

Announcements

To register for the Monthly Disease Surveillance Trainings:

1. Contact your Service Surveillance Hub to receive monthly updates and reminders. Contact info will be provided at the end of the training.
2. Log on or request log on ID/password:
<https://tiny.army.mil/r/zB8A/CME>
3. Register at: <https://tiny.army.mil/r/MEHsS/EpiTechFY18>

To confirm attendance:

- Please enter your full name and email into the DCS chat box to the right, or e-mail your Service Hub.
- You will receive a confirmation email within 48 hours with your attendance record. If you do not receive this email, please contact your Service Hub.



Continuing Medical Education Course Handout

FY18 Epi-Tech Surveillance Training

Sunday, October 01, 2017 - Sunday, September 30, 2018
DCS, APG, MD

Provided By

U.S. Army Medical Command

<u>Activity ID</u>	<u>Course Director</u>	<u>CME Planner</u>
2017-1636	John Ambrose	Mimi C. Eng

Accreditation Statement

This activity has been planned and implemented in accordance with the accreditation requirements and policies of the Accreditation Council for Continuing Medical Education (ACCME) through the joint providership of U.S. Army Medical Command and ARMY PUBLIC HEALTH CENTER. The U.S. Army Medical Command is accredited by the ACCME to provide continuing medical education for physicians.

Credit Designation

The U.S. Army Medical Command designates this Live Activity for a maximum of 5 *AMA PRA Category 1 Credit (s)*TM. Physicians should claim only the credit commensurate with the extent of their participation in the activity.

This is a required handout. It must be disseminated to each learner prior to the start of the activity.



Continuing Medical Education Course Handout

Statement of Need/Gap Analysis

The purpose of this CME activity is to address the identified gap(s):

1. Surveillance techniques - Surveillance of common communicable diseases continues to be a problem among local MTFs. In fact, cases of campylobacter were not investigated in 2015 for PACOM MTFS, while 2016 cases of salmonella were not investigated. Civilian public health agencies are required to conduct investigations into all reportable medical events. However, DoD facilities often do not take initiative to conduct this investigation.
2. Disease identification - verification of disease by established case definitions have been utilized by the local health departments, Centers for Disease Control and Prevention, World Health Organization, and the Department of Defense. With the every changing list of reportable medical events and new emerging infections, case definitions change rapidly. Army epidemiologist conduct verification studies that monitor the efficiency of reporting by local public health experts and have concluded that completeness percentages for reportable medical events range as low as 35% for select diseases.
3. Outbreak reporting - Recent evidence have demonstrated that outbreak reporting and communication between public health agencies is poor. In fact, the Army failed to report six outbreaks in the DRSi between June 2016 and September 2016.

Learning Objectives

1. Based on case presentation, enhance your ability to improve case finding and surveillance practices within your local MTF.

Target Audience / Scope of Practice

Target Audience: The intended audience for this educational activity includes preventive medicine physicians, community health nurses, public health nurses, and epidemiology technicians.

Scope of Practice: This activity will improve the performance of preventive medicine personnel who conduct surveillance activities in inpatient and outpatient settings.



Continuing Medical Education Course Handout

Disclosure of Faculty/Committee Member Relationships

It is the policy of the U.S. Army Medical Command that all CME planning committee/faculty/authors disclose relationships with commercial entities upon invitation of participation. Disclosure documents are reviewed for potential conflicts of interest and, if identified, they are resolved prior to confirmation of participation.

Faculty Members

Brown, Alfonza	- No information to disclose.
Gibson, Kelly	- No information to disclose.
Holbrook, Victoria	- No information to disclose.
Kebisek, Julianna	- No information to disclose.
Reynolds, Mark	- No information to disclose.
Riegodedios, Asha	- No information to disclose.
Rudiger, Courtney	- No information to disclose.
Russell, Jamaal	Employment/Salary: Abbvie (spouse)
Walters, Cedric	- No information to disclose.

Committee Members

Ambrose, John	- No information to disclose.
Eng, Mimi	- No information to disclose.
Gibson, Kelly	- No information to disclose.
Riegodedios, Asha	- No information to disclose.

Acknowledgement of Commercial Support

There is no commercial support associated with this educational activity.





What Happens to MERs After I Hit Submit? Use of DRSi Data at Regional and Service Hub Levels

Courtney Rudiger, Epidemiologist
28 August 2018



NAVY AND MARINE CORPS PUBLIC HEALTH CENTER
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Objectives

- Describe the importance of reportable events data submitted by local reporters.
- Provide examples of how reportable events data are used at Regional and Service levels to help reporters understand the need for accurate data.
- Identify how to access reports created from reportable events data for use in improving local surveillance efforts.



Importance of Medical Event Reporting

- Current public health climate:
 - Focus on leadership visibility and transparency
 - Surveillance of emerging disease threats
 - Biosurveillance
 - Integration of disease surveillance/reporting into emergency preparedness plans



Importance of Medical Event Reporting

- The reporting of certain medical events is required by instructions in all Services.
- Allows for early identification of emerging diseases and other threats to force health protection.
- Medical event reports (MERs) can be used to estimate disease burden, trends, and risks in military populations.
- Data from medical event reports can be used to assess programs and policies for disease prevention and control.



Use of DRSi Data: Regional Level

- Identify outbreaks affecting more than one reporting unit
- Review urgently reportable events to identify whether assistance is needed
- Find opportunities to mentor and coach
- Analyze trends over time to inform regional public health discussions



Use of DRSi Data: Headquarters Level

- Conduct near real-time analysis to assess risk
- Identify events for situational awareness of leadership
- Combine with other data sources to conduct studies that inform service-wide policy and program discussions
- Produce reports that indicate readiness to help target improvements in reporting and surveillance activities



DRSi Data Usage Examples

- Routine Reviews
- Programmatic Reports
- Disease-Specific Analyses



Examples of DRSi Data Usage: Routine Reviews

- MERs submitted in DRSi are immediately visible at regional and service level surveillance hubs.
- These reports are reviewed regularly.
 - All events are reviewed for awareness of what is being reported.
 - Events that may require regional or higher level attention are noted and reported up for situational awareness.



Examples of DRSi Data Usage: Routine Reviews

- (Navy) Twice-weekly reviews sent to BUMED and HQMC summarizing MERs of particular interest or concern at the higher headquarters level.
 - Examples: malaria in deployed units, disease outbreaks, tuberculosis contact investigations



Examples of DRSi Data Usage: Routine Reviews



USAFSAM/PHR AFDRSi Summary 08/06/18 - 08/12/18



Urgent Events

Event	Case Classification	Date of Onset	Reporting Base	Service	MAJCOM	Beneficiary Status	Date 1st Reported	Date Edited	Meets Case Definition
Cholera	Confirmed	08/07/2018	RAMSTEIN AB	Air Force	USAFE	Dependent/Other	08/09/2018	08/09/2018	Y
E. Coli, Shiga Toxin Producing	Suspect	07/17/2018	SHAW AFB	Air Force	ACC	Dependent/Other	08/08/2018	08/09/2018	Y
Pertussis	Probable	08/07/2018	RANDOLPH JBSA	Air Force	AETC	Dependent/Other	08/07/2018	08/08/2018	Y
Spotted Fever Rickettsiosis	Probable	07/25/2018	ANDREWS JBA	Air Force	AFDW	Active Duty	08/06/2018	08/06/2018	Y
Spotted Fever Rickettsiosis	Suspect	07/16/2018	ELLSWORTH AFB	Air Force	AFGSC	Dependent/Other	08/09/2018	08/09/2018	Y
Spotted Fever Rickettsiosis	Suspect	07/17/2018	LITTLE ROCK AFB	Air Force	AMC	Res/Nat Guard	08/10/2018	08/10/2018	Y
Spotted Fever Rickettsiosis	Probable	07/18/2018	TINKER AFB	Air Force	AFMC	Dependent/Other	08/08/2018	08/08/2018	Y

Other Events (Excludes Urgent Events and STIs)

Event	Case Classification	Date of Onset	Reporting Base	Service	MAJCOM	Beneficiary Status	Date 1st Reported	Date Edited	Meets Case Definition
Campylobacteriosis	Probable	07/31/2018	LACKLAND JBSA	Air Force	AETC	Dependent/Other	08/07/2018	08/08/2018	Y
Campylobacteriosis	Probable	04/14/2018	OSAN AB	Air Force	PACAF	Dependent/Other	08/09/2018	08/09/2018	Y
Campylobacteriosis	Probable	08/07/2018	RAMSTEIN AB	Air Force	USAFE	Active Duty	08/09/2018	08/09/2018	Y
Cyclosporiasis	Confirmed	07/24/2018	NELLIS AFB	Marine Corps	ACC	Dependent/Other	08/06/2018	08/06/2018	Y
Heat Illness	Confirmed	07/20/2018	OSAN AB	Air Force	PACAF	Active Duty	08/08/2018	08/08/2018	Y
Hepatitis B	Confirmed	07/03/2018	LOS ANGELES AFB	Navy	AFSPC	Dependent/Other	08/06/2018	08/08/2018	Y
Hepatitis B	Confirmed	07/31/2018	TYNDALL AFB	Air Force	ACC	Dependent/Other	08/10/2018	08/10/2018	Y
Hepatitis C	Suspect	08/01/2018	TYNDALL AFB	Air Force	ACC	Retiree	08/07/2018	08/07/2018	N *



Examples of DRSi Data Usage: Routine Reviews

Comparison of RMEs from Air Force MTFs for Jul 2018

*This table displays the frequencies for each RME for all Suspected, Probable, and Confirmed cases submitted to AFDRSi in Jul 2018 compared to Jul 2017 as well as year-to-date comparisons for the period of 01/01/18–07/31/18 to 01/01/17–07/31/17 for all Air Force MTFs.**

	Jul 2018	Jul 2017	2018 Year to Date	2017 Year to Date
Amebiasis	1	1	1	4
Any other unusual condition not listed	0	0	0	3
Campylobacteriosis	14	13	86	95
Chlamydia	627	564	4119	4118
Coccidioidomycosis	5	0	28	10
Cold Weather Injury	0	0	3	5
Cryptosporidiosis	0	1	28	22
Cyclosporiasis	19	0	28	0
Dengue Virus Infection	2	0	4	0
E. Coli, Shiga Toxin Producing	1	1	13	8
Giardiasis	4	1	18	11
Gonorrhea	73	64	415	424
Haemophilus influenzae, invasive	0	0	2	3
Heat Illness	4	1	13	3
Hepatitis A	0	0	7	2
Hepatitis B	2	2	35	23
Hepatitis C	3	2	17	13
Influenza-Associated Hospitalization	0	0	26	7
Lead Poisoning	2	1	3	6

(Continued)



Examples of DRSi Data Usage: Routine Reviews

Army Public Health Center

Daily Reportable Medical Events Reported in DRSi

Thursday, 9 August 2018

Reporting Location	Case ID	Condition	Visit Date	Svc	FMP	Cat	Age	Sex	Status
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Examples of DRSi Data Usage: Programmatic Reports

- Reports that compile DRSi data in order to answer questions and address issues related to disease surveillance programs:
 - What has been reported in DRSi?
 - How well are MTFs reporting? (metrics)
 - Where can reporting be improved?



Examples of DRSi Data Usage: Programmatic Reports

- (Navy) Quarterly Reporting Metric Report
 - Provides Navy MTFs with their “reporting percentages”
 - Percent of Positive case finding records with an associated MER in DRSi within 30 days (+/-) of the lab result certification date
 - 70% guideline
 - Report sent to NAVMED East/West for situational awareness



**Medical Event Reporting Process Improvement Metric:
Percent Completeness of Reporting in DRSi, Navy MTFs, Jul-Sep 2017**

Parent MTF		Previous Quarters			Current Quarter: Jul-Sep 2017		
		Oct-Dec 2016 % Match	Jan-Mar 2017 % Match	Apr-Jun 2017 % Match	% Match	# Lab Identified Events	# Matching DRSi MERS (w/in 30 days)
Navy Medicine East Current Quarter: 14 Green MTFs 1 Yellow MTF 1 Red MTF	NHC ANNAPOLIS	77.8	94.7	100.0	79.2	24	19
	NH BEAUFORT	63.8	90.0	77.4	84.5	97	82
	NH CAMP LEJEUNE	87.0	75.0	82.1	86.9	298	259
	NHC CHARLESTON	92.0	100.0	87.5	100.0	35	35
	NHC CHERRY POINT	97.6	98.2	98.0	100.0	64	64
	NHC CORPUS CHRISTI	-	100.0	33.3	-	-	-
	NH GUANTANAMO BAY	100.0	100.0	100.0	80.0	5	4
	NH JACKSONVILLE	68.1	87.9	84.9	93.1	188	175
	JAMES A LOVELL FHCC	91.5	84.7	79.8	72.8	232	169
	NH NAPLES	78.6	77.8	83.3	73.3	15	11
	NHC NEW ENGLAND	77.1	76.9	60.0	65.0	40	26
	NHC PATUXENT RIVER	81.3	100.0	65.0	95.0	20	19
	NH PENSACOLA	58.6	87.8	76.3	77.5	138	107
	NMC PORTSMOUTH	87.3	88.2	89.5	88.0	457	402
	NHC QUANTICO	87.2	42.9	59.6	52.3	44	23
NH ROTA	87.5	91.7	100.0	70.8	24	17	
NH SIGONELLA	88.1	95.5	91.3	70.8	65	46	
Navy Medicine West Current Quarter: 9 Green MTFs 0 Yellow MTFs 1 Red MTF	NH BREMERTON	98.6	99.0	98.7	94.4	89	84
	NH CAMP PENDLETON	86.8	83.0	95.8	95.7	234	224
	NH GUAM-AGANA	93.9	96.2	96.4	100.0	40	40
	NHC HAWAII	96.2	100.0	91.9	94.7	57	54
	NH LEMOORE	74.3	81.7	85.1	84.0	25	21
	NH OAK HARBOR	91.3	97.9	100.0	92.9	14	13
	NH OKINAWA	59.8	94.1	77.4	93.1	130	121
	NMC SAN DIEGO	91.0	90.5	93.5	62.6	393	246
	NH TWENTYNINE PALMS	64.8	91.9	11.4	80.2	86	69
NH YOKOSUKA	88.5	95.7	95.0	99.3	135	134	

Green: Percent match ≥ 70%
Yellow: Percent match <70%; at least one clinic/hospital working with NMCPHC/NEPMUS for process improvement
Red: Percent match <70%; opportunity for local process improvement



Examples of DRSi Data Usage: Programmatic Reports

- (Air Force) Quarterly Completeness of Reporting Metric
 - Provides AF MAJCOMs and bases with an indicator of their completeness of reporting to DRSi
 - Percent of positive AFDRSi Case Finding records reported by a given MTF within 30 days of the lab result certification date



- MAJCOM-specific metric for Q2, 2018

		1 Apr 2018 - 30 Jun 2018		
Major Command	Installation	Total Positive Labs	Total Positive Labs reported in AFDRSi	Percent Match
AFGSC	BARKSDALE AFB	21	17	81.0
	DYESS AFB	17	16	94.1
	ELLSWORTH AFB	18	15	83.3
	KIRTLAND AFB	15	14	93.3
	MALMSTROM AFB	16	16	100.0
	MINOT AFB	27	24	88.9
	WHITEMAN AFB	21	21	100.0
	Total	135	123	91.1

The following base(s) did not have any reportable events for the time period: F.E. Warren AFB

- Key Performance Indicator (KPI): Tracks percentages quarterly based on an 80% performance cut point

Legend ¹
≥90.0%
80–89.9%
<80.0%

Completeness of Reportable Medical Event (RME) Reporting Metric	Q1 CY17	Q2 CY17	Q3 CY17	Q4 CY17*	Q1 CY18	Q2 CY18
USAF	89.7%	84.8%	82.7%	84.4%	86.9%	85.1%
Beale AFB	100.0%	100.0%	100.0%	100.0%	100.0%	72.7%
Davis-Monthan AFB	100.0%	90.9%	94.1%	100.0%	92.5%	95.9%
Grand Forks AFB	50.0%	88.9%	25.0%	50.0%	66.7%	50.0%
Holloman AFB	70.6%	100.0%	100.0%	94.7%	97.0%	84.8%
Langley AFB	70.4%	75.5%	85.4%	95.2%	90.4%	80.8%
Moody AFB	85.0%	91.2%	95.0%	89.5%	96.0%	100.0%
Mountain Home AFB	90.9%	43.5%	68.4%	87.5%	80.0%	90.9%
Nellis AFB	92.7%	94.5%	96.5%	62.3%	54.6%	40.2%
Offutt AFB	95.5%	97.5%	86.2%	88.9%	87.5%	93.5%
Seymour Johnson AFB	64.7%	90.0%	100.0%	94.4%	96.3%	93.3%
Shaw AFB	95.0%	80.6%	57.9%	76.9%	92.3%	96.3%
Tyndall AFB	46.7%	83.3%	83.3%	88.0%	82.1%	83.3%
ACC	84.0%	86.9%	88.9%	85.4%	81.5%	77.3%



Examples of DRSi Data Usage: Programmatic Reports

- (Army) Monthly RME Reports
 - Compares event reporting from the current month to the same month in the previous year, as well as year to date in current year compared to previous year
 - Summary of MERs submitted by location and last recorded report from each location



Table 1: Comparison of RMEs from Army Facilities for July 2018 & 2017

This table compares the frequencies for each disease for all probable and confirmed RMEs submitted to the DRSI in July 2018 and July 2017. Year-to-date comparisons are displayed for the period of 1 July 2018 – 31 July 2018 and 2017 for U.S. Army Medical Treatment Facilities.

Condition	Counts*			
	JULY 2018	JULY 2018	2018 YTD	2017 YTD
Amebiasis	0	0	0	4
Arboviral Diseases, Neuro and Non-neuroinvasive	0	0	2	1
Botulism	0	0	0	1
Brucellosis	0	0	2	1
Campylobacteriosis	22	37	154	203
Chikungunya	0	0	1	1
Chlamydia	1267	1255	9459	9254
Cholera O1 or O139	1	0	2	0
Coccidioidomycosis	0	1	0	3
Cold Weather Injuries	0	1	64	39
Cryptosporidiosis	7	3	13	15
Cyclosporiasis	0	1	8	2
Dengue Virus Infection	1	1	1	2
<i>E. coli</i> , Shiga Toxin-Producing	6	6	16	20
Ehrlichiosis/Anaplasmosis	4	1	5	2
Giardiasis	3	4	26	28
Gonorrhea	206	226	1526	1505
<i>Haemophilus influenzae</i>	0	1	7	2
Hantavirus Disease	1	0	1	1
Heat Illness	240	273	660	568
Hepatitis A	2	1	5	2
Hepatitis B	6	7	60	71
Hepatitis C	7	7	51	46
Influenza-Associated Hospitalization	0	1	178	90
Legionellosis	0	0	1	4
Leishmaniasis	0	0	5	3
Leprosy	0	0	0	0

Section IV: Cases Reported in July by Installation

Table 2: Installation Reporting Summary, July 2018*

Installation	Disease (Count)	Last Report Date*
Regional Health Command Atlantic (RHC-A)		
Aberdeen Proving Ground	STI Reports	23 JUL 2018
Carlisle Barracks	STI Reports	31 JUL 2018
Dilorenzo TriCare Health Clinic	STI Reports	5 JUL 2018
Ft Belvoir	<i>E. Coli</i> , Shiga Toxin Producing (3), Ehrlichiosis (3), Heat Illness (1), Lyme Disease (2), Post-Exposure Prophylaxis against Rabies (3), Spotted Fever Rickettsiosis (2), STI Reports	30 JUL 2018
Ft Benning	Heat Illness (76), Post-Exposure Prophylaxis against Rabies (1), STI Reports	31 JUL 2018
Ft Bragg	Campylobacteriosis (4), Heat illness (35), Hepatitis C (3), Leptospirosis (1), Malaria (1), Post-Exposure Prophylaxis against Rabies (12), Salmonellosis (14), Spotted Fever Rickettsiosis (2), STI Reports	27 JUL 2018
Ft Buchanan	STI Reports	24 JUL 2018
Ft Campbell	Ehrlichiosis (1), Hepatitis A (1), Shigellosis (1), STI Reports	30 JUL 2018
Ft Drum	Lyme Disease (1), Malaria (1), STI Reports	31 JUL 2018
Ft Eustis	Salmonellosis (1), STI Reports	30 JUL 2018
Ft Gordon	Campylobacteriosis (2), Salmonellosis (6), STI Reports	26 JUL 2018
Ft Jackson	Heat Illness (7), STI Reports	31 JUL 2018
Ft Knox	Heat Illness (1), STI Reports	30 JUL 2018
Ft Lee	STI Reports	31 JUL 2018
Ft Meade	Post-Exposure Prophylaxis against Rabies (1), STI Reports	31 JUL 2018
Ft Rucker	Heat Illness (2), STI Reports	13 JUL 2018
Ft Stewart	Heat Illness (7), Post-Exposure Prophylaxis against Rabies (2), STI Reports	30 JUL 2018
JB-Myer-Henderson Hall	Lyme disease (1), Salmonellosis (1), STI Reports	31 JUL 2018
Walter Reed NMMC	Campylobacteriosis (3), Lyme Disease (2), STI Reports	30 JUL 2018
West Point	Heat Illness (5), Post-Exposure Prophylaxis against Rabies (1), STI Reports	31 JUL 2018



Examples of DRSi Data Usage: Disease-Specific Analyses

- (Navy) Biennial Malaria and tuberculosis reports
 - Updated every other year (malaria in odd years and TB in even years)
 - Summarizes disease trends since 2005
 - Uses DRSi MERs as well as laboratory data and medical encounter data (ICD-9/10 codes)
- (Navy) Weekly influenza report
 - Produced during the annual flu season, the report summarizes influenza burden in DON beneficiaries
 - Laboratory data, pharmacy data, medical encounters, DRSi MERs



Table 1. Demographics of Navy and Marine Corps Tuberculosis Cases, All Beneficiaries, 2005-2015

	2005	2006	2007	2008	2009	2010	2011	2012	2013	2014	2015
Service											
Marine Corps	3	2	1	1	2	3	3	1	1	3	4
Navy	8	9	9	10	12	8	10	7	7	7	11
Age Group											
<16	0	0	0	0	0	0	2	1	0	0	1
17-26	2	2	2	1	4	1	1	1	2	3	3
27-36	0	4	1	1	1	1	3	2	2	3	2
37-46	0	3	2	1	2	1	0	1	2	0	2
47-56	3	1	1	6	4	3	2	2	1	2	2
56+	6	1	4	2	3	5	5	1	1	2	5
Beneficiary											
Active Duty	1	3	0	4	3	1	1	1	4	0	2
Recruit	1	0	2	0	1	0	2	1	1	4	2
All Others	9	8	8	7	10	10	10	6	3	6	11

Figure 4. Tuberculosis Cases by Year and Service DON Beneficiaries, 2005-2015

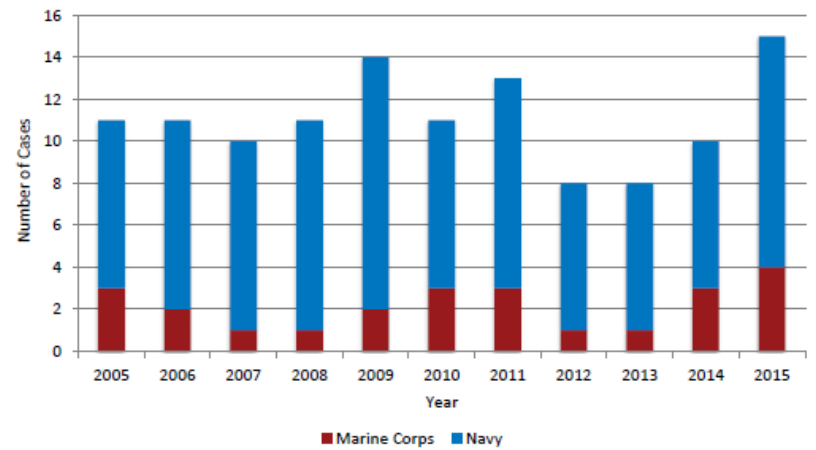
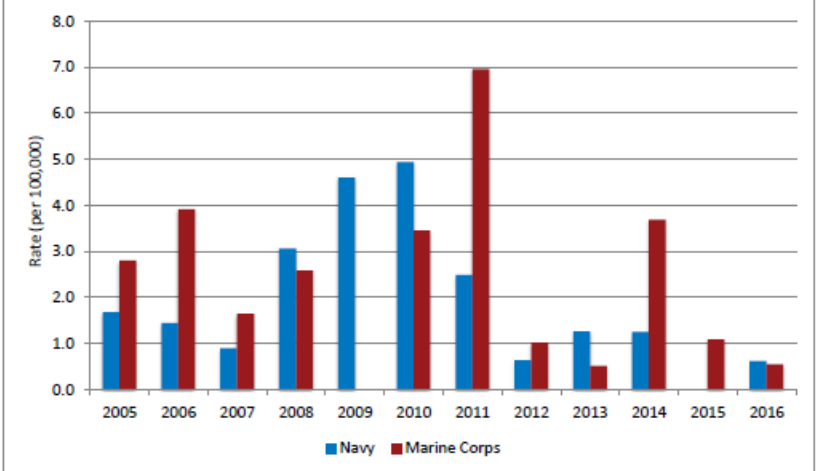


Table 2. Characteristics of Navy and Marine Corps Malaria Cases, 2005-2016

	2005	2006	2007	2008	2009	2010	2011	2012	2013	2014	2015	2016
	N (%)	N (%)	N (%)	N (%)	N (%)	N (%)	N (%)	N (%)	N (%)	N (%)	N (%)	N (%)
Reason for Travel												
Duty	4 (36)	10 (83)	3 (50)	10 (67)	5 (33)	13 (56)	20 (91)	3 (75)	1 (20)	6 (55)	2 (100)	1 (33)
Personal	4 (36)	2 (17)	3 (50)	5 (33)	6 (40)	5 (22)	1 (5)	1 (25)	3 (60)	2 (18)	0 (0)	1 (33)
Unknown	3 (27)	0 (0)	0 (0)	0 (0)	4 (27)	5 (22)	1 (5)	0 (0)	1 (20)	3 (27)	0 (0)	1 (33)
Region of Travel												
Africa	3 (27)	6 (50)	4 (67)	8 (53)	14 (93)	14 (61)	11 (50)	2 (50)	5 (100)	9 (82)	2 (100)	3 (100)
Caribbean	0 (0)	0 (0)	0 (0)	0 (0)	0 (0)	7 (30)	0 (0)	1 (25)	0 (0)	0 (0)	0 (0)	0 (0)
Middle East	4 (36)	4 (33)	1 (17)	5 (33)	0 (0)	1 (4)	10 (45)	1 (25)	0 (0)	0 (0)	0 (0)	0 (0)
Southeast Asia	2 (18)	2 (17)	1 (17)	2 (13)	0 (0)	1 (4)	0 (0)	0 (0)	0 (0)	0 (0)	0 (0)	0 (0)
Unknown	2 (18)	0 (0)	0 (0)	0 (0)	1 (7)	0 (0)	1 (5)	0 (0)	0 (0)	2 (18)	0 (0)	0 (0)
Plasmodium Species *												
<i>P. falciparum</i>	5 (45)	5 (42)	2 (33)	7 (47)	9 (60)	14 (61)	10 (45)	2 (50)	2 (40)	3 (27)	1 (50)	2 (67)
<i>P. ovale</i>	0 (0)	0 (0)	2 (33)	0 (0)	1 (7)	0 (0)	1 (5)	0 (0)	0 (0)	0 (0)	0 (0)	0 (0)
<i>P. vivax</i>	4 (36)	5 (42)	2 (33)	3 (20)	1 (7)	1 (4)	4 (18)	1 (25)	0 (0)	0 (0)	0 (0)	0 (0)
Unspecified	2 (18)	2 (17)	0 (0)	6 (40)	4 (27)	8 (35)	7 (32)	1 (25)	3 (60)	8 (73)	1 (50)	1 (33)

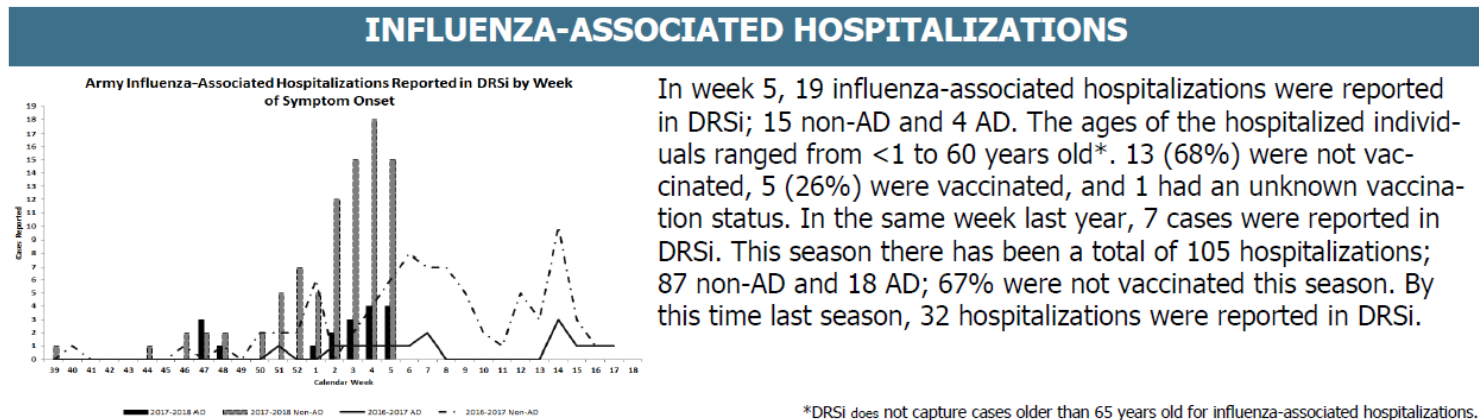
* 1 dual infection of *P. falciparum* and *P. vivax* (2006) was counted once for each species.

Figure 1. Rates of Malaria by Service, Navy and Marine Corps, 2005-2016



Examples of DRSi Data Usage: Disease-Specific Analyses

- (Army) Weekly influenza report
 - Uses DRSi MERs to describe hospitalizations related to influenza
- (Army) Monthly vectorborne disease report
 - Summarizes vector-borne illnesses reported in DRSi



Contact Information

- Army: USAPHC – Disease Epidemiology Program
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