

# News

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## Doctor Discusses Navy's Role in Detecting H1N1

By Gerry J. Gilmore  
American Forces Press Service

WASHINGTON, Nov. 4, 2009 - The Navy played a key role last spring in the discovery of the H1N1 influenza's presence in the United States, according to a senior Navy medical officer.

In April, technicians at the San Diego-based Naval Health Research Center encountered a puzzling influenza specimen provided by a 10-year-old military family member, said Navy Capt. (Dr.) Tanis Batsel Stewart, director of emergency preparedness and contingency support at the Navy Bureau of Medicine and Surgery.

The specimen contained the "A" type of influenza virus that can cause pandemics, Batsel Stewart said, but it couldn't be sub-typed.

"It's very unusual not to be able to sub-type an influenza virus," she said in a recent phone interview with American Forces Press Service.

The specimen, she said, was then sent to the Centers for Disease Control and Prevention in Atlanta for more testing, where technicians determined it was a new strain of influenza virus.

A second specimen from a 9-year-old girl that arrived at the NHRC soon afterward was found to be identical to the one submitted by the military family member, Batsel Stewart said. That specimen, too, was sent to the CDC, where it was determined to be the novel influenza A H1N1 virus, commonly known at the time as "swine flu."

"That was a definite red flag -- that we have a new influenza strain circulating that might very well cause a pandemic, and obviously, it has," she said.

The CDC activated its emergency operations center to better coordinate the public-health response to H1N1 on April 22. The U.S. government declared a public health emergency on April 26, and began aggressively implementing the nation's pandemic response plan.

The World Health Organization announced June 11 that the spread of the H1N1 virus had reached pandemic proportions, with cases reported in 70 countries at the time. President Barack Obama issued a national emergency declaration on H1N1 on Oct. 24.

"By rapidly identifying the virus, implementing public health measures, providing guidance for health professionals and the general public, and developing an effective vaccine, we have taken proactive steps to reduce the impact of the pandemic and protect the health of our citizens," the president said in his declaration.

The Washington-based Navy Bureau of Medicine and Surgery is the headquarters and center for Navy medicine, while the NHRC is a leading research and development laboratory for the Defense Department. The NHRC manages and executes medical research, development and test and evaluation programs for the Naval Medical Research Command in Silver Spring, Md.; the Navy Medicine Support Command in Jacksonville, Fla.; and the Navy Bureau of Medicine and Surgery.

The Naval Health Research Center's respiratory diseases research department conducts active, laboratory-based surveillance of infectious diseases that affect military personnel and family members, with an emphasis on respiratory illnesses. The department also addresses the safety and efficacy of drugs and vaccines.

The Navy has for years conducted influenza and other infectious-disease surveillance programs in conjunction with the other U.S. military services in partnership with foreign nations and public health organizations, Batsel Stewart said.

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The U.S. military's infectious disease research capability "is the largest in the world," she said, noting the U.S. maintains labs in Egypt, Indonesia, Kenya, Peru and Thailand that fall under the auspices of the Department of Defense Global Emerging Infections Surveillance and Response System.

More than 100 countries, "from Afghanistan to Zimbabwe," participate in the surveillance program, Batsel Stewart said.

A presidential directive established the response system, which falls under the Armed Forces Health Surveillance Center, in June 1996. The directive expanded the Defense Department's mission to include support of global surveillance, training, research, and response to emerging infectious disease threats.

It also charged the department to strengthen its global disease-reduction efforts through centralized coordination, improved preventive health programs and epidemiological capabilities, and enhanced involvement with military treatment facilities.

The Naval Health Research Center's respiratory diseases research department serves as the Navy hub for the surveillance and response system.

"We don't anticipate, at this point, H1N1 becoming a severe pandemic, causing a lot of deaths and very severe illness," Batsel Stewart said. "But, we've been preparing for years within [the Defense Department] and the Navy and Navy medicine for something along the lines of the pandemic of the influenza of 1918, which was horrendously severe."

To help in preventing the spread of influenza viruses, Batsel Stewart recommended that people:

- Cough or sneeze into the crook of their elbow, rather than into their hand;
- Wash their hands frequently;
- Stay home if they feel ill;
- Keep sick children at home; and
- Distance themselves if they or others are ill.

Public health officials have urged citizens to obtain both H1N1 and regular seasonal flu vaccines. Defense Department officials say the department will have enough H1N1 vaccine available for servicemembers and their families.

Meanwhile, the Pentagon's global infectious disease surveillance network watches for potential pandemics as it also assists foreign partners.

Batsel Stewart recalled a previous duty assignment in Lima, Peru, where she and her colleagues assisted Peruvian health authorities in identifying new strains of dengue fever virus.

"Peru always thought that they had one, maybe two strains of the dengue fever virus circulating," said Batsel Stewart, noting that the fever has four strains. The U.S. medical team, she said, discovered that Peru actually has all four strains of dengue fever virus. One of those strains, she added, is dengue hemorrhagic fever, which causes victims to bleed internally and sometimes externally.

"So, the Peruvian government and the Peruvian public health system was better able to respond to some of the cases they were saying they would not have recognized previously," Batsel Stewart said.