Mid-Season Influenza Vaccine Effectiveness for the 2012-2013 Influenza Season

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Assessment of VE was performed by three case-control approaches in which cases were individuals with positive laboratory tests for influenza. First, the AFHSC used the Defense Medical Surveillance System (DMSS) to identify all active component, non-recruit service members during 1 September 2012 to 14 February 2013. Health Level 7 data in the DMSS was used to identify influenza cases that were laboratory confirmed by a rapid influenza test, reverse transcriptase polymerase chain reaction (RT-PCR), or viral culture. Controls were active component service members with health care encounters for musculoskeletal conditions (without respiratory diagnoses) and were matched to cases by sex, age, date of diagnosis (+/- 3 days) and treatment facility. Most cases and controls were treated at military or civilian medical facilities in the U.S.; however the population did include service members who sought care at military medical facilities in Europe, Korea, and Japan. Vaccination status was determined by immunization records documented in the DMSS.

Second, NHRC’s analysis relied on influenza-like illness (ILI) surveillance among DoD dependent and other civilian populations living in southern...
LAIV conferred similar levels of protection in all analyses. Vaccination coverage varied among the study populations; the highest coverage was among active component service members (AFHSC) and lowest among civilians and dependents (NHRC). Highly immunized populations (active component service members) appeared to have lower VE than less immunized populations (civilians and dependents); however, further studies would be required to properly assess this hypothesis. Models for influenza A (subtype H1) and B resulted in non-statistically significant findings; this result could be due in part to limited numbers of laboratory-confirmed influenza infections during the periods of study.

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# Mid-Season Influenza Vaccine Effectiveness for the 2012-2013 Influenza Season


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## Abstract
The Armed Forces Health Surveillance Center (AFHSC), Naval Health Research Center (NHRC) and United States Air Force School of Aerospace Medicine (USAFSAM) conduct annual mid-season influenza vaccine effectiveness (VE) analyses for the Department of Defense (DoD). As each organization conducts influenza surveillance on different populations, their analyses provide a unique opportunity to assess influenza VE among service members, dependents and civilians. This report describes the findings for the middle of the 2012-2013 influenza season.