VIEWPOINT

COVID-19: BEYOND TOMORROW

The Dual Epidemics of COVID-19 and Influenza
Vaccine Acceptance, Coverage, and Mandates

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Supplemental content

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The confluence of coronavirus disease 2019 (COVID-19) and seasonal influenza this fall and winter will result in considerable morbidity and mortality, stressing the health system. With more than 100 000 COVID-19–related deaths already, the US could see a second wave of disease later this year. In 2018-2019 (a "moderate" year for influenza), the US experienced 35.5 million influenza cases, with 490 600 hospitalizations and 34 200 deaths related to influenza.[1] An effective COVID-19 vaccine is unlikely until 2021. Even though seasonal influenza vaccines have variable year-to-year effectiveness, they can significantly reduce morbidity and mortality, especially with high coverage.

The health system, and wider society, must prepare for the likelihood of co-epidemics of COVID-19 and influenza. What are the most effective strategies for increasing influenza vaccine coverage across the population and particularly in schools, businesses, and hospitals? Should states or businesses require vaccinations? Influenza vaccination, moreover, could offer valuable lessons for ensuring vaccine acceptance and uptake when COVID-19 vaccines become available.

Vaccine Coverage and Effectiveness

The Centers for Disease Control and Prevention (CDC) recommends that every person 6 months and older get vaccinated for seasonal influenza, with rare exceptions for persons with medical contraindications. Yet influenza vaccine coverage remains low. In 2018-2019, vaccination coverage among adults was estimated at 45.3%.[2] Even with relatively low coverage, the CDC estimated that the vaccine prevented approximately 4.4 million influenza cases, 58 000 hospitalizations, and 3500 deaths.[3] High vaccine coverage would reduce influenza-related mortality, while also helping to preserve the capacity and function of the health system during circulation of influenza viruses and severe acute respiratory syndrome coronavirus 2.

Influenza vaccine effectiveness varies by age, health status, and season. Vaccination reduces the risk of influenza illness by an estimated 40% to 60% when circulating viruses are well-matched to the vaccine.[4] In addition to preventing influenza infections, vaccines also reduce intensive care admissions and duration of hospitalizations. Vaccine hesitancy is related to public perceptions of low effectiveness, along with safety concerns. While effectiveness is low compared with other vaccines, influenza immunization is very safe and cannot cause influenza. Low vaccination rates represent a missed opportunity for reducing influenza every year but would be particularly harmful this year.

Expanding Influenza Vaccine Coverage

The nation's goal should be to attain high influenza vaccine coverage, including near-universal coverage among health care personnel and other high-risk groups for COVID-19. Expanding vaccine coverage requires multiple strategies.

Incentivizing Vaccine Production

Expanding coverage requires increased supplies of influenza vaccines matched to heightened demand. Vaccine manufacturers aim to produce vaccine supplies sufficient to meet demand, although in some years vaccine shortages exist, whereas in other years there is vaccine oversupply. Vaccine demand will be particularly uncertain this year, placing manufacturers at financial risk if they increase supplies. The federal government should absorb this risk through advance purchase commitments (APCs). APCs for influenza vaccines could offer a precedent for public purchase of COVID-19 vaccines. The federal government should plan now to incentivize COVID-19 vaccine production, while also ensuring that cost is not a barrier to access for the public.

Increasing Demand

The federal government should fund an evidence-based mass communication campaign, focusing on public benefit and personal obligation. Health messages would emphasize community responsibility to protect health care workers, while preserving health system capacities. Health messages should also explain that influenza vaccinations help protect vulnerable populations such as older adults, who die disproportionately from both influenza and COVID-19. Dispelling misconceptions will be vital, including that vaccines cause influenza. Overall, an education campaign should explain clearly the health risks posed by influenza and the benefits of vaccination. Tailoring messages to specific populations can also increase vaccine acceptance. Learning from the experience of influenza vaccines, the federal government should create a comprehensive plan to expand coverage for COVID-19 vaccines, including tailored messages, routine offering, and ongoing evaluation.

Ensuring Safe Access

Childhood immunization rates have declined during the COVID-19 pandemic, with vaccine doses decreasing by an estimated 21.5% during January-April 2020.[5] Without routine clinical visits, influenza vaccine uptake will be limited. COVID-19–related disruptions in businesses and in higher education also could decrease vaccination coverage. As an essential business, pharmacies could expand outreach and capacity to administer influenza vaccinations. If schools and universities open, influenza vaccination campaigns could increase coverage in these settings. As a major driver of influenza circulation, children

should be a vaccine priority, thus reducing hospitalizations not only for children but for adults who frequently contract influenza from children. Individuals must feel safe when seeking influenza vaccination. Thus, rigorous infection control in clinics, pharmacies, workplaces, and schools that deliver vaccines will be essential. Effective use of disinfection, masks, and physical distancing could mitigate the risk of airborne pathogens. These kinds of "safe" immunization sites could also be used for COVID-19 vaccine delivery.

Mandates as a Last Resort

Every state requires childhood vaccinations as a condition of school entry, which is associated with higher vaccine coverage and lower rates of disease. Yet no state requires adult vaccination, including for influenza. The Association of Immunization Managers advises "sparingly and cautious" consideration of mandates. Yet influenza vaccines fulfill most AIM criteria: sufficient vaccine funding, inclusion in state immunization registries, stable and adequate supply, adequate vaccine safety data, physician/health care provider support, and public acceptance. What are the justifications for, and against, mandates for influenza vaccination in specific settings?

Educational Facilities

Currently, 6 states require influenza vaccination for day care, but no state mandates it for grades K-12. Most childhood vaccines are completed prior to school entry, but influenza vaccines would require annual adherence. States could determine whether COVID-19 justifies added enforcement burdens. Colleges and universities routinely offer, but do not require, seasonal influenza vaccination. Yet most higher education facilities are creating plans for safe reopening, with many creating new mandates, including for masks, temperature screening, COVID-19 testing, and influenza vaccines.

Businesses

The Occupational Safety and Health Administration (OSHA) permits businesses to require influenza vaccination as a condition of employment. Similar OSHA guidance is likely when a COVID-19 vaccine becomes available. The Equal Employment Opportunity Commission (EEOC), however, requires employers to grant exemptions for medical necessity or religious beliefs. The EEOC has brought lawsuits against health facilities for not allowing certain religious exemptions. In preparing for dual COVID-19 and influenza epidemics, businesses could require vaccines, with appropriate exemptions.

Health Facilities

The CDC prioritizes high-risk groups and their contacts/caregivers for influenza vaccinations. Health care personnel are exposed to pathogens that can be transmitted to and from patients, even if staff are not directly involved in patient care. In 2018-2019, vaccine coverage among health care personnel reached 81.1%, similar to previous seasons (77.3%-79.0%).[6] Given the heightened importance of health care worker and patient safety during the co-epidemics of COVID-19 and influenza, higher vaccine coverage should be a national priority.

State laws require health facilities to ensure employees receive influenza vaccines but only for consenting personnel: 8 states require hospitals to document proof of employees' vaccination status; 16 states have similar requirements for long-term care facilities; and 7 states for ambulatory care facilities (eTable in the Supplement).[7] Facilities can fulfill their legal duties by demonstrating that the worker was offered and declined an influenza vaccine. Coercing health workers to receive vaccines may not be warranted now, given the extraordinary burdens already imposed by caring for patients with COVID-19. Yet expansion of state laws to routinely offer immunization to consenting staff could increase coverage.

Throughout the world, hospitals and nursing homes have become high-risk settings for COVID-19 transmission. While data are incomplete, the CDC reports that well more than 300 COVID-19–related deaths and nearly 70 000 cases have involved health personnel.[8] Given the high risks, health workers would gain high priority for COVID-19 vaccination. Strong incentives should be in place, including laws requiring health facilities to routinely offer both influenza and COIVID-19 vaccines.

Vaccine Hesitancy in the Time of COVID-19

On May 15, 2020, the president announced Operation Warp Speed, a public-private partnership to accelerate research and wide distribution of COVID-19 vaccines by January 2021. Yet vaccine hesitancy is already causing concern, especially as herd immunity for COVID-19 requires an estimated 55% to 82% uptake.[9] Surveys of 493 and 2200 individuals found that 3 in 4 people would consent to COVID-19 vaccination, and only 30% would become vaccinated soon after availability.[9] Experience with increasing influenza vaccination coverage could be instructive. At the very least, all levels of government should develop evidence-based immunization plans, appealing to individuals' ethical responsibilities to protect themselves, health care workers, family members, and vulnerable populations.

ARTICLE INFORMATION

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