccine uptake within the constraints of social distancing requirements may also require modification of timing, location, and provider – as the Australian example illustrates.

Clear and succinct communications designed by multiple stakeholders (including industry), which are then delivered cohesively and with repetition, should be an annual component to influenza preparation.

Policy changes helping to drive increased demand are welcomed and should be sustained in the interests of public health and as an additional pandemic preparedness measure. Planning for the 2020–2022 season must begin now given the lead times required for the manufacturing of influenza vaccine.

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No potential conflicts of interest were disclosed.

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