

Influenza pandemic: Is there a real threat?

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The progress of the influenza A (H1N1) pandemic worldwide has allowed for evaluation of preliminary findings, and estimates concerning its potential severity in Greece during the coming months. The World Health Organization (WHO) has already warned all countries of the Northern hemisphere about the inevitability of the coming pandemic. So far, recording of its course suggests an international predominance of the new virus, which is expected to represent the prevailing influenza species in most parts of the world. During the coming months, the pandemic will persist in this country, as the virus continues to spread in vulnerable non-immune segments of the population. Even after it has reached its maximum national distribution, certain localized areas of high transmittance are likely to remain.

Intensive laboratory surveillance has revealed genetic stability of the new virus and an absence, so far, of a new mutation to a more lethal species, although this possibility cannot be ruled out.

The clinical presentation of the pandemic is similar in all affected countries. More specifically, the vast majority of patients present with a mild clinical form. Although the virus is likely, in some cases, to cause extremely severe, lethal disease in young, otherwise healthy individuals, the incidence rate of severe disease remains relatively small.

Despite these encouraging data, a significant number of people in Greece are susceptible to the virus. This lack of immunity suggests that, despite the mild clinical presentation, the incoming pandemic may have serious consequences in this country, due to a high rate of infection. Health departments will be mostly affected by this quantitative effect. One of the major problems that will arise early is the large number of patients with serious disease requiring hospitalization in intensive care units (ICU). Currently, approximately 15% of patients hospitalized with influenza A require ICU care. This need is expected to rise and will possibly compromise the quality of support and health care provided to patients with other life-threatening conditions who also require ICU.

H1N1 virus remains susceptible to the two main antiviral drugs available. There have been reports of individual incidents with lack of susceptibility to the main antiviral drug, but this did not result in further dissemination of the drug-resistant species. The possibility of emergence of drug resistance requires continuous laboratory surveillance.

Influenza A is not identical with seasonal influenza. Several differences have been noted between this pandemic and various epidemics of seasonal influenza in terms of its clinical course:

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- The pandemic affects younger age groups. So far this holds for the majority of the affected population, and especially for severely affected patients (approximately 80% of hospitalized patients are aged <65 years), and patients with lethal complications.
- Most severe cases and deaths so far have been reported in adults aged <50 years old, whereas the majority of cases of severe illness and deaths (90%) from seasonal influenza occur in patients aged > 65 years.
- According to international clinical reports, otherwise healthy young individuals can develop an extremely severe form of the disease, which is rarely observed with seasonal influenza. In this form, the virus directly affects the lungs, causing severe respiratory failure, which requires specialized care in an ICU. Greece is expected to experience a sudden increase in the requirements for ICU (according to some estimates, more than 150 ICU beds should be available daily).

Certain population groups are considered to be particularly susceptible, and at high risk for serious disease, complications and even death attributable to the pandemic, including pregnant women and people

with respiratory diseases, such as asthma. The pool of high-risk patients has increased dramatically over the past decades. Obesity is a new worldwide epidemic, and obese individuals are more commonly seen among those with severe and lethal incidents, whereas the number of patients with asthma (230 million worldwide) and diabetes mellitus (220 million worldwide), also at higher risk, continues to rise. It appears that native populations and minorities express higher rates of particularly severe disease leading to hospitalization and death (the relative risk is 4-5 times higher than in the general population). One possible explanation for this is the higher rate of unfavourable living conditions, malnutrition and poor general health in these populations, associated with an increased prevalence of conditions such as asthma and diabetes mellitus.

In conclusion, despite its mainly mild clinical presentation, the new pandemic of influenza A may have significant consequences for the national health system and overall functioning of the country's social institutions.