



Defense Intelligence Agency

Defense Intelligence Assessment**(U) Worldwide: New 2009-H1N1 Influenza Virus Poses Potential Threat to U.S. Forces**

1 May 2009
DI-1812-1544-09

(U) Scope Note

(U) This product characterizes the risk of the currently circulating new H1N1 influenza virus to U.S. forces. It is written primarily for the use of military commanders, medical officers, and operational planners.

(U) Key Judgments

(U) NCMI assesses with high confidence a new H1N1 influenza virus (referred to by the media as "swine flu") poses a potential threat to U.S. forces overseas and within the United States. The virus can be acquired relatively easily through casual contact with infected persons. The full worldwide extent of the H1N1 outbreak, including the extent of the virus spread, the number of cases, and the number of related deaths, remains unknown because of the lack of specialized diagnostic capabilities in many countries.

(U) Based on clinical and epidemiological data from current cases, NCMI judges the 2009-H1N1 influenza virus may cause attack rates exceeding 10 percent per month in U.S. forces. Most cases will likely debilitate personnel for approximately 1 week, possibly longer. Military populations living in crowded or austere conditions where handwashing and personal hygiene are suboptimal are particularly vulnerable to person-to-person spread of H1N1 influenza virus if introduced. Attack rates in such populations may exceed 50 percent per month.

(U) NCMI judges a small percentage of healthy military-age adults may develop severe and potentially fatal illness, requiring hospitalization, intensive care, and weeks of recovery. If large outbreaks occur among deployed U.S. military personnel, they will likely strain and possibly overwhelm military medical capabilities, particularly at the intensive care level.

(U) NCMI further assesses with high confidence that detection of H1N1 outbreaks in local populations, including those near concentrations of U.S. forces, will be limited in developing countries with poor surveillance capabilities.

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(U) Source Summary Statement

(U) The sources used in this product include multiple open-press reports and a U.S. Centers for Disease and Control Prevention (CDC) publication. The sources have been corroborated by reporting from the World Health Organization (WHO) and the CDC and are therefore considered reliable.

(U) U.S. Forces Potentially at Risk Worldwide - True Geographic Extent of H1N1 Circulation Unknown

(U) NCMI assesses with high confidence U.S. forces worldwide (including those in the United States) are potentially vulnerable to H1N1 infection from relatively casual interactions with local populations in areas where the virus is circulating. The true geographic extent of circulation remains unknown -- but NCMI judges it likely extends well beyond the countries with confirmed human cases.

(U) According to the CDC, the H1N1 virus is contagious and spreading from person-to-person. Transmission is believed to occur in the same way typical seasonal influenza spreads, mainly from person-to-person through coughing and sneezing. Individuals can also become infected by touching contaminated surfaces and then touching their nose or mouth.

- (U) Based on data from typical strains of influenza A and B, hard surfaces such as countertops or faucet handles contaminated with secretions from infected individuals may be infectious for approximately 2 to 8 hours. Tissues or other soft materials may remain infectious for a period of a few minutes. Hands contaminated with secretions remain infected for approximately 5 minutes.
- (U) As of 29 April 2009, the new H1N1 virus has been identified and laboratory confirmed in Austria, Canada, Costa Rica, Germany, Israel, Mexico, New Zealand, Spain, the United Kingdom, and the United States. Suspected cases have been reported in at least 21 additional countries. At present, locations reporting confirmed cases primarily reflect places with access to advanced diagnostic testing through specialized laboratories in the United States and Canada.

(U) For additional information, see [\(U\) Infectious Disease Alert DI-1812-1534-09](#) and [\(U\) Warning Assessment for Pandemic Influenza](#). NCMI's Intellipedia page [\(U\) H1N1 Influenza Virus Outbreak 2009](#) lists an update of countries affected and published intelligence assessments are available at NCMI's [\(U\) Avian Influenza/Pandemic Influenza](#) webpage. See [\(U\) Frequently Asked Questions: 2009-H1N1 Influenza](#) for additional details.

(U) Operational Impact May Be Significant

(U) NCMI assesses with high confidence the new H1N1 virus may cause operationally significant attack rates, potentially exceeding 10 percent per month in U.S. forces. Military populations living in crowded or austere conditions where handwashing and personal hygiene are suboptimal are particularly vulnerable to person-to-person spread of H1N1 influenza virus if introduced. Attack rates in such populations may exceed 50 percent per month. Most infections are likely to debilitate personnel for approximately 1 week, possibly longer. A small percentage of healthy military-age adults, however, may develop severe and potentially fatal illness, requiring hospitalization, intensive care, and prolonged recovery. If large outbreaks occur among deployed U.S. military personnel, they

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will likely strain and possibly overwhelm military medical capabilities, particularly at the intensive care level.

- (U) Typical influenza illness is characterized by fever, cough, muscle pain, headache, fatigue, and sore throat with symptoms generally lasting 5 to 7 days. Most cases of H1N1 identified outside of Mexico appear to have displayed this level of severity.
- (U) In Mexico, an unusually high number of fatalities among healthy young adults (military-age) have been noted. According to open source reporting, the majority of fatalities in Mexico are among 25-50 year olds.
- (U) More austere military settings often have limited facilities for frequent handwashing and personal hygiene, limiting the capacity to implement one of the most basic preventive measures.
- (U) Operational military environments often are characterized by crowding (e.g., shipboard berthing, military barracks, field billeting, travel on military or civilian transports, etc.), which is strongly associated with person-to-person transmission. Outbreaks of a variety of respiratory diseases are not uncommon in crowded military populations.

(U) Advanced Indication of Potential Exposure Will Be Limited in Some Locations

(U) NCMI assesses with high confidence the degree of advanced notification of new H1N1 influenza circulation in local populations, including those near concentrations of U.S. forces, will be limited in developing countries with poor surveillance capabilities. As a result, U.S. forces in some locations may be unable to prevent substantial exposure to infected local populations. NCMI judges countries with relatively good surveillance capabilities, such as the United States, South Korea, and Japan, likely will be able to identify local H1N1 circulation within their populations. Such notification will support adoption of aggressive pandemic preventive measures in deployed U.S. forces at the earliest possible stage.

- (U) According to a United Kingdom government report, routine surveillance is absent in many developing countries, and their diagnoses and determinations of cause of death are unreliable. For additional information, see [\(U\) Worldwide: Country Capabilities to Detect New H1N1 Influenza Virus Cases](#).
- (U) According to peer reviewed literature, Japan and South Korea have effective infectious disease surveillance systems that can identify significant outbreaks and disease occurrences. Diagnostic capability and disease reporting infrastructure is functional in most parts of these countries.

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(U) New H1N1 Influenza and Countermeasures

(U) Although the ease with which the new H1N1 influenza virus is transmitted is currently unknown, the virus is believed to be spread in the same way as regular seasonal influenza viruses. Influenza viruses are spread mainly from person-to-person through sneezing or coughing by infected individuals. People may become infected by touching something contaminated with influenza viruses and then touching their nose or mouth. Infected people may be able to infect others beginning 1 day before symptoms emerge and up to 7 or more days after becoming sick. Hard surfaces contaminated with secretions from infected individuals likely can be effectively disinfected by scrubbing with germicidal disinfectant soap and water, alcohol-based cleaners, and dilute bleach solutions.

(U) The CDC recommends the following personal protective measures to avoid influenza infection:

- (U) Frequent handwashing with soap and water or alcohol-based hand cleaners.
- (U) Covering the nose and mouth with a tissue when coughing or sneezing.
- (U) Avoid touching the eyes, nose, or mouth.
- (U) Avoidance of close contact with sick people.
- (U) Individuals with influenza-like or respiratory symptoms should stay home from work or school and limit contact with others.

(U) In addition to the routine preventive measures outlined by the CDC, the following additional measures may apply to military populations:

- (U) Reduction of crowding in billeting and work areas to the greatest extent feasible.
- (U) Head-to-toe orientation of bunks where feasible.
- (U) Maximized ventilation in berthing and other areas where people congregate.
- (U) Provision of handwashing facilities near berthing and other areas.
- (U) Enhanced active surveillance for clinical cases of febrile respiratory disease.
- (U) Prompt isolation of suspected cases.
- (U) Pandemic response plans that can be activated as needed, potentially involving isolation of forces, restriction of travel, and other measures.

(U) Administrative Notes

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(U) This publication supersedes (U) Worldwide: New H1N1 Influenza Virus Poses Potential Threat to U.S. Forces, DI-1812-1540-09, dated 30 April 2009, which should be destroyed.

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