

## What needs to be monitored in the pandemic scenario of swine flu?

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Τι θα πρέπει να παρακολουθείται στο σενάριο πανδημίας της γρίπης των χοίρων;

*Περίληψη στο τέλος του άρθρου*

**Key words:** Monitor, Pandemic, Swine flu

Swine flu is a new emerging disease that was first identified in early 2009 in Mexico and subsequently spread around the world.<sup>1</sup> At present, the World Health Organization

(WHO) has already raised the precaution level of this new disease to level 6, indicating the generalization of this disease around the world. Swine flu is accepted to be in a pandemic situation throughout the world at the present time.<sup>1-3</sup> According to the rules of infection control, monitoring of new infected cases is needed. Many surveillance systems in disease morbidity and mortality are already in place. Recently, WHO noted that it was not necessary to make a daily report to the public on the number of infections and deaths in the countries where the pandemic has already reached; however it is still recommended for any new setting, or in the case where a new pattern of outbreak is observed. In this brief article, the author discusses important items which need to be monitored in the pandemic scenario of swine flu.

### DISEASE MORBIDITY AND MORTALITY

Although it is not recommended to broadcast the information on the number of cases of infection and death to the public, this does not mean that there is no need for basic surveillance on disease morbidity and mortality.<sup>1-4</sup> The routine recording of new cases of swine flu must be performed continuously. The data derived from this activity are useful for monitoring the current state of the outbreak and for planning timely response when indicated.

### MUTATION OF THE VIRUS

The pathogenic virus causing swine flu is a new genetically modified H1N1 influenza virus. This modification is the result from natural reassortment.<sup>5</sup> Due to the nature of the virus, the mutation can easily occur, and for this reason monitoring of the possible mutation of the virus is needed. An identified mutation might lead to new problems in disease management, such as new manifestations or resistance to treatment. Luckily, up until the present, there has still been no evidence of mutation of swine flu in reports from around the world.<sup>6,7</sup>

### DRUG RESISTANCE

At present, oseltamivir is the drug of choice for treatment of swine flu.<sup>8</sup> There has so far been no official report on oseltamivir drug resistance.<sup>9</sup> However, resistance is expected to be developed in the future, since oseltamivir resistance has been detected in classical H1N1 influenza virus infection. With the high rate of drug usage in the pandemic scenario of swine flu, drug resistance is expected to develop within a short period.<sup>9</sup>

## EPIDEMICS OF OTHER INFLUENZA VIRUS INFECTIONS

It is also necessary to monitor the co-occurrence of epidemics of other influenza virus infections. The classical influenza can be expected to be detected in the same period as the pandemic of swine flu.<sup>1-3</sup> The co-occurrence of the two diseases might happen and this needs close surveillance, as such an episode could be the cause of a new genetic reassortment of the virus to create a new, more deadly virus. For this reason the monitoring of epidemics of other influenza virus infections is suggested.

### ΠΕΡΙΛΗΨΗ

**Τι θα πρέπει να παρακολουθείται στο σενάριο πανδημίας της γρίπης των χοίρων;**

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Η πανδημία της γρίπης των χοίρων αποτελεί παγκόσμιο πρόβλημα. Αρκετά γεγονότα θα πρέπει να τονιστούν για ένα σενάριο πανδημίας, όπως η νοσηρότητα και η θνησιμότητα της νόσου, η πιθανότητα μετάλλαξης του ιού, η ανάπτυξη αντοχής στα φάρμακα, καθώς και η συνύπαρξη πιθανής επιδημίας με άλλους τύπους γρίπης.

**Λέξεις ευρετηρίου:** Γρίπη των χοίρων, Πανδημία, Παρακολούθηση

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