



# Navy and Marine Corps Medical Surveillance Report

Navy and Marine Corps Public Health Center

Volume I, Issue I  
1 March 2010

This newsletter is an authorized publication for members of the Department of Defense. The contents of this newsletter are not necessarily the official views of, or endorsed by, the U.S. Government, the Department of Defense, or Navy and Marine Corps Public Health Center.

## Introduction by Captain Bruce Cohen, CO, NMCPHC

I am pleased to launch this inaugural edition of the Navy and Marine Corps Surveillance Report newsletter. This newsletter will keep our Navy Medicine customers informed and is consistent with our Navy Medicine Support Command Commander's guidance on "moving the gauge to excellence in epidemiology services". This quarterly newsletter highlights the ongoing epidemiology efforts in several important areas in our Epi-Data Center including influenza surveillance and tracking, deployment health assessments, as well as infection surveillance in outpatient settings.



Captain Cohen

With the expansion of our epidemiology services supporting the BUMED Wounded Ill and Injured (WII) Program starting in FY2010, this newsletter will serve as the venue to provide clinicians with critical information on newly developed metrics providing leading and lagging indicators of WII program measures, including illness

and injury prevention, health-care burden, quality of care, and appropriateness of care. The refinement of health and disease tracking in clinical databases as described in future newsletters will guide preventive healthcare programs across the enterprise for all beneficiaries.

We welcome your questions, feedback and comments on this newsletter as well as other public health issues to [newsletter@nehc.mar.med.navy.mil](mailto:newsletter@nehc.mar.med.navy.mil) for prompt and responsive service.

## Table of Contents

- Introduction by CAPT Cohen
- Tracking Influenza
- MRSA and MSSA with SSTI in outpatient setting
- Evaluation of DoN High Risk Individuals with Influenza, 2009-2010
- Deployment Health

## Tracking Influenza

by Gosia Nowak, MSC, MPH, Division Head of Communicable Disease, EpiData Center

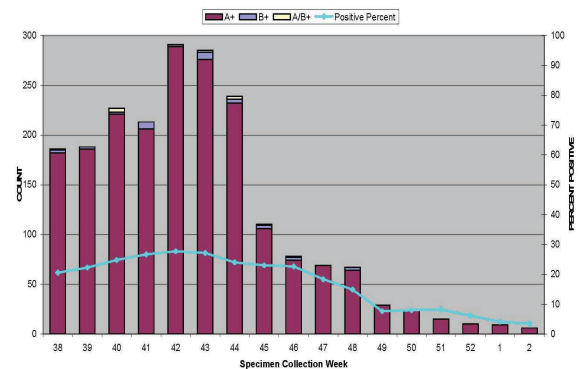
Between 27 September 2008 and 16 January 2010, there were a total of 2046 positive influenza lab results in the Department of Navy Military Health System (fixed facilities only). The vast majority of positive results with influenza typing information have indicated influenza type A. Since Week 42 (25 October – 31 October), there has been a systematic decrease in the identified cases. Of all seasonal influenza laboratory tests performed, approximately 21% of tests have been positive. The vast majority of tests continue to be

rapid diagnostic tests. During this period, there were 6 influenza-positive laboratory results in the inpatient setting. Of all influenza tests performed at DON inpatient facilities (n=15), approximately 7% were positive. When compared to the same time period last season (2008-2009), there was a similar number of inpatient positive results this season.

[\(click here for more information\)](#)

[\(click graph to open full-size image\)](#)

Influenza Positive DON MHS Laboratory Test Results by Type\*  
Updated: Week 2 (January, 10 - January 16, 2010)\*\*  
2008 - 2010 Influenza Season



## MRSA and MSSA with SSTI in outpatient setting

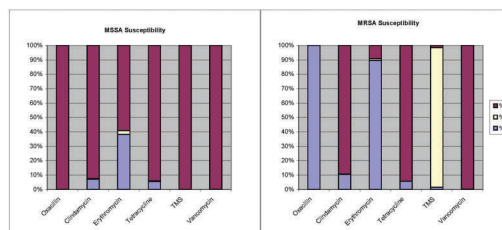
by Uzo Chukwuma, MPH, Division Head of Clinical Epidemiology, EpiData Center

Between October 2006 and May 2008, there were 361,655 cases of skin and soft tissue infection (SSTI) identified from outpatient encounter records for active duty military service members. Nearly three-quarters of the identified isolates (74%) associated with the SSTI cases were positive for the *Staphylococcus aureus* organism, with 60% of these further classified as methicillin-resistant *S. aureus* (MRSA). The top five antibiotics recommended by the Clinical Laboratory Standard Institute (CLSI) for treatment were evaluated, as well as oxacillin. The majority of MRSA isolates were not only resistant to oxacillin but also to erythromycin (90%). In

contrast, methicillin-resistant *S. aureus* (MSSA) isolates were highly sensitive to all antibiotics in the spectrum, including oxacillin. All isolates of both MRSA and MSSA showed 100% susceptibility to vancomycin. According to the HL7 pharmacy records, drugs used to treat MRSA were often used for MSSA treatment. TMS was the most frequently prescribed antibiotic for both MRSA (67%) and MSSA (52%) associated SSTIs.

[\(click here for full report\)](#)

Left: MRSA vs. MSSA Susceptibility, AD DOD, SSTI Associated Isolates, October 06 – May 08  
[\(click graph to open full-size image\)](#)



©: Sensitive I: Intermediate R: Resistant



Navy and Marine Corps Public Health Center  
(757)953-0979  
DSN: 377 0979

[newsletter@nehc.mar.med.navy.mil](mailto:newsletter@nehc.mar.med.navy.mil)

NMCPHC Website:  
[www-nmcpHC.med.navy.mil](http://www-nmcpHC.med.navy.mil)

*The Navy and Marine Corps Medical Surveillance Report* is a publication produced by the Navy and Marine Corps Public Health Center in Portsmouth, Virginia. The purpose of this publication is to alert Navy preventive health officers, clinicians, and other healthcare personnel of recent trends and research in epidemiology, especially where this information relates to the treatment and prevention of communicable diseases, and thereby to help these personnel to excel in their duties, and so increase the overall readiness and effectiveness of the US Navy.

*Editing and Layout by William Murphy of  
Pioneer Technologies Corporation*

**Purpose:** Influenza is a respiratory illness that can cause serious complications, including death. The EpiData Center (EDC) at the Navy and Marine Corps Public Health Center (NMCPHC) collects and analyzes data regarding influenza hospitalizations during the 2009-2010 influenza season. The results were used to track Department of Navy (DoN) serious influenza cases to describe the clinical experience of hospitalized patients in the Military Health System, including concurrent diagnoses and treatment. The purpose of this evaluation was to examine case descriptions from three serious influenza patients who were considered high risk. These three cases illustrate the clinical experience of high risk individuals who have been infected by the influenza virus.

**Methods:** Cases were identified from positive influenza tests from HL7 chemistry or microbiology data that had an inpatient Medical Expense and Performance Reporting System (MEPRS) code. Cases were identified from the Naval Disease Reporting System (NDRSi) if they had an ICD-9 code of 488 or 487 and were hospitalized. Data from HL7 and clinical encounter databases were requested for each case. Individual reports were completed for each case, detailing positive and negative influenza tests, laboratory tests (e.g., blood cultures), medications received (inpatient, IV, outpatient), radiology imaging tests (e.g., chest x-ray), outpatient and inpatient encounter visits and diagnoses, and any reports from NDRSi.

**Results:** Between influenza weeks 39 and 45, 104 people with influenza were hospitalized. Of the 104 cases, 38 were beneficiaries from the Department of Navy. Three cases of interest were chosen from the Serious Influenza Project to provide examples of Department of Navy high risk hospitalized influenza patients. Cases were described to detail the clinical experience of the three unique patients. The patients chosen for this analysis included a child, a pregnant woman, and a recruit with co-infections. All three of these influenza high risk patients were successfully treated with influenza-specific antivirals and reported in NDRSi within one day of diagnoses or positive lab result. The pregnant woman was treated with antivirals and diagnosed without confirmatory lab tests, while child and recruit had positive lab culture results. Additionally, the patients were able to see specialists that their other conditions required, such as an obstetrician and a dietitian.

**Conclusions:** The information obtained from the Serious Influenza Project would be useful in future surveillance of influenza since a large population of the United States is considered high risk for influenza, and high risk individuals are more likely to become hospitalized with influenza compared to their healthier counterparts. A study of the clinical experiences of high risk hospitalized influenza patients will enable clinicians and analysts to better understand the procedure and treatments applied, impact of co-morbid diagnoses, and special circumstances. ([click here for full report](#))

## Deployment Health Assessments

*By Dr. Chris Rennix, ScD, MS, CIH, Head, EpiData Center*

The Navy and Marine Corps Public Health Center is responsible for collecting and analyzing the survey data in support of DODI 6490.03, OPNAVINST 6100.3, and various MARADMINS. The EpiData Center provides bi-monthly reports to BUMED, USMC, and OPNAV of several key metrics to ensure proper data flow, logistical support for survey management, and identify the potential burden on the military healthcare system (MHS). The Marine Corps accounts for a significant number of the surveys and the burden for follow-on care in the MHS is most likely due to their deployment role and operational tempo. Both services are making extraordinary efforts to improve access and compliance to the survey instruments and the completion rates have steadily increased over the last year. Less than 1% of all respondents refused to

complete the post deployment health reassessment (DD2900) survey. Below is the annual DD2900 report for calendar year 2009 for Department of Navy personnel. Access to the electronic Deployment Health Assessment (eDHA) program can be obtained at:

<https://data.nmcpHC.med.navy.mil/edha/>

PDHRA Annual Report for DON — 2009

Service Branch	service Component	Number of Service Members Screened	Number of Service Members Declined to complete form	Percentage of Service Members Declined to complete form	Number of Service Members Referred for Further Evaluation	Referred for Further Evaluation Due to Physical Only	Referred for Further Evaluation Due to Behavioral Health Only	Percentage of Behavioral Health Referral only (Out of Service Members Screened)	Referred for Further Evaluation Due to Both Physical and Behavioral Health
Navy	Active Duty	19,705	196	1.0%	3,370	2,888	1,008	5.1%	526
	Reserve	5,031	22	0.4%	991	920	249	4.9%	178
	Other	34	0	0.0%	4	4	0	0.0%	0
	Total	24,770	218	0.9%	4,365	3,812	1,257	5.1%	704
Marine Corps	Active Duty	53,778	362	0.7%	14,226	13,109	3,124	5.8%	2,007
	Reserve	7,817	13	0.2%	2,363	2,197	714	9.1%	548
	Other	83	0	0.0%	32	31	8	9.6%	7
	Total	61,678	375	0.6%	16,621	15,337	3,846	6.2%	2,562
<b>Total</b>		<b>86,448</b>	<b>593</b>	<b>0.7%</b>	<b>20,986</b>	<b>19,149</b>	<b>5,103</b>	<b>5.9%</b>	<b>3,266</b>