



**June 3, 2016**

**Public Health Preparedness and Situational Awareness Report: #2016:21  
Reporting for the week ending 5/28/16 (MMWR Week #21)**

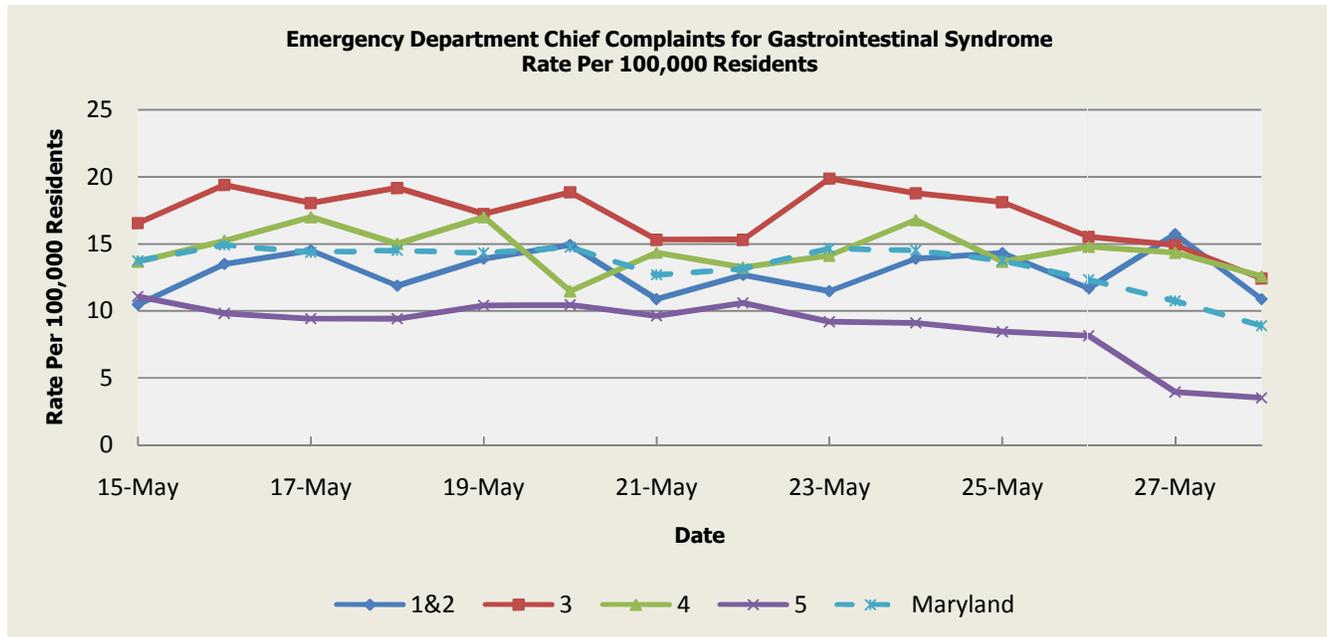
**CURRENT HOMELAND SECURITY THREAT LEVELS**

**National: No Active Alerts**  
**Maryland: Level Four (MEMA status)**

**SYNDROMIC SURVEILLANCE REPORTS**

**ESSENCE (Electronic Surveillance System for the Early Notification of Community-based Epidemics):**

Graphical representation is provided for all syndromes (excluding the "Other" category; see Appendix 1) by Health and Medical Regions (See Appendix 2). Emergency department chief complaint data is presented as rates per 100,000 residents using data from the 2010 census.

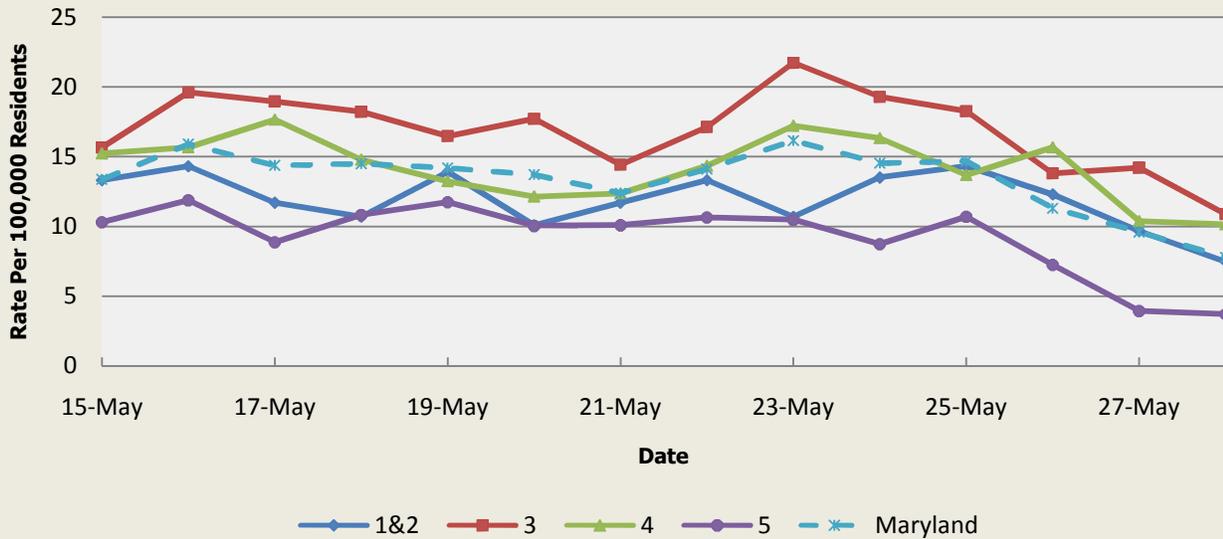


There were two (2) foodborne outbreaks reported this week: 1 outbreak of gastroenteritis/foodborne associated with a Country Club (Regions 1&2); 1 outbreak of gastroenteritis/foodborne associated with a Workplace (Region 5).

Gastrointestinal Syndrome Baseline Data January 1, 2010 - Present					
Health Region	1&2	3	4	5	Maryland
Mean Rate*	12.94	14.88	15.42	10.31	13.01
Median Rate*	12.70	14.47	14.80	10.17	12.75

\* Per 100,000 Residents

**Emergency Department Chief Complaints for Respiratory Syndrome  
Rate Per 100,000 Residents**

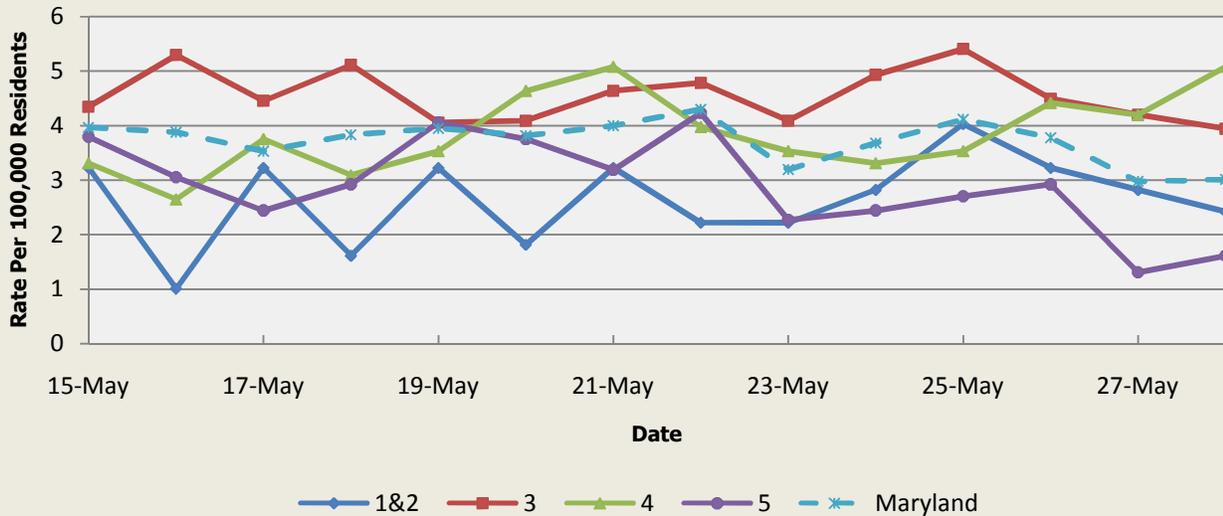


There were no respiratory illness outbreaks reported this week.

Respiratory Syndrome Baseline Data January 1, 2010 - Present					
Health Region	1&2	3	4	5	Maryland
Mean Rate*	11.99	14.12	14.04	9.94	12.34
Median Rate*	11.70	13.37	13.69	9.52	11.79

\* Per 100,000 Residents

**Emergency Department Chief Complaints for Fever Syndrome  
Rate Per 100,000 Residents**

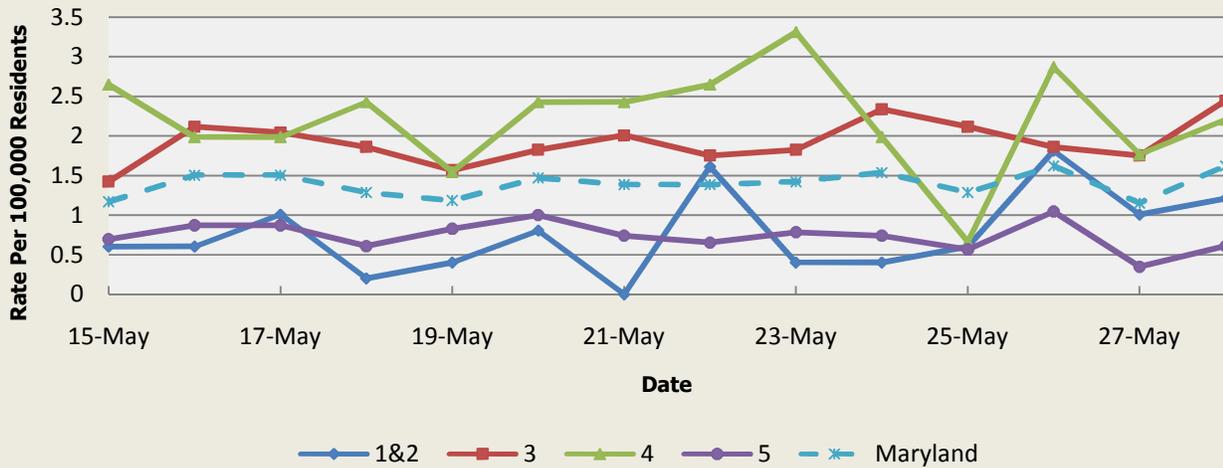


There were no fever outbreaks reported this week.

Fever Syndrome Baseline Data January 1, 2010 - Present					
Health Region	1&2	3	4	5	Maryland
Mean Rate*	3.07	3.80	3.93	3.09	3.48
Median Rate*	3.02	3.62	3.75	2.97	3.35

Per 100,000 Residents

**Emergency Department Chief Complaints for Localized Lesion Syndrome  
Rate Per 100,000 Residents**

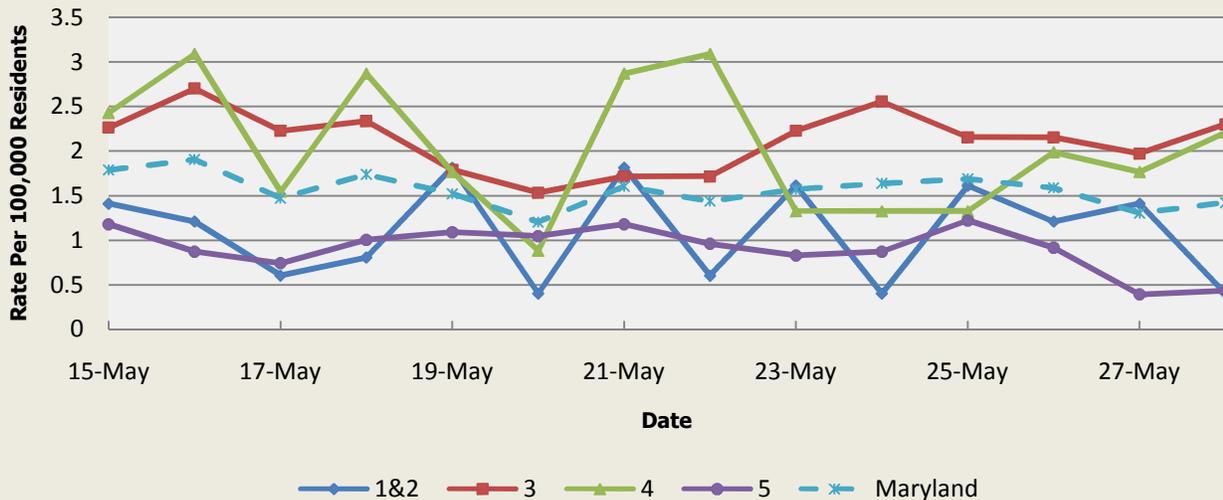


There were no localized lesion outbreaks reported this week.

Localized Lesion Syndrome Baseline Data January 1, 2010 - Present					
Health Region	1&2	3	4	5	Maryland
Mean Rate*	1.07	1.91	2.03	0.98	1.49
Median Rate*	1.01	1.86	1.99	0.92	1.44

\* Per 100,000 Residents

**Emergency Department Chief Complaints for Rash Syndrome  
Rate Per 100,000 Residents**

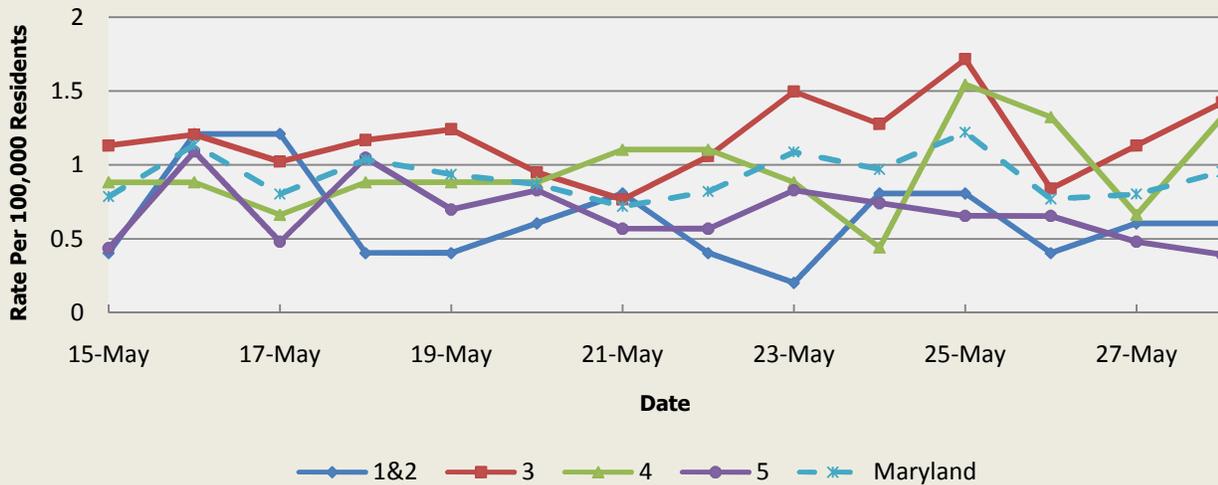


There were three (3) rash illness outbreaks reported this week: 3 outbreaks of Hand, Foot and Mouth Disease associated with Daycare Centers (Regions 3, 4 and 5).

Rash Syndrome Baseline Data January 1, 2010 - Present					
Health Region	1&2	3	4	5	Maryland
Mean Rate*	1.30	1.75	1.75	1.04	1.44
Median Rate*	1.21	1.68	1.77	1.00	1.39

\* Per 100,000 Residents

**Emergency Department Chief Complaints for Neurological Syndrome  
Rate Per 100,000 Residents**

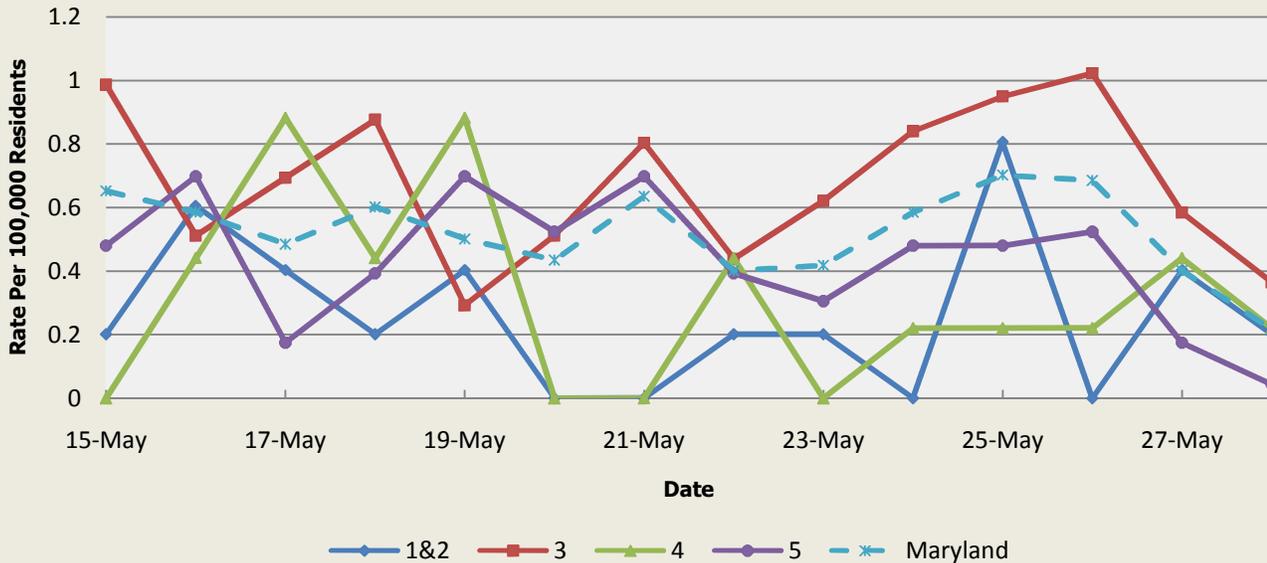


There were no neurological syndrome outbreaks reported this week.

Neurological Syndrome Baseline Data January 1, 2010 - Present					
Health Region	1&2	3	4	5	Maryland
Mean Rate*	0.63	0.73	0.65	0.48	0.62
Median Rate*	0.60	0.66	0.66	0.44	0.57

\* Per 100,000 Residents

**Emergency Department Chief Complaints for Severe Illness or Death Syndrome  
Rate Per 100,000 Residents**



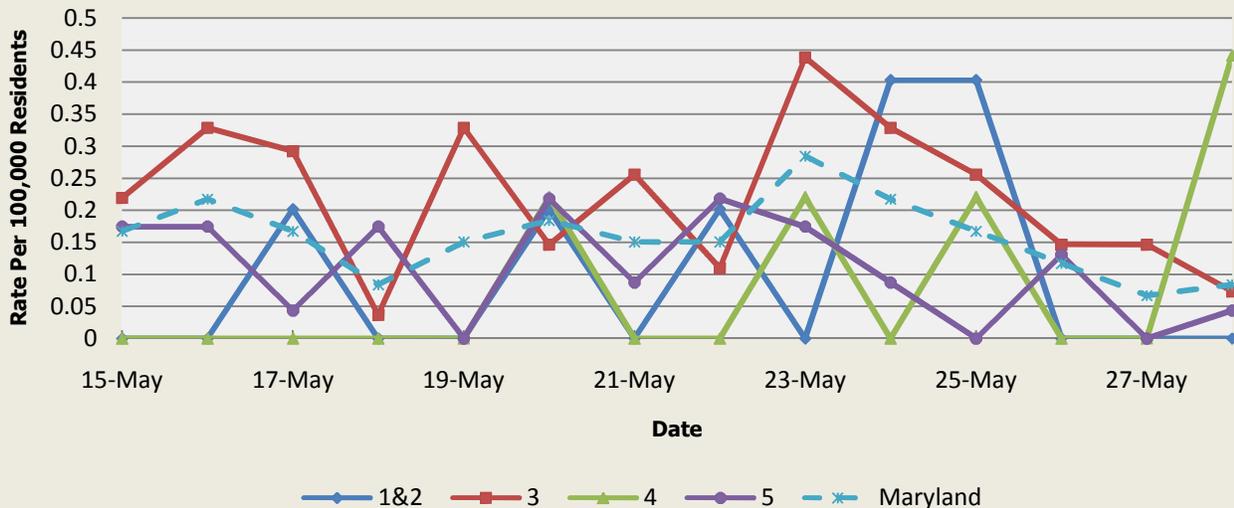
There were no severe illness or death outbreaks reported this week.

Severe Illness or Death Syndrome Baseline Data January 1, 2010 - Present					
Health Region	1&2	3	4	5	Maryland
Mean Rate*	0.70	0.95	0.84	0.44	0.73
Median Rate*	0.60	0.91	0.88	0.44	0.72

\* Per 100,000 Residents

## SYNDROMES RELATED TO CATEGORY A AGENTS

**Emergency Department Chief Complaints for Botulism-like Syndrome  
Rate Per 100,000 Residents**

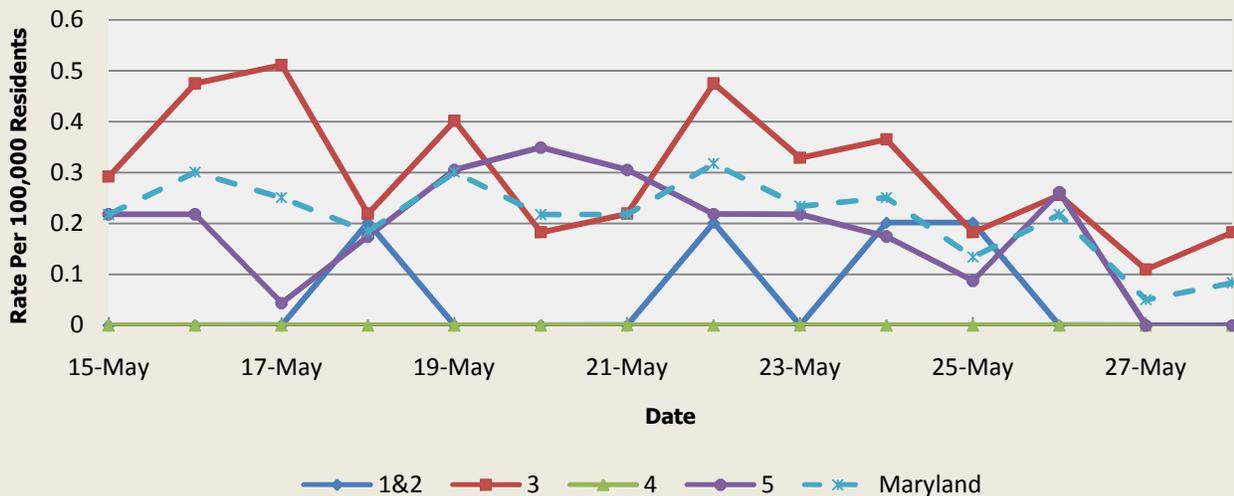


There was an appreciable increase above baseline in the rate of ED visits for Botulism-like Syndrome on 5/15 (Regions 3,5), 5/16 (Regions 3,5), 5/17 (Regions 1&2,3), 5/18 (Region 5), 5/19 (Region 3), 5/20 (Regions 1&2,4,5), 5/21 (Region 3), 5/22 (Regions 1&2,5), 5/23 (Regions 3,4,5), 5/24 (Regions 1&2,3), 5/25 (Regions 1&2,3,4), 5/26 (Region 5) and 5/28 (Region 4). These increases are not known to be associated with any outbreaks.

Botulism-like Syndrome Baseline Data January 1, 2010 - Present					
Health Region	1&2	3	4	5	Maryland
Mean Rate*	0.06	0.08	0.04	0.05	0.06
Median Rate*	0.00	0.04	0.00	0.04	0.05

\* Per 100,000 Residents

**Emergency Department Chief Complaints for Hemorrhagic Illness Syndrome  
Rate Per 100,000 Residents**

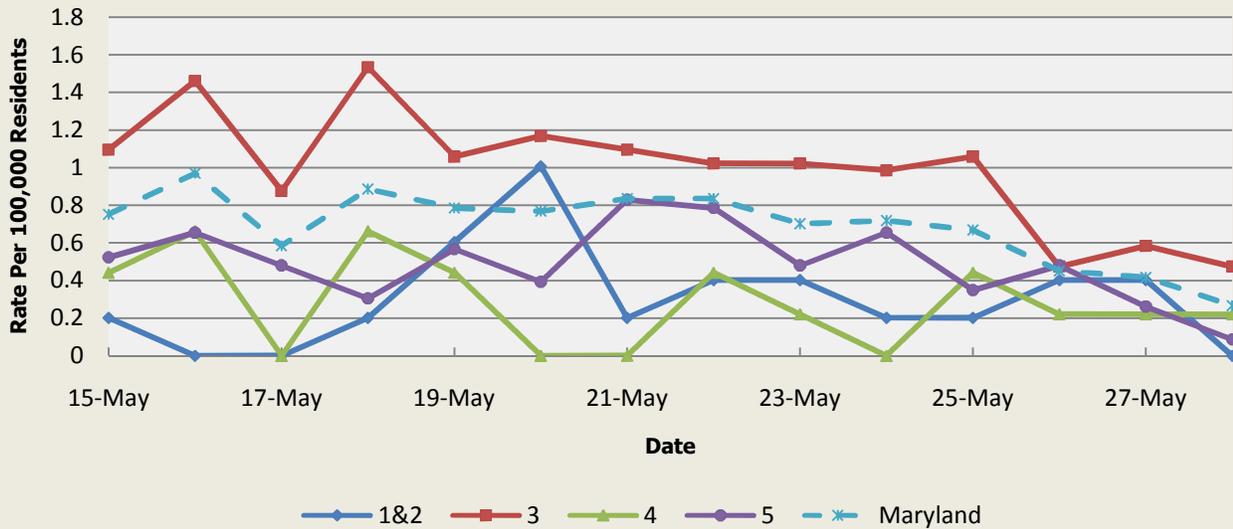


There was an appreciable increase above baseline in the rate of ED visits for Hemorrhagic Illness Syndrome on 5/15 (Regions 3,5), 5/16 (Regions 3,5), 5/17 (Region 3), 5/18 (Regions 1&2,3,5), 5/19 (Regions 3,5), 5/20 (Region 5), 5/21 (Regions 3,5), 5/22 (Regions 1&2,3,5), 5/23 (Regions 3,5), 5/24 (Regions 1&2,3,5), 5/25 (Regions 1&2), and 5/26 (Regions 3,5). These increases are not known to be associated with any outbreaks.

Hemorrhagic Illness Syndrome Baseline Data January 1, 2010 - Present					
Health Region	1&2	3	4	5	Maryland
Mean Rate*	0.03	0.10	0.03	0.07	0.08
Median Rate*	0.00	0.04	0.00	0.04	0.03

\* Per 100,000 Residents

**Emergency Department Chief Complaints for Lymphadenitis Syndrome  
Rate Per 100,000 Residents**



There was an appreciable increase above baseline in the rate of ED visits for Lymphadenitis Syndrome on 5/15 (Region 3), 5/16 (Regions 3,5), 5/18 (Region 3), 5/19 (Region 3), 5/20 (Region 3), 5/21 (Regions 3,5), 5/22 (Regions 3,5), 5/23 (Region 3), 5/24 (Regions 3,5), and 5/25 (Region 3). These increases are not known to be associated with any outbreaks.

Lymphadenitis Syndrome Baseline Data January 1, 2010 - Present					
Health Region	1&2	3	4	5	Maryland
Mean Rate*	0.31	0.47	0.34	0.29	0.38
Median Rate*	0.20	0.37	0.22	0.26	0.32

\* Per 100,000 Residents

**MARYLAND REPORTABLE DISEASE SURVEILLANCE**

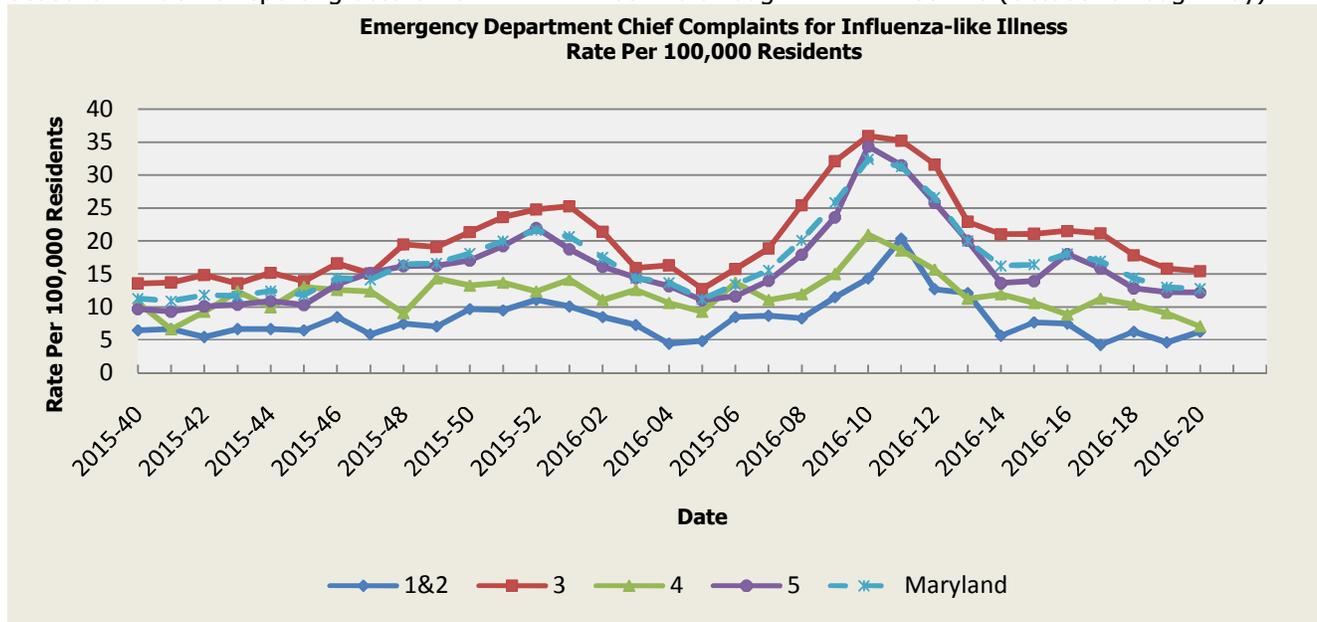
Condition	Counts of Reported Cases‡					
	April			Cumulative (Year to Date)**		
	2016	Mean*	Median*	2016	Mean*	Median*
<b>Vaccine-Preventable Diseases</b>						
Aseptic meningitis	18	28.8	26	118	142	134
Meningococcal disease	0	0.4	0	2	4.2	4
Measles	0	0	0	2	2	0
Mumps	3	2.8	2	7	28.6	6
Rubella	0	0.4	0	1	1.2	1
Pertussis	8	19.4	22	70	101.6	107
<b>Foodborne Diseases</b>						
Salmonellosis	29	69.8	74	185	260.2	261
Shigellosis	2	14	10	39	71	77
Campylobacteriosis	22	56.8	50	215	215.6	212
Shiga toxin-producing Escherichia coli (STEC)	5	12.2	9	43	40.2	34
Listeriosis	0	1.2	2	3	3.8	4
<b>Arboviral Diseases</b>						
West Nile Fever	0	0	0	0	0	0
Lyme Disease	74	124	125	304	367	363
<b>Emerging Infectious Diseases</b>						
Chikungunya	1	1.2	0	3	3.8	0
Dengue Fever	0	1.4	1	12	5.2	5
Zika Virus***	4	0	0	21	0.2	0
<b>Other</b>						
Legionellosis	10	13	11	40	41.8	42

‡ Counts are subject to change \*Timeframe of 2011-2015 \*\*Includes January through current month

\*\*\*As of June 1, 2016, the total Maryland Confirmed Zika Virus Infections is 19.

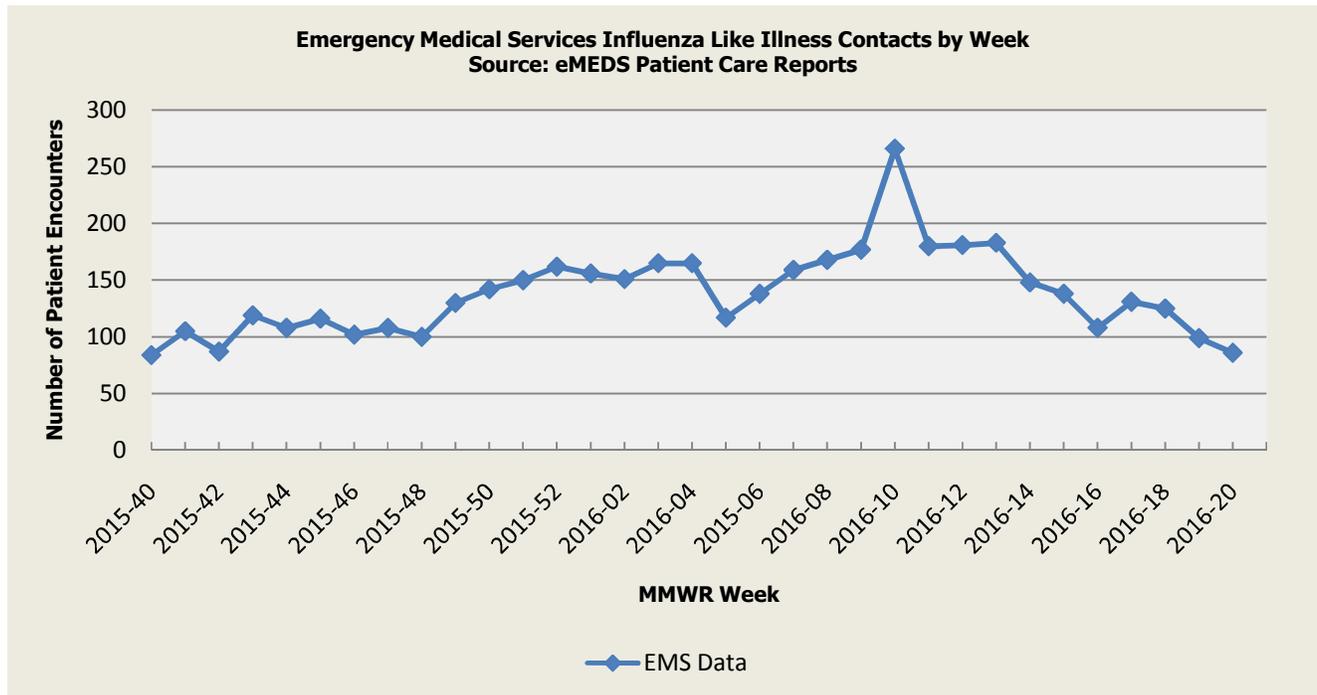
**SYNDROMIC INFLUENZA SURVEILLANCE**

Seasonal Influenza reporting occurs from MMWR Week 40 through MMWR Week 20 (October through May).



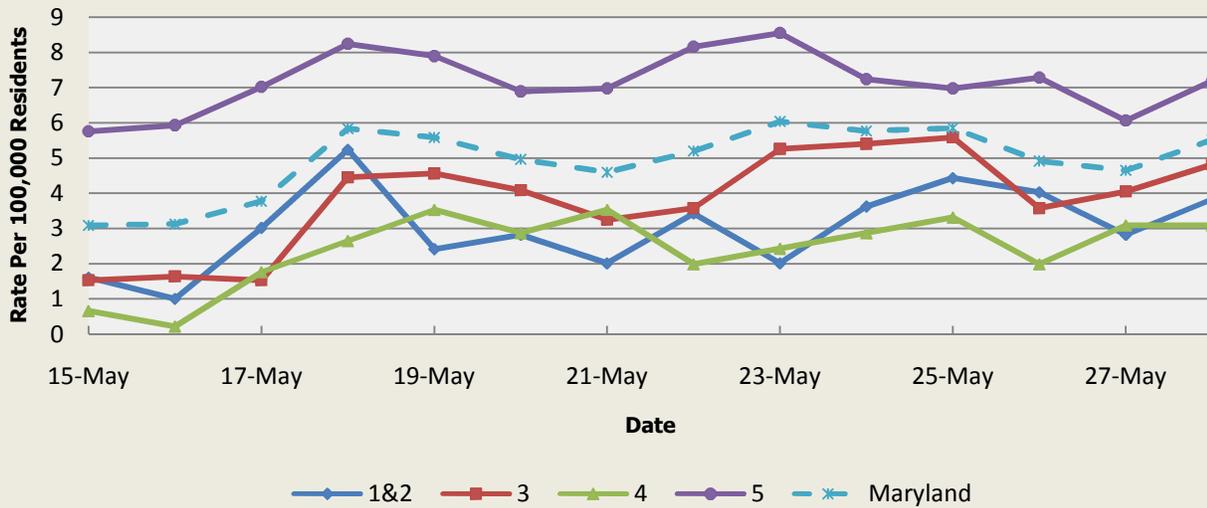
Influenza-like Illness Baseline Data Week 1 2010 - Present					
Health Region	1&2	3	4	5	Maryland
Mean Rate*	9.26	11.58	10.78	10.43	10.88
Median Rate*	7.66	8.99	9.05	8.03	8.72

\* Per 100,000 Residents



**Disclaimer on eMEDS flu related data:** This data is based on EMS Pre-hospital care reports where the EMS provider has selected "flu like illness" as a primary or secondary impression of a patient's illness. This impression is solely based on the signs and symptoms seen by the provider, not on any diagnostic tests. Since these numbers do not include all primary or secondary impressions that may be seen with influenza the actual numbers may be low. This data is reported for trending purposes only.

**Over-the-Counter Medication Sales Related to Influenza  
Rate Per 100,000 Residents**

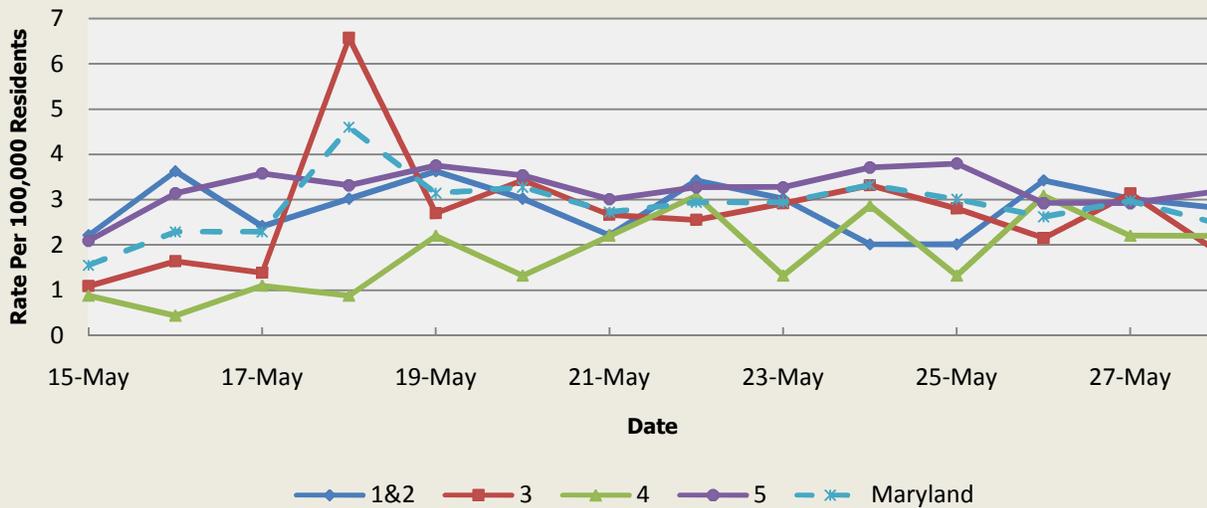


There was not an appreciable increase above baseline in the rate of OTC medication sales this week.

	<b>OTC Sales Baseline Data January 1, 2010 - Present</b>				
Health Region	1&2	3	4	5	Maryland
Mean Rate*	3.86	6.41	1.86	13.92	8.73
Median Rate*	3.02	5.30	1.55	11.35	7.13

\* Per 100,000 Residents

**Over-the-Counter Thermometer Sales  
Rate Per 100,000 Residents**



There was not an appreciable increase above baseline in the rate of OTC thermometer sales this week.

	<b>Thermometer Sales Baseline Data January 1, 2010 - Present</b>				
Health Region	1&2	3	4	5	Maryland
Mean Rate*	4.12	4.71	1.61	7.30	5.42
Median Rate*	3.63	4.35	1.55	6.68	4.97

\* Per 100,000 Residents

## **PANDEMIC INFLUENZA UPDATE / AVIAN INFLUENZA-RELATED REPORTS**

**WHO update:** The current WHO phase of pandemic alert for avian influenza is ALERT. Currently, the avian influenza H5N1 virus continues to circulate in poultry in some countries, especially in Asia and northeast Africa. This virus continues to cause sporadic human infections with some instances of limited human-to-human transmission among very close contacts. There has been no sustained human-to-human or community-level transmission identified thus far.

Influenza A (H7N9) is one of a subgroup of influenza viruses that normally circulate among birds. Until recently, this virus had not been seen in people. However, human infections have now been detected. As yet, there is limited information about the scope of the disease the virus causes and about the source of exposure. The disease is of concern because most patients have been severely ill. There is no indication thus far that it can be transmitted between people, but both animal-to-human and human-to-human routes of transmission are being actively investigated.

**Alert phase:** This is the phase when influenza caused by a new subtype has been identified in humans. Increased vigilance and careful risk assessment, at local, national and global levels, are characteristic of this phase. If the risk assessments indicate that the new virus is not developing into a pandemic strain, a de-escalation of activities towards those in the interpandemic phase may occur. As of May 9, 2016, the WHO-confirmed global total (2003-2016) of human cases of H5N1 avian influenza virus infection stands at 850, of which 449 have been fatal. Thus, the case fatality rate for human H5N1 is approximately 53%.

### **Avian Influenza in Humans:**

**H7N9 (CHINA):** 29 May 2016, A new human case of the H7N9 avian flu strain has been reported in south China's Guangdong Province, the provincial health and family planning commission said [on Thu 26 May 2016]. The 63 year old male patient in Meizhou City is the 12th H7N9 case reported in Guangdong this year [2016]. 4 out of the 12 infected patients died, the commission said. Read More: <http://www.promedmail.org/post/4250949>

*There were no reports of human cases of avian influenza in the United States at the time that this report was compiled.*

### **Avian Influenza in Poultry:**

**H5N1 (EGYPT):** 28 May 2016, Between 9 and 16 May 2016, 10 highly pathogenic avian influenza [HPAI] H5N1 outbreaks were observed in 6 Egyptian governorates, with 2 outbreaks each in Fayoum, Menia, Qena, and Assiut, and a single outbreak each in Beni Suef and Gharbia. All were reported within 48 hours and laboratory confirmed within 24 hours through reverse transcriptase-polymerase chain reaction [RT-PCR]. Read More: <http://www.promedmail.org/post/4250950>

**H7N7 (ITALY):** 26 May 2016, Another outbreak of H7N7 highly pathogenic avian flu has been found in Italy. The outbreak occurred in the same region, Emilia-Romagna, as an outbreak reported earlier this month. The farm was within the protection zone set up after the earlier outbreak. Read More: <http://www.promedmail.org/post/4247616>

## **NATIONAL DISEASE REPORTS**

**ANTIBIOTIC RESISTANCE, E. COLI, COLISTIN, MCR-1 (USA):** 28 May 2016, Bacteria carrying the very worrisome MCR-1 resistance gene -- which makes the last-line antibiotic colistin useless against them -- have been found in human and animal samples for the 1st time in the United States, according to a report today [26 May 2016] in Antimicrobial Agents and Chemotherapy [1] and a statement by federal health officials. Today's findings involve a 49 year old woman whose urine contained *Escherichia coli* harboring the MCR-1

gene and an *E. coli* isolate from a pig intestine that also contained the colistin-resistance gene. Read More: <http://www.promedmail.org/post/4251552>

**E. COLI (CALIFORNIA):** 01 Jun 2016, Two young children including a 2-year-old Fairfax (CA) [in Marin County, north of San Francisco - Mod.LL] resident, have been diagnosed with a toxin-producing form of *E. coli*, and Marin public health officials are investigating the possibility that the source of the bacteria was a creek that runs through Peri Park in downtown Fairfax. A 3rd child, a 3-year-old San Anselmo resident, has also displayed symptoms consistent with a diagnosis of *E. coli*, but tests results are still pending. The 2nd confirmed *E. coli* case is a 3-year-old resident of Truckee. All 3 children played in Peri Park's Fairfax Creek not long before becoming ill. Read More: <http://www.promedmail.org/post/4258822>

**E. COLI (USA):** 02 Jun 2016, CDC is collaborating with public health and regulatory officials in multiple states and the U.S. Food and Drug Administration (FDA) to investigate a multistate outbreak of Shiga toxin-producing [also called enterohemorrhagic] *Escherichia coli* O121 (EHEC O121) infections. A total of 38 people infected with the outbreak strain of EHEC O121 have been reported from 20 states. Read More: <http://www.promedmail.org/post/4261085>

### **INTERNATIONAL DISEASE REPORTS**

**ANTHRAX (BANGLADESH):** 27 May 2016, In a follow-up to the ongoing reports on the anthrax outbreak in Sirajganj District [Rajshahi Division] in Bangladesh, local media report that the total human cases reported has topped 100 in the past month, calling it the "highest ever anthrax infection across the country". The district has now seen 106 cases as more than a dozen additional were reported from Shazadpur and Kamarkhand upazilas (counties). Read More: <http://www.promedmail.org/post/4250810>

**Q FEVER (NETHERLANDS):** 31 May 2016, The official death toll of people affected by Q-Fever since the outbreak in 2007 now stands at 74, an increase of 26 since the number was last updated, NU.nl reports. The reason for the increase in deaths can be attributed to patients still carrying the live bacteria after the 2007 outbreak. The disease has symptoms of fever, headache, muscle aches and a decreased heart rate, among other things. Read More: <http://www.promedmail.org/post/4256718>

### **OTHER RESOURCES AND ARTICLES OF INTEREST**

More information concerning Public Health and Emergency Preparedness can be found at the Office of Preparedness and Response website: <http://preparedness.dhmm.maryland.gov/> or follow us on Facebook at [www.facebook.com/MarylandOPR](http://www.facebook.com/MarylandOPR).

More data and information on influenza can be found on the DHMH website: <http://phpa.dhmm.maryland.gov/influenza/fluwatch/Pages/Home.aspx>

Please participate in the Maryland Resident Influenza Tracking System (MRITS): <http://flusurvey.dhmm.maryland.gov>

\*\*\*\*\*  
**NOTE:** This weekly review is a compilation of data from various surveillance systems, interpreted with a focus on a potential BT event. It is not meant to be inclusive of all epidemiology data available, nor is it meant to imply that every activity reported is a definitive BT event. International reports of outbreaks due to organisms on the CDC Critical Biological Agent list will also be reported. While not "secure", please handle this information in a professional manner. Please feel free to distribute within your organization, as you feel appropriate, to other professional staff involved in emergency preparedness and infection control.

For questions about the content of this review or if you have received this and do not wish to receive these weekly notices, please e-mail us. If you have information that is pertinent to this notification process, please send it to us to be included in the routine report.

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## Appendix 1: ESSENCE Syndrome Definitions and Associated Category A Conditions

Syndrome	ESSENCE Definition	Category A Conditions
Botulism-like	(Botulism or (DifficultyFocusing and DifficultySpeaking) or (DifficultySpeaking and DifficultySwallowing) or (DifficultySwallowing and DifficultyFocusing) or DoubleVision or FacialParalysis or GuillainBarre or Ptosis) and not GeneralExclusions	Botulism
Fever	(Chills or (FeverPlus and (Drowsiness or Seizure)) or FeverOnly or SepsisGroup or ViralSyndrome) and not GeneralExclusions	N/A
Gastrointestinal	(AbdominalCramps or AbdominalPainGroup or Diarrhea or FoodPoisoning or Gastroenteritis or GIBleeding or Peritonitis or Vomiting) and not (GeneralExclusions or Gynecological or Obstetric or Reproductive or UrinaryTract)	Anthrax (gastrointestinal)
Hemorrhagic Illness	(FeverOrChills and (AcuteBloodAbnormalitiesGroup or BleedingFromMouth or BleedingGums or GIBleeding or Hematemesis or Hemoptysis or Nosebleed or Petechiae or Purpura)) and not GeneralExclusions	Viral Hemorrhagic Fever
Localized Lesion	(Boils or Bump or Carbuncle or DepressedUlcer or Eschar or Furuncle or InsectBite or SkinAbscess or (SkinSores and not AllOverBody) or SkinUlcer or SpiderBite) and not (GeneralExclusions or Decubitus or Diabetes or StasisUlcer)	Anthrax (cutaneous) Tularemia
Lymphadenitis	(BloodPoisoning or Bubo or CatScratchDisease or SwollenGlands) and not GeneralExclusions	Plague (bubonic)
Neurological	(([Age<75] and AlteredMentalStatus) or (FeverPlus and (Confusion or Drowsiness or Petechiae or StiffNeck)) or Delirium or Encephalitis or Meningitis or UnconsciousGroup) and not GeneralExclusions	N/A
Rash	(ChickenPox or Measles or RashGeneral or Roseola or (Rubella and not Pregnancy) or Shingles or (SkinSores and AllOverBody) or Smallpox) and not GeneralExclusions	Smallpox
Respiratory	(Anthrax or Bronchitis or (ChestPain and [Age<50]) or Cough or Croup or DifficultyBreathing or Hemothorax or Hypoxia or Influenza or Legionnaires or LowerRespiratoryInfection or Pleurisy or Pneumonia or RespiratoryDistress or RespiratoryFailure or RespiratorySyncytialVirus or RibPain or ShortnessOfBreath or Wheezing) and not (GeneralExclusions or Cardiac or (ChestPain and Musculoskeletal) or Hyperventilation or Pneumothorax)	Anthrax (inhalational) Tularemia Plague (pneumonic)
Severe Illness or Death	CardiacArrest or CodeGroup or DeathGroup or (Hypotension and FeverPlus) or RespiratoryArrest or SepsisGroup or Shock	N/A

## Appendix 2: Maryland Health and Medical Region Definitions

Health and Medical Region	Counties Reporting to ESSENCE
Regions 1 & 2	Allegany County Frederick County Garrett County Washington County
Region 3	Anne Arundel County Baltimore City Baltimore County Carroll County Harford County Howard County
Region 4	Caroline County Cecil County Dorchester County Kent County Queen Anne's County Somerset County Talbot County Wicomico County Worcester County
Region 5	Calvert County Charles County Montgomery County Prince George's County St. Mary's County

