

ANNOUNCEMENTS

- All participants must register for the Monthly Disease Surveillance Trainings in order for us to provide CMEs/CNEs:
 1. Log-on or Request log-on ID/password: <https://tiny.army.mil/r/zB8A/CME>
 2. Register at: <https://tiny.army.mil/r/4TgNE/EpiTechFY17>Communicate with your Service surveillance hub to ensure you get information on future trainings and past recordings.
- Confirm attendance for today's training:
 - Enter your full name/email into chat box or email your Service hub
 - You will receive a confirmation email within the next 48 hours
 - If you do not receive this email, please contact us
- Please put your phones on mute when not speaking





Making the Most of ESSENCE

Presented by: Courtney Rudiger
Disease Surveillance Monthly Training
25 October 2016



NAVY AND MARINE CORPS PUBLIC HEALTH CENTER
PREVENTION AND PROTECTION START HERE

WWW.NMCPHC.MED.NAVY.MIL

Objectives

- Describe ways to optimally configure ESSENCE for routine surveillance
- Describe how to use ESSENCE to understand your population
- Describe how to use ESSENCE to track current public health events



What is ESSENCE?

Electronic Surveillance System for the Early Notification of Community Based Epidemics

- The DoD's syndromic surveillance tool (DoDI 6200.03)
- Web based surveillance system
- Recognition of suspected or confirmed medical events or disease outbreaks



Data in ESSENCE

Data are grouped into multiple modules for querying:

- Syndromes
- D&I (Disease & Injury; formerly DNBI)
- RME (Reportable Medical Events)

ESSENCE Syndrome Categories:

- Botulism-like
- Fever (Unexplained)
- Gastrointestinal
- Hemorrhagic Illness
- Influenza-Like Illness (ILI)
- Influenza Specific
- Localized Cutaneous Lesion
- Neurological
- Rash
- Shock/Coma/Death



OPTIMAL ESSENCE CONFIGURATION



Configuring ESSENCE – how?

- User-defined sites
 - Group MTFs together in ways that are more efficient for the local user's routine surveillance.
- User-defined syndromes
 - Group diagnoses together to query on syndromes relevant to local interest
- Local SOPs could include user-defined sites/syndromes specific to the facility that the local users should create



User-Defined Sites

- A “site” in ESSENCE is a group of MTFs that can be queried.
- System-defined sites include:
 - States
 - Countries (OCONUS)
 - Metropolitan areas
 - Army/Navy/Air Force medical regions



User-Defined Sites - Example

- A large parent MTF creates a site that includes the parent MTF as well as its child clinics.
- A regional public health command creates a site that includes all hospitals and clinics within that region.



User-Defined Sites


Site appears in list of sites to select for queries:

The screenshot displays a software interface for site management. At the top, there is a navigation bar with icons for a map, a hospital, an American flag, a globe, a pulse line, and a world map. Below this is a large map of the United States with state abbreviations (WA, OR, ID, MT, WY, ND, SD, MN, WI, MI, NY, VT, NH, MA, CT, RI, ME, CA, NV, UT, CO, KS, MO, IL, IN, OH, PA, WV, MD, DC, DE, NJ, VA, NC, SC, GA, FL, TX, NM, AZ, AR, OK, MS, AL, TN, KY, WV, VA, NC, SC, GA, FL). A legend indicates that a diamond symbol represents a 'Hospital' and a square symbol represents an 'MTF'. A small globe icon is labeled 'ALL MTFs'. Below the main map are three smaller maps: one for Alaska (AK), one for Hawaii (HI), and a world map with regions labeled 'Latin America', 'Europe', and 'Pacific'. At the bottom, there are two dropdown menus: 'Select System-Defined Site: Select...' and 'Select User-Defined Site: Select...'. The 'Select User-Defined Site' dropdown is open, showing a list of options: 'Select...', 'NEPMU2', 'NEPMU5', 'NEPMU6', 'NEPMU7', and 'Portsmouth'. The 'Portsmouth' option is highlighted in blue. The Windows taskbar is visible at the bottom of the screen.



User-Defined Sites

- Similar to system-defined sites, specific MTF(s) from a user-defined site can be selected from a query.
 - All MTFs will include all MTFs in the selected site for the query.

Current Data Query Selections	
Site	Portsmouth  Site Selection
Data Source	Health Encounters

Next Selections:	
MTF	<div style="border: 1px solid gray; padding: 2px;"><div style="background-color: #e0e0e0; padding: 2px;">All MTFs ▲</div><div style="padding: 2px;">CHESAPEAKE - TRICARE OUTP</div><div style="padding: 2px;">JOINT (AN) EB LITTLE CREEK-F</div><div style="padding: 2px;">NORFOLK - NAS NORFOLK NRM ▼</div></div>
Select Category	<div style="border: 1px solid gray; padding: 2px;">Syndromes ▼</div>
<div style="border: 1px solid gray; padding: 5px 20px;">Submit</div>	



User-Defined Syndromes

- User defined syndromes allows users to make their own syndrome groups in addition to the predefined syndromes.
 - Can use the following to define a syndrome:
 - ICD9-ICD10 diagnosis codes
 - GC3 codes (pharmacy)
 - CPT codes (laboratory and radiology)
 - Chief Complaint sub-syndrome or keywords
- User defined syndromes can be shared among ESSENCE users.




User-Defined Syndromes - examples

- A local MTF creates a syndrome of pneumonia-specific diagnoses to monitor severe respiratory illness during influenza season.
- A local MTF creates a syndrome with a specific diagnosis code to monitor occurrences of that specific condition.



User-Defined Syndrome

User-defined syndromes appear at the bottom of the syndrome list when querying syndromes:

Current Data Query Selections	
Site	Portsmouth  Site Selection
Data Source	Health Encounters
MTF	All MTFs
Category	Syndromes

Next Selections:	
Syndrome	<div style="border: 1px solid gray; padding: 2px;"><div style="border-bottom: 1px solid gray; padding: 2px;">Botulism-like ▾</div><div style="padding: 2px;">Botulism-like</div><div style="padding: 2px;">Fever, Unexplained</div><div style="padding: 2px;">Gastrointestinal</div><div style="padding: 2px;">Hemorrhagic Illness</div><div style="padding: 2px;">ILI</div><div style="padding: 2px;">Influenza Specific</div><div style="padding: 2px;">Localized Cutaneous Lesion</div><div style="padding: 2px;">Neurological</div><div style="padding: 2px;">Rash</div><div style="padding: 2px;">Shock/Coma/Death</div><div style="border: 2px solid red; padding: 2px; background-color: #e0f0ff;">NMCPHC Pneumonia Specific</div></div>
Disposition	<div style="border: 1px solid gray; padding: 2px;"><div style="border-bottom: 1px solid gray; padding: 2px; background-color: #e0f0ff;">All Clinic Types</div><div style="padding: 2px;">ER</div><div style="padding: 2px;">Other</div><div style="padding: 2px;">Primary Care</div></div>
Age Group	
Clinic Type	



User-Defined Sites and Syndromes

- Using these user-defined functions allow for greater versatility for ESSENCE queries.
- Provides the ability to customize both the search area and the illnesses/conditions to those of greatest interest to the user.
- Sharing user-defined syndromes helps customize the use of ESSENCE among users responsible for the same area/region.



UNDERSTANDING YOUR POPULATION



Understanding Your Population

- ESSENCE algorithms use the “expected” number of cases in syndromic groups to identify potential alerts.
- Not all alerts may be a true event.
- Routine ESSENCE use can give the user a baseline.



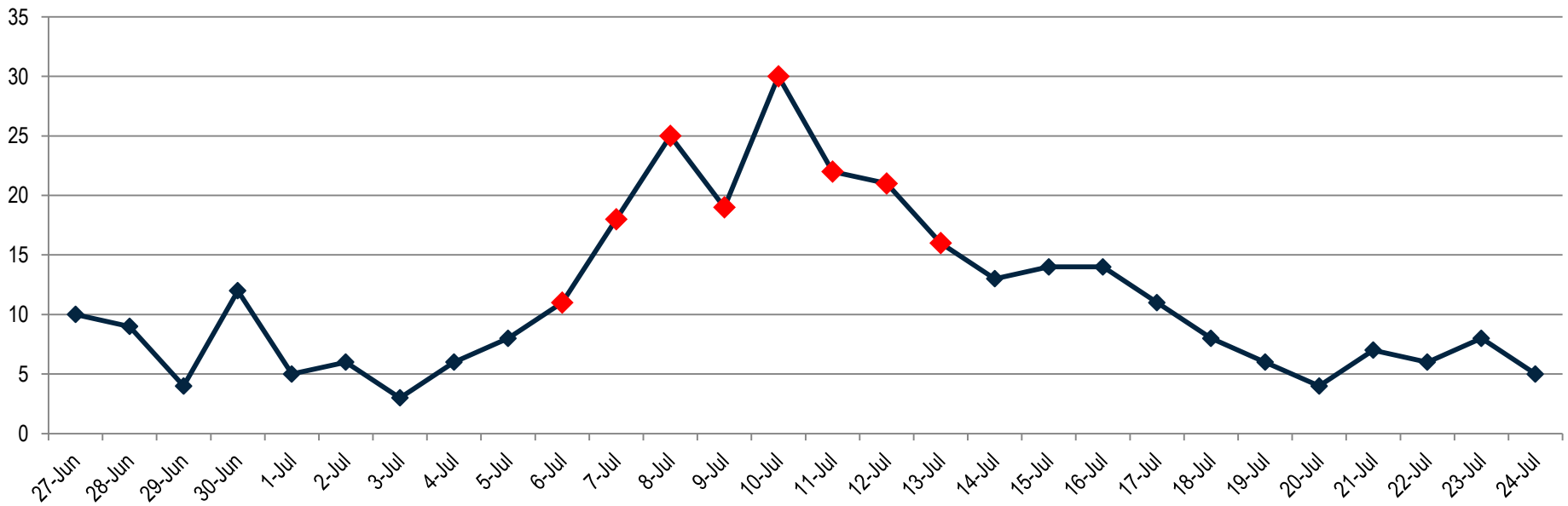
Understanding Your Population

- Important to keep external factors in mind:
 - Training cycles
 - Deployment cycles
 - Other personnel movement



Understanding Your Population – example

- A clinic at a military academy queries ILI encounters and observes a graph similar to the below:
- Are these alerts significant?



Understanding Your Population – example

- Consider external factors:
 - Influx of new students in July
- Could expect higher rates of illness in this time
- Do previous years show similar increases?



TRACKING PUBLIC HEALTH EVENTS IN ESSENCE



Tracking Public Health Events - examples

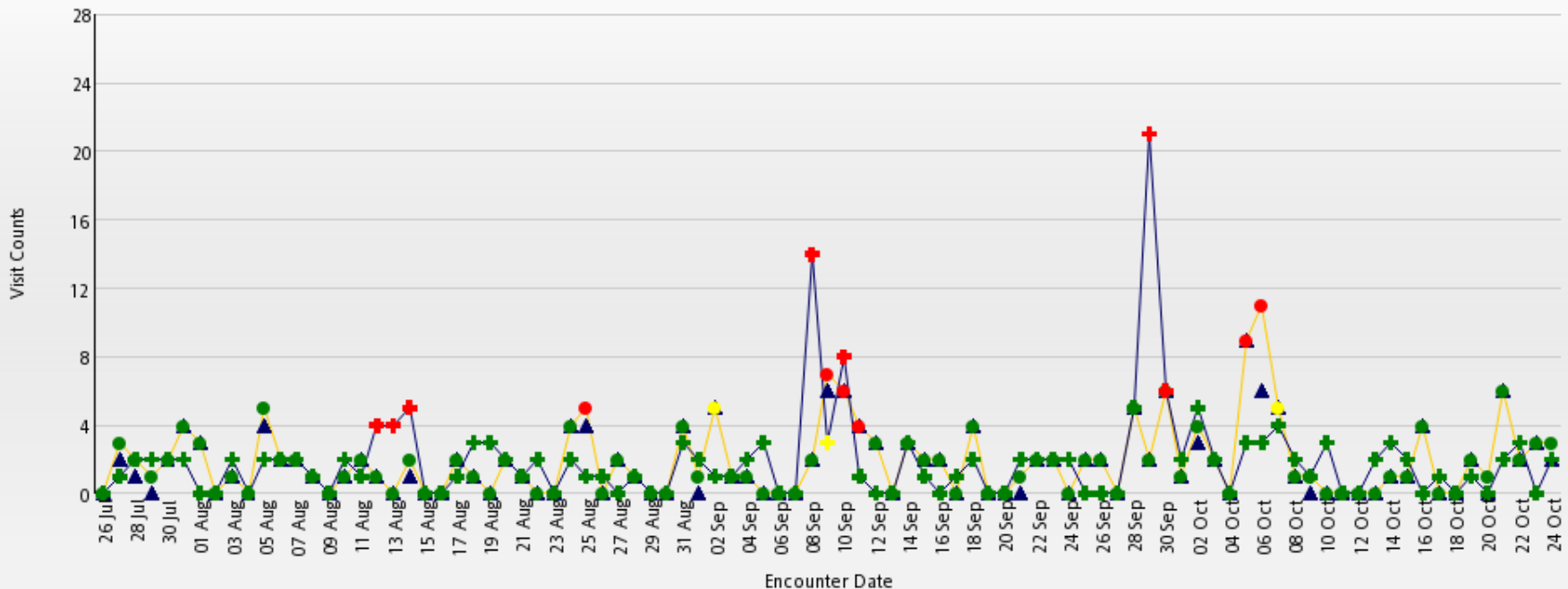
- Providers at a recruit training center are seeing many patients with ILI symptoms and believe that this is “more than normal”.
- There is a heightened alert for a public health event, such as Zika virus, prompting the need for enhanced surveillance.
- A food recall has been announced due to an outbreak of hepatitis A.
- **All of these can be tracked using ESSENCE!**



Tracking Public Health Events

- Providers at a recruit training center are seeing many patients with gastrointestinal symptoms and believe that this is “more than normal”.
- Use ESSENCE to:
 - Query gastrointestinal encounters:

From 26/Jul/2015 to 24/Oct/2015



Tracking Public Health Events

- There is a heightened alert for a public health event, such as Zika virus, prompting the need for enhanced surveillance.
- Use ESSENCE to:
 - Create a user-defined syndrome specific for Zika virus.
 - Symptoms and/or disease-specific codes
 - Add monitoring of this syndrome to routine ESSENCE surveillance processes.

Add / Edit User-Defined Syndromes

Syndrome Name :

Description :

Chief Complaint Keyword :


(maximum 1500 characters)

Add :

Filter

Type: Code: Description:

Item Page : 1

	Code	Code Type
	A92.8	ICD10



Tracking Public Health Events

- A food recall has been announced due to an outbreak of hepatitis A.
- Use ESSENCE to:
 - Identify cases of hepatitis A in the reportable events module.
 - Supplement existing case finding efforts.

<u>Encounter/Order Date</u>	<u>Disp</u>	<u>PIN</u>	<u>Age</u>	<u>ICD</u>	<u>ICD Description/Test Name</u>	<u>Category</u>
02/Aug/2016	OUT:Release No Limit		19	B15.9	Hepatitis A without hepatic coma	Hepatitis A
10/Aug/2016	IN:Continue Hosp		32	B15.9	Hepatitis A without hepatic coma	Hepatitis A
10/Aug/2016	IN:Continue Hosp		32	B15.9	Hepatitis A without hepatic coma	Hepatitis A



More ESSENCE Help and Information

- NMCPHC web site: <http://www.med.navy.mil/sites/nmcphc/program-and-policy-support/essence/Pages/default.aspx>
 - ESSENCE Registration Guide
 - Creating a Pneumonia User-Defined Syndrome
- ESSENCE training modules on Joint Knowledge Online (JKO): <http://jko.jten.mil/>



Contact Information

- **Army: USAPHC – Disease Epidemiology Program**
Aberdeen Proving Ground – MD
Comm: (410) 436-7605 DSN: 584-7605
usaphc.disease.epidemiology@us.army.mil
- **Air Force: Contact your MAJCOM PH or USAFSAM/PHR**
USAFSAM / PHR / Epidemiology Consult Service
Wright-Patterson AFB, Ohio
Comm: (937) 938-3207 DSN: 798-3207
USAFSAMESSENCE@us.af.mil



Contact Information

- **Navy: NMCPHC Preventive Medicine Programs and Policy Support Department**
 - COMM: (757) 953-0700; DSN: (312) 377-0700
 - Email: usn.hampton-roads.navmcpublthcenpors.list.nmcphc-threatassess@mail.mil
- **Navy Environmental and Preventive Medicine Units (NEPMU)**
 - NEPMU2
 - COMM: (757) 953-6600; DSN: (312) 377-6600
 - Email: usn.hampton-roads.navhospporsva.list.nepmu2norfolk-threatassess@mail.mil
 - NEPMU5
 - COMM: (619) 556-7070; DSN (312) 526-7070
 - Email: usn.san-diego.navenpvntmedufive.list.nepmu5-health-surveillance@mail.mil
 - NEPMU6
 - COMM: (808) 471-0237; DSN: (315) 471-0237
 - Email: usn.jbphh.navenpvntmedusixhi.list.nepmu6@mail.mil
 - NEPMU7
 - COMM (international): 011-34-956-82-2230 (local: 727-2230); DSN: 94-314-727-2230
 - Email: NEPMU7@eu.navy.mil



Questions?

