

Influenza monitoring by the US military

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The recent global swine flu outbreak has underscored the critical need for good surveillance and rapid access to epidemiological data. The US military, starting with early monitoring efforts in the 1970s, has developed a broad-based influenza monitoring system.

In an article published in the September 2009 issue of the *American Journal of Preventive Medicine*, researchers describe this little-known national jewel that has repeatedly made notable contributions to global influenza control through close collaboration with CDC, the [Food and Drug Administration](#) (FDA), the WHO, and many other partners.

National concerns about emerging infectious diseases led to the creation of the Department of Defense Global Emerging Infections Surveillance and Response System (DoD-GEIS) in 1997. This program has 6 objectives relevant to influenza: (1) To isolate and identify circulating influenza viruses, (2) To detect new virus variants or subtypes for possible vaccine modification, (3) To identify influenza outbreaks, (4) To determine the incidence of influenza-like illness among sentinel military populations at high risk, such as basic training populations, (5) To prevent or control endemic and [pandemic](#) influenza outbreaks, and (6) To conduct global, operationally relevant, laboratory-based influenza surveillance.

According to the Institute of Medicine, "The DoD-Global Emerging Infections System, through its avian influenza/pandemic influenza activities at the [DoD] overseas laboratories and headquarters, has contributed greatly to the development of laboratory and

communications infrastructures within partner countries. Beneficial effects can be seen from current DoD-GEIS efforts in 56 countries to assist its public health partners in building capacity through training and support of laboratory and communications infrastructures."

Writing in the article, Col. James Neville, MD, MPH, of the US Air Force School of Aerospace Medicine, Brooks City-Base, Texas, and colleagues state, "During seven complete influenza seasons, the DoD Global Laboratory-Based Influenza Surveillance Program...coordinated and expanded influenza surveillance efforts among the uniformed services and with DoD partner nations overseas, and operated in concert with WHO and CDC programs. As a result, the DoD and other global communities benefited from improved surveillance and expanded influenza laboratory and epidemiologic capability. The generated data and information supported timely, informed decision making in response to threats, expanded the data set used to select the components for seasonal influenza vaccines, and provided candidate seed viruses for possible use in influenza vaccines used worldwide."

In a commentary in the same issue, Dr. Patrick W. Kelley, MD, DrPH, of the Institute of Medicine, The National Academies, notes that, "The somewhat unexpected emergence of novel H1N1 in Mexico, rather than in the anticipated Asian setting, highlights a lesson learned about the need for comprehensive global influenza surveillance. This is a lesson that geographically diverse foreign military health systems may be well-positioned to help address."

He continues, "The success of the US DoD system, and the particular epidemiologic characteristics of military populations and military health systems, suggest that global influenza surveillance and response could be more comprehensive and informative if other military organizations around the world took advantage of their comparative organizational advantages to emulate, extend, and institutionalize the US DoD

approach."

More information: The article is "Department of Defense Global Laboratory-Based Influenza Surveillance: 1998-2005" by Angela B Owens, MPH; Linda C Canas, BS; Kevin L Russell, MD, MTM&H; James Neville, MD, MPH; Julie A Pavlin, MD, PhD, MPH; Victor H MacIntosh, MD, MPH; Gregory C Gray, MD, MPH; and Joel C Gaydos, MD, MPH. The commentary is "A Commentary on the Military Role in Global [Influenza](#) Surveillance" by Dr. Patrick W. Kelley, MD, DrPH. Both appear in the *American Journal of Preventive Medicine*, Volume 37, Issue 3 (September 2009) published by Elsevier.

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