

Rising above the mask wars: using nonpharmaceutical interventions to lessen the burden of influenza



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The COVID-19 pandemic imparted important lessons, both through its direct impact on society and through the manner in which society's response influenced the trajectory of other diseases. The decrements in the rates of infection and morbidity from influenza during 2020 were significant, which is particularly important for pregnant women. Despite past attempts by public health authorities to encourage nonpharmaceutical interventions for the prevention of influenza, preventive efforts have focused largely on the use of vaccines. The COVID-19 experience has demonstrated that basic nonpharmaceutical interventions can potentially make a difference in lowering the rates of influenza during future outbreaks. In this article, we discuss the prepandemic role of nonpharmaceutical interventions in disease prevention, the outcomes that were seen in the flu season of 2020, and the role obstetricians should play in using nonpharmaceutical interventions in future influenza disease prevention efforts.

Key words: flu season, handwashing, mask wearing, public health, social distancing, vaccines

Introduction

Influenza threatens the lives of thousands of Americans each year, and pregnant women are particularly susceptible to its consequences. The rates of hospitalization, intensive care unit admission, and death are all elevated. Vaccine hesitancy is an obstacle for pregnant women in obtaining the influ-

enza vaccine, and insufficient provision of the vaccines in physicians' offices may be a contributing factor. Even among women who do get vaccinated, the efficacy of the "flu shot" is well below that seen with COVID-19 vaccines. Although antivirals can be helpful to those who become infected, they may be employed too long after the first symptoms to be helpful, and even when used appropriately, they are not always successful. There is a clear need for additional interventions to mitigate the acquisition and the consequences of influenza in pregnant women.

The potential utility of nonpharmaceutical interventions was convincingly demonstrated in the 2020 influenza season. As a recent story in the *New York Times* noted, there was virtually no flu season in 2020. Instead, large numbers of Americans adopted the guidance advanced by public health agencies to avoid COVID-19. The impact of these measures on rates of influenza was remarkable; clinical laboratories in the United States saw a 61% decline in flu swab specimens and 98% decrease in the positivity of those swabs in 2020.¹

Although hundreds of pediatric deaths from influenza are recorded in most years, only a single pediatric death was reported in 2020, despite active monitoring.

It is possible that altered behavior and lowered infection rates in 2020 were coincidental, but there are reasons to suspect that this was not entirely a post hoc ergo propter hoc phenomenon. Randomized trials have demonstrated a role for masks in reducing the acquisition of influenza at rates ranging from 6% to 60%.² Even when a mask does not prevent the acquisition of influenza, it may reduce the inoculum and result in a milder course.

Our current strategies for the prevention and treatment of influenza are imperfect and insufficient. The data demonstrating the potential utility of masks and social distancing in reducing the acquisition of influenza make a discussion about nonpharmaceutical interventions in pregnancy worth having. It should be acknowledged that the dramatic decline in influenza in 2020 was unique to an event that is unprecedented and unlikely to be replicated simply by masking. During the COVID-19 pandemic, not only did individuals at risk wear masks, but almost everyone else with whom that person came in contact did so.

The Centers for Disease Control and Prevention (CDC) has advocated the use of nonpharmaceutical interventions to blunt pandemics in the past. Nonpharmaceutical interventions have been defined as "actions that persons and communities can take to help slow the spread of respiratory virus infections, including seasonal and pandemic influenza viruses³." The categories of nonpharmaceutical interventions include personal protective measures for influenza pandemics, environmental measures, and measures at a community

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Received May 20, 2021; revised Nov. 10, 2021; accepted Nov. 11, 2021.

The authors report no conflict of interest.

No funding was received for this work.

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0002-9378/\$36.00

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<https://doi.org/10.1016/j.ajog.2021.11.1349>



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level. However, they have not focused particularly on pregnant women, and the degree to which physicians have been champions of this approach is unclear.

The American College of Obstetricians and Gynecologists has been an unflagging champion of activities that mitigate the harms of influenza in pregnancy. The College has traditionally focused on the steps practitioners may take to increase vaccination rates, developed algorithms for the treatment of influenza-like illnesses, and has disseminated information about antivirals. However, the College has not promoted the use of non-pharmaceutical interventions as actively.⁴ To be fair, the protocols promulgated by the CDC have not been particularly user-friendly. They depend on a variety of triggers to decide which steps to take and have neither been widely adopted by obstetricians nor achieved mainstream acceptance. In the wake of the nation's experience with COVID-19 and with non-pharmaceutical interventions during the pandemic, it is reasonable to hope that uptake in the future may be facilitated by the involvement of the population with these techniques in the immediate past.

There is no doubt that an even greater societal benefit, vis-à-vis reductions in respiratory infections, would be obtained if the shutdowns that marked 2020 were implemented annually during the influenza season. However, the tremendous societal and economic cost of that approach would make it virtually impossible. Yet, voluntary programs could have salutary benefits for many vulnerable segments of society. For example, it is reasonable to suggest the continued masking of all the visitors at nursing homes and hospitals during the influenza season. Currently, masks are provided freely to anyone in need within these spaces and in municipal areas where masking is mandated, such as subways or buses. It is worth noting, however, that these customs are temporary, and the cost of mask wearing may one day be borne by individuals. Although we should normalize staying at home when having symptoms of

influenza-like illness and masking when going out if symptomatic, the costs should be considered, and ways to allow indigent women to benefit from these interventions should be developed. These minor changes, if broadly adopted, might help to mitigate the rates of disease overall and the consequences for those most at risk in particular. As discussed above, pregnant women fall into the latter category.

From a number needed to treat perspective, one might consider personal protective measures such as masking highly inefficient. Even in the years of the influenza pandemic, the number of maternal deaths because of influenza is <100, leading to a number needed to treat in the range of tens of thousands. However, the number needed to treat has never been an appropriate metric for judging hygiene measures. That number has never been calculated for obvious reasons; the interventions are benign and the potential consequences of not intervening are serious. Further, when faced with an outbreak of pandemic influenza, there is evidence to suggest that most people willingly cooperate with public health recommendations on the use of nonpharmaceutical interventions.

So what do we suggest as standards for obstetricians? In the first instance, they must be aware of the extent of influenza outbreaks in their communities; the CDC and local departments of public health can provide guidance. Obstetricians should counsel their patients about the appropriate steps to mitigate risks as part of standard care during yearly influenza seasons. They should routinely recommend the influenza vaccine for all of their patients and provide guidance regarding the use of antivirals for treatment and postexposure prophylaxis. When the community spread of influenza is high, obstetricians should discuss the risks and benefits of avoiding crowds, allowing them to consider the economic burden on the one hand and any particular comorbidity on the other. They should be informed about the option of masking. It is also important that providers and governing bodies maintain uniform guidelines and consistent

patient advice with regard to the modes of transmission and the individual risk for influenza. In doing so, it will be easier to foster a sense of trust in the general population and avoid the level of panic seen at the onset of the current pandemic. The CDC has recommended masking for people who are ill during the influenza season even before the COVID-19 pandemic.⁵ They were more reticent to recommend masking for prevention, noting in the past that, "little evidence supports the use of face masks by well persons in community settings." They did note, however, that, "during a severe pandemic, pregnant women and other persons at high risk for influenza complications might use face masks if unable to avoid crowded settings"³ Since the time of that writing, the COVID-19 pandemic taught several painful public health lessons, making it reasonable to move from "might use" to "should use," particularly if the woman has frequent contact with the public. The CDC has also suggested that to increase social distancing, it would be reasonable to offer telecommuting and replace in-person meetings with virtual. Again, the COVID-19 pandemic demonstrated the acceptability of that approach for both employees and businesses. All members of the healthcare team should be reminded about respiratory etiquette and hand hygiene, and pregnant women should utilize frequent environmental surface cleaning measures. However, we acknowledge that there exist a large number of workers who are unable to work remotely, and the ability to implement nonpharmaceutical interventions is a luxury that many essential workers cannot afford.

Obstetricians play an essential role in public health, because they have contact with a population that can suffer disproportionately from infections that are more benign within the general population. Increasing demands on obstetricians make the dissemination of public health information a challenge. It is imperative that we promote discourse regarding infection prevention and common-sense information about risk. We can use patient interactions to educate our patients about how

respiratory droplets spread while reassuring patients that things such as grocery shopping and public transportation are safe. As the prospect of a post-COVID world beckons, the medical community and society at large are poised to take our hard-learned lessons and consider how we can be more proactive about contagion in the future.

Conclusion

Although physicians may feel more comfortable wielding a scalpel or a prescription pad than advocating behavioral interventions, the experience with

COVID-19 demonstrated that behavioral change can be a potent public health weapon. Accordingly, obstetricians should employ those tools during future flu seasons to promote the health interests of their patients. ■

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