

INSS Insight No. 1298, April 8, 2020 <u>The Struggle against the Coronavirus: Mass Vaccination before the</u> <u>Next Flu Season</u>

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Current medical policy is focused on the immediate struggle against the coronavirus. At the same time, however, the public health care system should plan and manage risks for the next stage, following the gradual exit from the current near-complete lockdown. The winter of 2020-21 may well be particularly challenging, when there may be a resurgence in coronavirus infections and a vaccine against the virus will likely not be ready. In this context, there should be a comprehensive campaign to vaccinate the population against influenza on a much larger scale than in the past. The goal is to temper the annual negative impact of the flu season on the health system, the economy, and society. Reducing influenza morbidity will leave more resources available for the fight against coronavirus. Reducing the risk of influenza is desirable at any time, and all the more so in the extraordinary circumstances of winter 2020-21.

This article, not a medical article, deals with the field of systemic risk management. Risk management places paramount importance on those risks with high damage expected value. However, it is also important to address less severe risks that consume many resources and can be removed with relative ease, thus making it easier for the system to deal with more serious risks. Currently leading that list of risks is the coronavirus crisis, which entails extreme uncertainty in the medical field and drives policy measures that are expensive and dangerous from both an economic and social point of view, such as the near-complete lockdown in Israel.

The unlocking process (as cautious as it may be) may be accompanied by an increase in infection; next winter there may be a new outbreak of the virus at the same time as the health system finds itself grappling with seasonal influenza. This article does not draw comparisons between the risks of influenza and coronavirus, but contends that a reduction in influenza morbidity in the winter of 2020-21 will contribute in a not insignificant manner to the ability of the health system, the economy, and society to deal with a new coronavirus outbreak. This situation should be anticipated and prepared for, particularly given that flu vaccines are not manufactured in Israel, that the quantities generally purchased by Israel

are relatively small in comparison to the population, and that global demand for flu vaccines could be particularly high.

Winter Flu Intensifies the Coronavirus Crisis

According to the website of the Clalit health maintenance organization, flu is caused by the influenza virus. The symptoms of the disease include high fever, muscle pain, headache, cough, and more. Most symptoms pass within a week. According to Clalit, while the flu is sometimes considered a not particularly pleasant but not too dangerous disease, this is a mistake: flu can be dangerous to the general population. The main complications of the illness are pneumonia, ear infections, and sinus infections. Rarer complications are inflammation of the brain (encephalitis), exacerbation of existing chronic lung disease, myocarditis, and Gillian Barre syndrome. According to the website of the Maccabi health maintenance organization, human transmission of the influenza virus occurs via aerosol droplets that spread when people with flu cough or sneeze and the droplets are inhaled. Infection is also possible by touching surfaces where the virus is present such as a phone, door handle, or an escalator railing. According to the Maccabi HMO, influenza patients can infect others the day before the onset of symptoms and for the following 5-6 days. In Israel, hospitals are flooded every year with influenza patients.

According to the Center for Disease Control and Prevention (CDC) in the United States, the number of influenza patients from October 2019 to March 2020 in the US is estimated at 39-55 million (approximately 14 percent of the population of 328 million); some 18-26 million patients underwent medical examination; 400,000-730,000 patients were hospitalized, and 24,000-63,000 patients died (0.06 - 0.11 percent of all patients).

While seasonal winter flu has some similar symptoms to coronavirus (including high fever and cough) and both can see complications of pneumonia, coronavirus is considered to be more infectious and far more lethal – although it remains unclear by exactly how much (as data varies for different countries). As of April 5, 2020 the mortality rate for coronavirus patients in Israel stands at 0.6 percent of diagnosed cases.

In general, the influenza vaccine is considered an effective means of reducing population incidence. According to a report by the Ministry of Health, during the 2018-19 winter season, some 1.75 million Israelis – approximately one fifth of the total population of Israel — were vaccinated against the flu. Vaccination coverage among those age 65 and over reached about 60 percent. The flu vaccine reduces morbidity and the need for hospitalization among the younger population as well. For example, a study conducted by Clalit, together with Ben Gurion University of the Negev and the University of Michigan,

found that vaccinating children against influenza reduced the risk of hospitalization of children that could occur as a result of complications of flu, by more than half (54 percent).

Recommendations

The coming winter stands to overload the healthcare system with both testing and hospitalization. The stream of information that will reach the health care system will require thousands of additional and unnecessary corona tests on people who will eventually be identified as influenza patients. Severely ill patients suffering from influenza complications will also require intensive care beds. In other words, influenza treatment will compete for health care resources intended for the fight against the coronavirus, and therefore reduced morbidity will allow more resources to be directed to the fight against coronavirus. Furthermore, influenza patients have a direct negative effect on the labor market and the education system. In other words, from this point of view as well, it is preferable to reduce the number of people with influenza.

Therefore, it is recommended that the Ministry of Health consider the idea of vaccinating the entire population, or large parts thereof, against influenza, and that it consider making vaccination mandatory. At the present stage, a program for mass vaccination against influenza should be prepared for the coming winter, including budget; conditions should be created for obtaining the vaccine in the necessary quantities, within a relevant time frame. In the long term, the value of local production capabilities for vaccines should be examined, in order to achieve independence for Israel in this field.

The author would like to thank Prof. Jacob Moran-Gilad for his useful comments on this article. Prof. Moran-Gilad is an expert in clinical microbiology and public health, a senior physician at the Soroka University Medical Center, a researcher at the Faculty of Health Sciences at Ben Gurion University, and a member of the Health Ministry's Advisory Committee for Infectious Diseases.