



# MARYLAND Department of Health

Larry Hogan, Governor · Boyd Rutherford, Lt. Governor · Dennis Schrader, Secretary

July 07, 2017

## Public Health Preparedness and Situational Awareness Report: #2017:26 Reporting for the week ending 07/01/17 (MMWR Week #26)

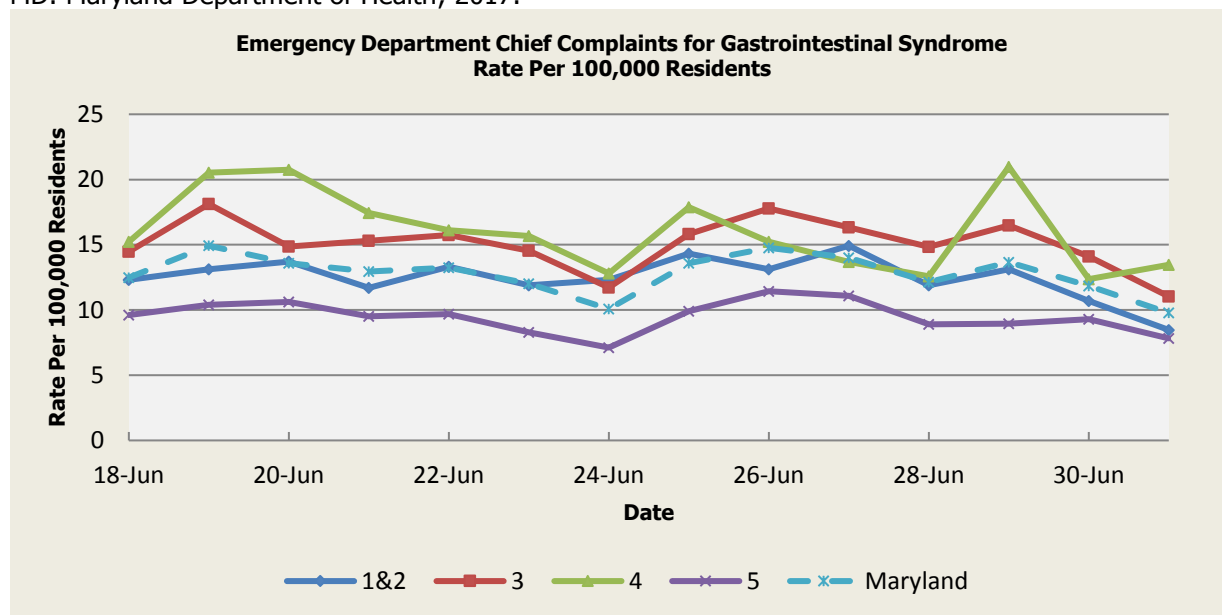
### CURRENT HOMELAND SECURITY THREAT LEVELS

National: No Active Alerts

Maryland: Level Four (MEMA status)

### SYNDROMIC SURVEILLANCE REPORTS

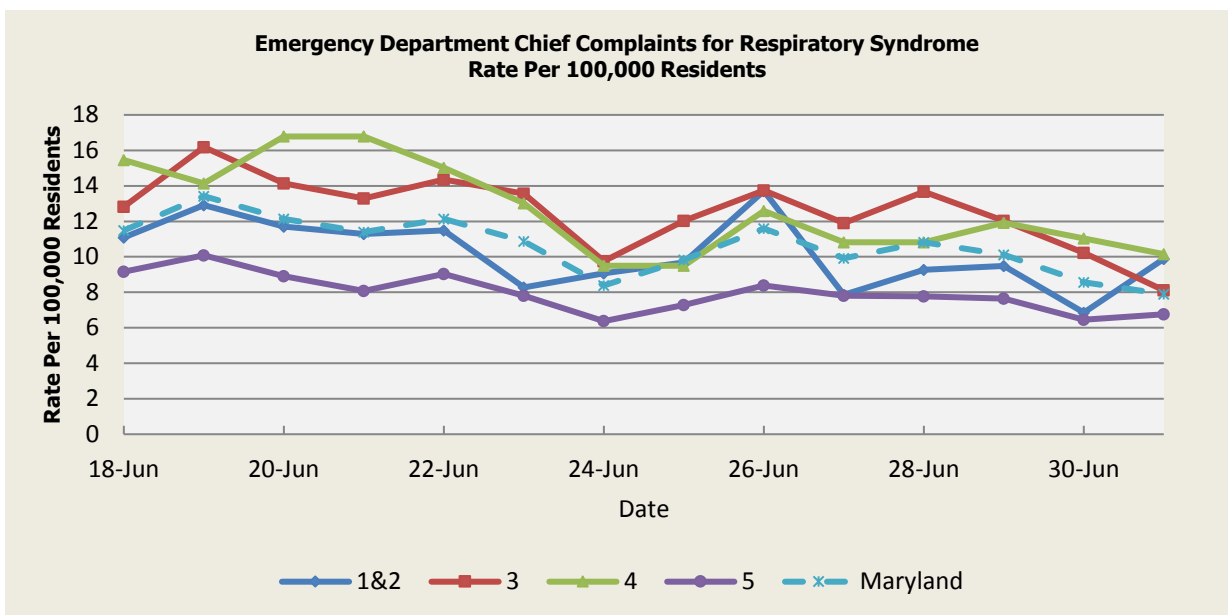
**ESSENCE (Electronic Surveillance System for the Early Notification of Community-based Epidemics):** Graphical representation is provided for all syndromes (excluding the "Other" category; see Appendix 1) by Health and Medical Regions (See Appendix 2). Emergency department chief complaint data is presented as rates per 100,000 residents using data from the 2010 census. Electronic Surveillance System for the Early Notification of Community-Based Epidemics (ESSENCE). Baltimore, MD: Maryland Department of Health; 2017.



There were two (2) Gastrointestinal Syndrome outbreaks reported this week: two (2) outbreaks of Gastroenteritis associated with Restaurants (Region 3).

Gastrointestinal Syndrome Baseline Data January 1, 2010 - Present					
Health Region	1&2	3	4	5	Maryland
Mean Rate*	12.61	14.76	15.08	10.06	12.81
Median Rate*	12.91	14.80	15.02	10.22	12.95

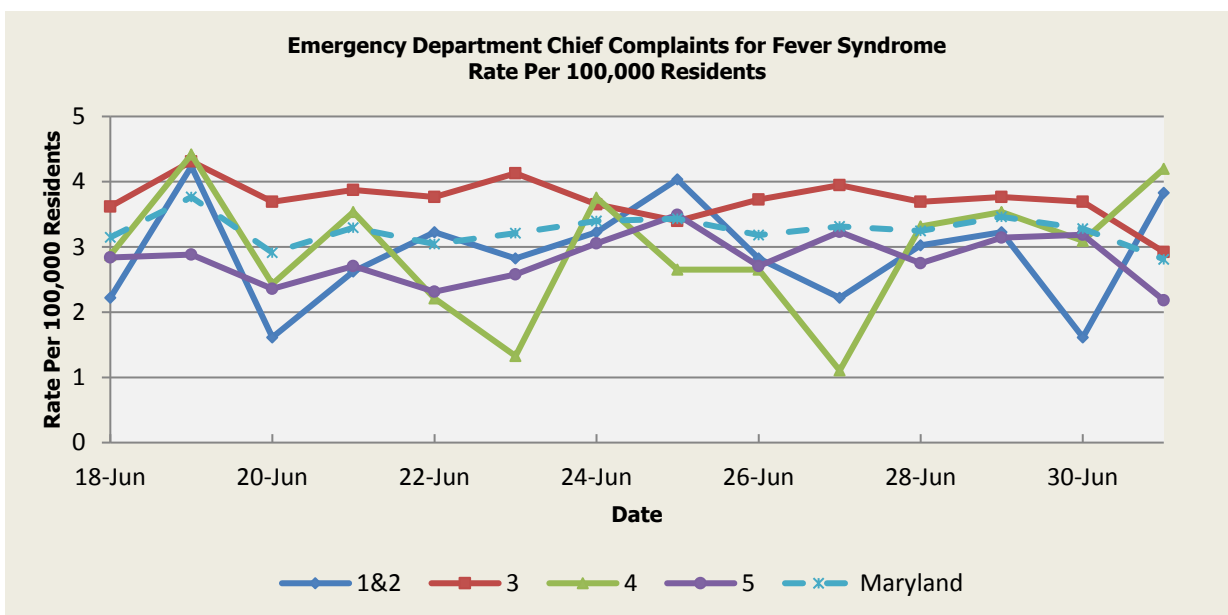
\* Per 100,000 Residents



There was one Respiratory Syndrome outbreak reported this week: one (1) outbreak of Pneumonia in a Nursing Home (Region 3).

Respiratory Syndrome Baseline Data January 1, 2010 - Present					
Health Region	1&2	3	4	5	Maryland
Mean Rate*	11.77	14.12	14.02	9.73	12.24
Median Rate*	11.70	13.88	13.91	9.65	12.05

\* Per 100,000 Residents

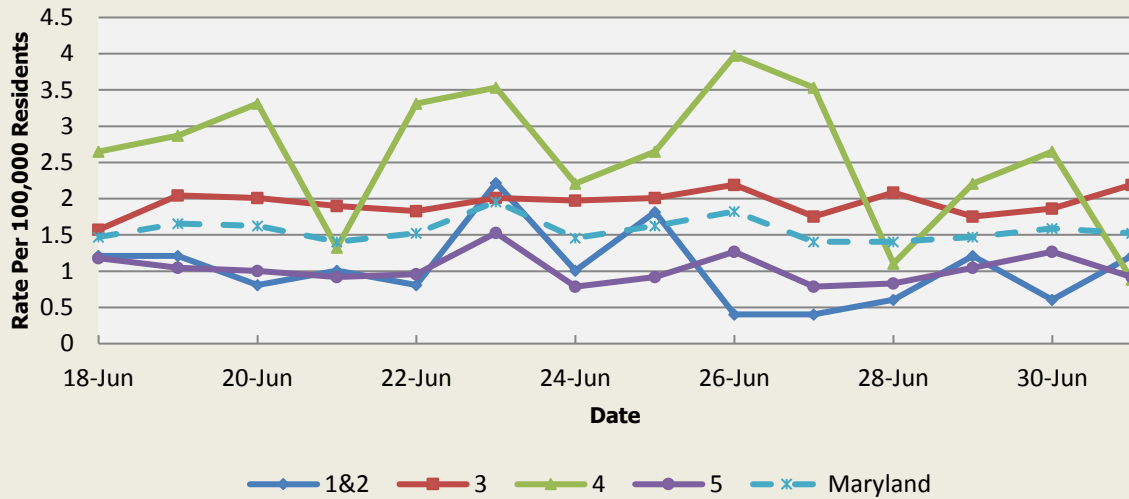


There were no Fever Syndrome outbreaks reported this week.

Fever Syndrome Baseline Data January 1, 2010 - Present					
Health Region	1&2	3	4	5	Maryland
Mean Rate*	2.96	3.78	3.89	3.01	3.43
Median Rate*	2.82	3.76	3.75	2.97	3.40

Per 100,000 Residents

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



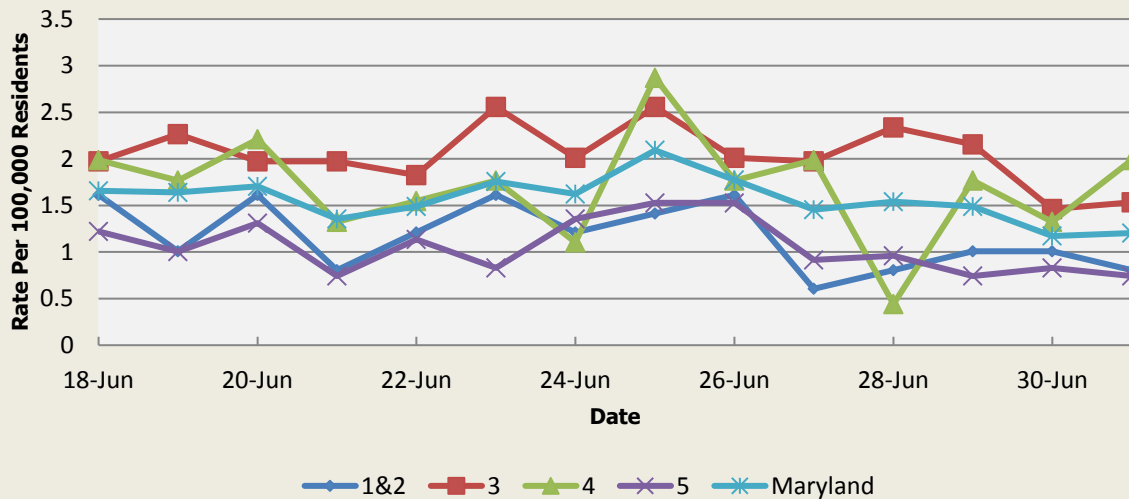
There were no Localized Lesion Syndrome outbreaks reported this week.

#### Localized Lesion Syndrome Baseline Data January 1, 2010 - Present

Health Region	1&2	3	4	5	Maryland
Mean Rate*	1.02	1.85	1.98	0.94	1.44
Median Rate*	1.01	1.83	1.99	0.92	1.42

\* Per 100,000 Residents

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

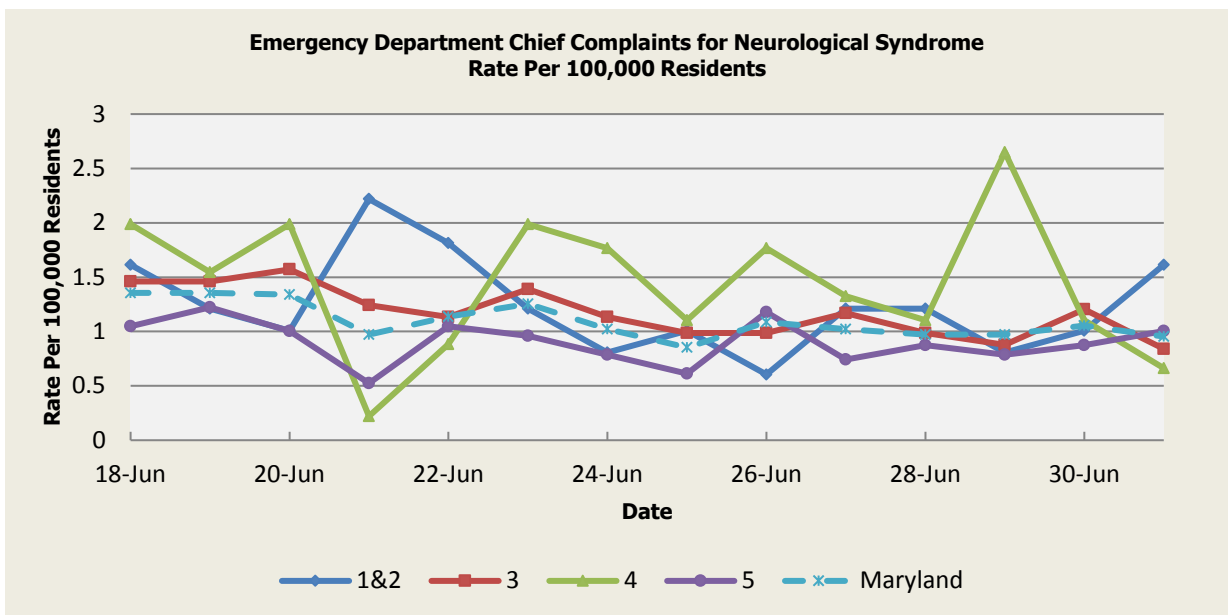


There were two (2) Rash Syndrome outbreaks reported this week: one (1) outbreak of Hand, Foot, and Mouth Disease associated with a Daycare Center (Region 3); one (1) outbreak of Ringworm associated with a Daycare Center (Region 5).

#### Rash Syndrome Baseline Data January 1, 2010 - Present

Health Region	1&2	3	4	5	Maryland
Mean Rate*	1.22	1.71	1.73	1.00	1.40
Median Rate*	1.21	1.68	1.77	1.00	1.39

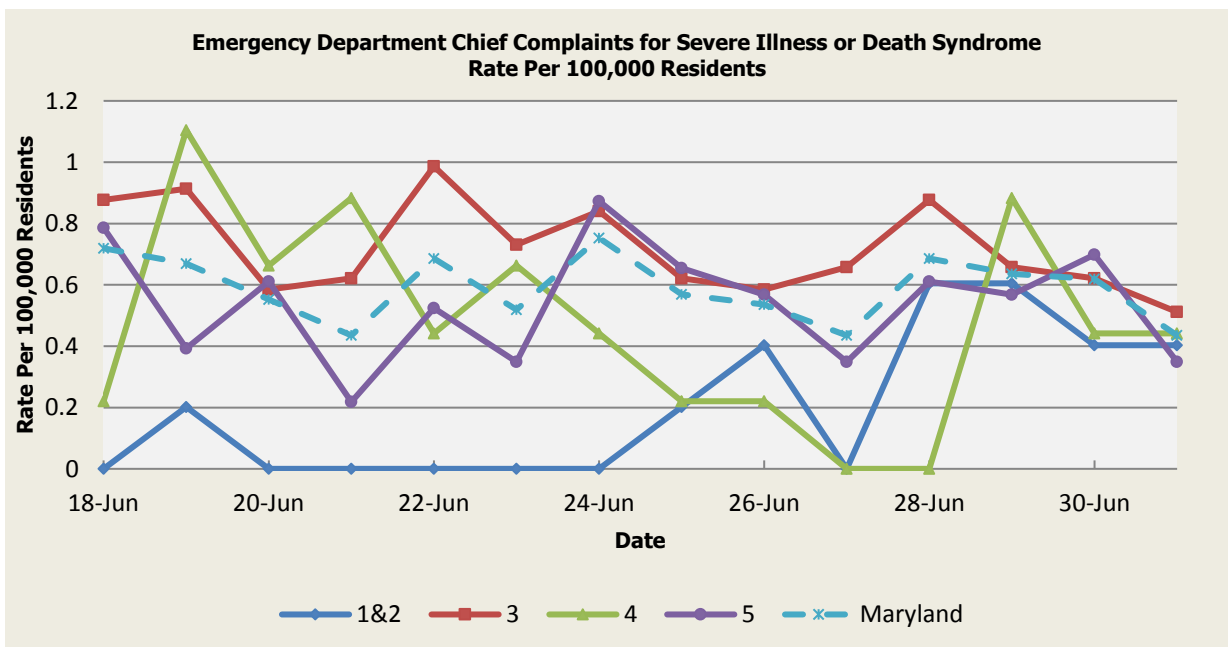
\* Per 100,000 Residents



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*	0.64	0.78	0.67	0.50	0.65
Median Rate*	0.60	0.69	0.66	0.48	0.59

\* Per 100,000 Residents

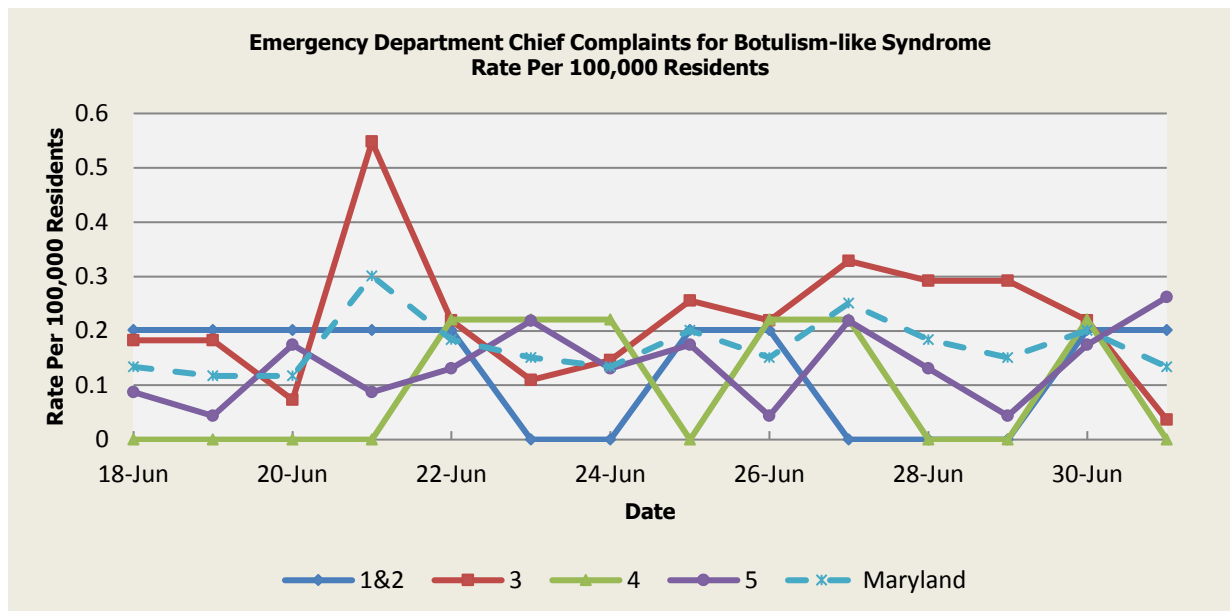


There were no Severe Illness or Death Syndrome outbreaks reported this week.

Severe Illness or Death Syndrome Baseline Data January 1, 2010 - Present					
Health Region	1&2	3	4	5	Maryland
Mean Rate*	0.63	0.90	0.79	0.45	0.70
Median Rate*	0.60	0.91	0.66	0.44	0.70

\* Per 100,000 Residents

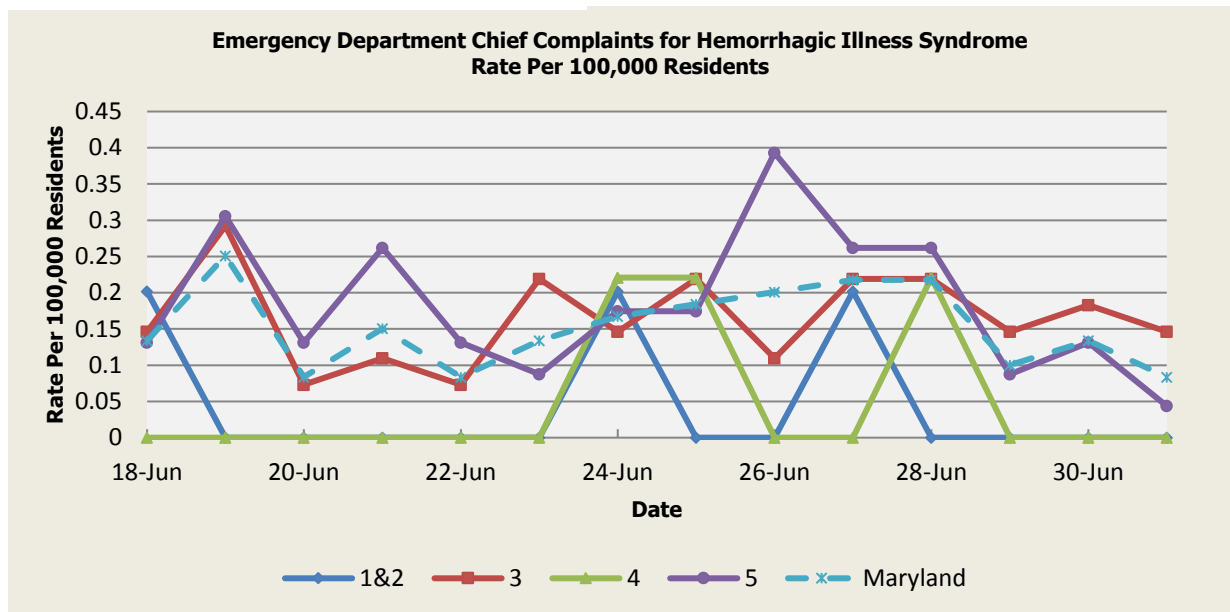
## SYNDROMES RELATED TO CATEGORY A AGENTS



There was an appreciable increase above baseline in the rate of ED visits for Botulism-like Syndrome on 06/18 (Regions 1&2,3), 06/19 (Regions 1&2,3), 06/20 (Regions 1&2,5), 06/21 (Regions 1&2,3), 06/22 (Regions 1&2,3,4,5), 06/23 (Regions 4,5), 06/24 (Regions 4,5), 06/25 (Regions 1&2,3,5), 06/26 (Regions 1&2,3,4), 06/27 (Regions 3,4,5), 06/28 (Regions 3,5), 06/29 (Region 3), 06/30 (Regions 1&2,3,4,5), 07/01 (Regions 1&2,5). 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	0.09	0.04	0.06	0.07
Median Rate*	0.00	0.07	0.00	0.04	0.05

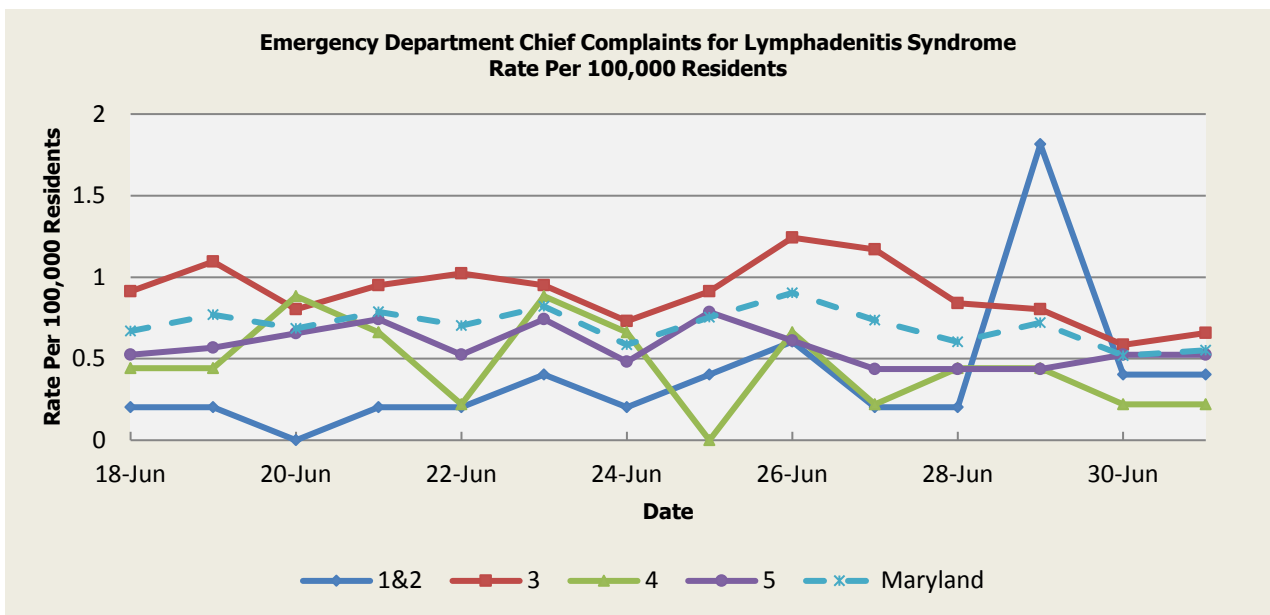
\* Per 100,000 Residents



There was an appreciable increase above baseline in the rate of ED visits for Hemorrhagic Illness Syndrome on 06/18 (Regions 1&2), 06/19 (Regions 3,5), 06/21 (Region 5), 06/24 (Regions 1&2,4), 06/25 (Region 4), 06/26 (Region 5), 06/27 (Regions 1&2,5), 06/28 (Regions 4,5). 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	0.13	0.03	0.09	0.10
Median Rate*	0.00	0.04	0.00	0.04	0.05

\* Per 100,000 Residents



There was an appreciable increase above baseline in the rate of ED visits for Lymphadenitis Syndrome on 06/19 (Region 3), 06/20 (Regions 4,5), 06/21 (Region 5), 06/22 (Region 3), 06/23 (Regions 4,5), 06/25 (Region 5), 06/26 (Regions 1&2,3), 06/27 (Region 3), 06/29 ((Regions 1&2)). These increases are not known to be associated with any outbreaks.

<b>Lymphadenitis Syndrome Baseline Data January 1, 2010 - Present</b>					
Health Region	1&2	3	4	5	Maryland
Mean Rate*	0.30	0.51	0.34	0.31	0.41
Median Rate*	0.20	0.40	0.22	0.26	0.33

\* Per 100,000 Residents

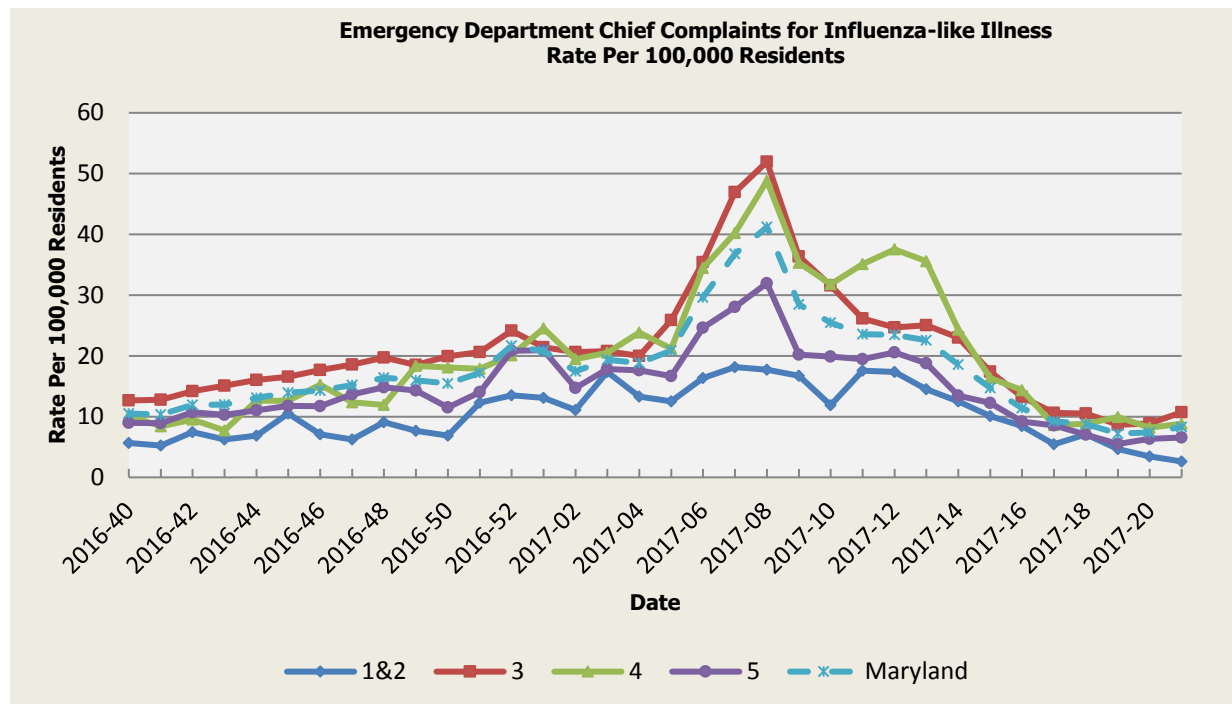
## MARYLAND REPORTABLE DISEASE SURVEILLANCE

Condition	Counts of Reported Cases†					
	June			Cumulative (Year to Date)**		
Vaccine-Preventable Diseases	2017	Mean*	Median*	2017	Mean*	Median*
Aseptic meningitis	0	2.4	3	137	190.6	183
Meningococcal disease	0	0	0	4	3	2
Measles	0	0	0	3	3.8	3
Mumps	0	0	0	20	33.2	11
Rubella	0	0	0	1	3.6	3
Pertussis	0	2.2	2	108	154.4	159
Foodborne Diseases	2017	Mean*	Median*	2017	Mean*	Median*
Salmonellosis	0	3.6	3	316	378.4	371
Shigellosis	0	0.4	0	118	100.6	122
Campylobacteriosis	0	3.6	4	347	354.2	353
Shiga toxin-producing Escherichia coli (STEC)	1	0.4	0	72	67	68
Listeriosis	0	0.2	0	12	5.6	5
Arboviral Diseases	2017	Mean*	Median*	2017	Mean*	Median*
West Nile Fever	0	0	0	0	2.8	2
Lyme Disease	1	47.6	46	1428	1432.6	1349
Emerging Infectious Diseases	2017	Mean*	Median*	2017	Mean*	Median*
Chikungunya	0	0	0	0	2	0
Dengue Fever	0	0.4	0	6	13.2	9
Zika Virus***	0	0	0	1	5.8	4
Other	2017	Mean*	Median*	2017	Mean*	Median*
Legionellosis	0	1.2	0	98	78.6	83

NEDSS data: Maryland National Electronic Disease Surveillance System (NEDSS). Baltimore, MD: Maryland Department of Health; 2017. † Counts are subject to change \*Timeframe of 2011-2017\*\*Includes January through current month. \*\*\* As of July 06, 2017, the total [Maryland Confirmed and Probable Cases of Zika Virus Disease and Infection](#) for 2017 is 34.

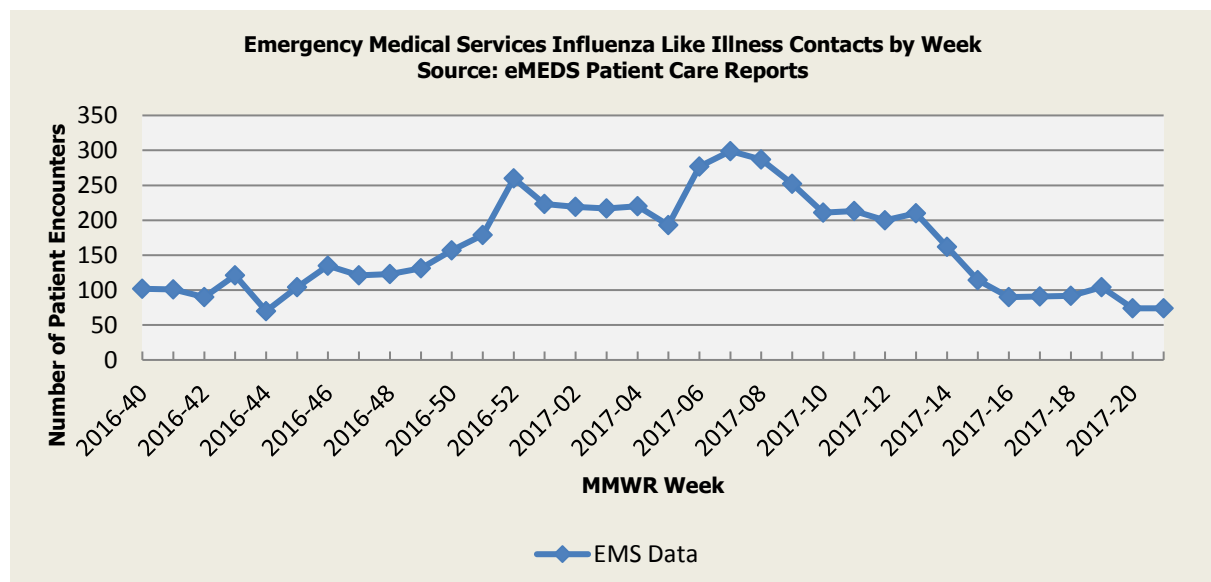
## SYNDROMIC INFLUENZA SURVEILLANCE

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



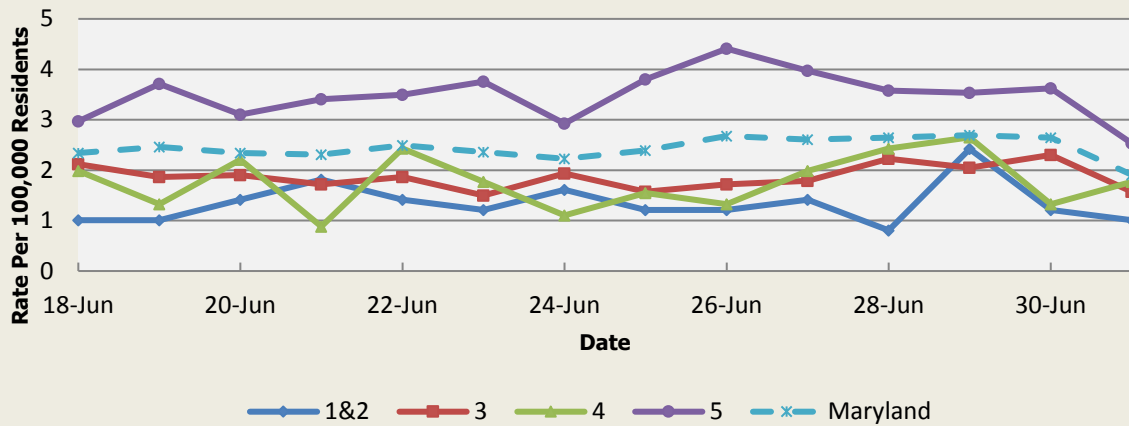
Influenza-like Illness Baseline Data Week 1 2010 - Present					
Health Region	1&2	3	4	5	Maryland
Mean Rate*	167.70	223.96	205.49	194.23	206.50
Median Rate*	7.66	9.63	9.05	8.51	9.00

\* Per 100,000 Residents



**Disclaimer on eMEDS flu related data:** These data are 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. These data are reported for trending purposes only.

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

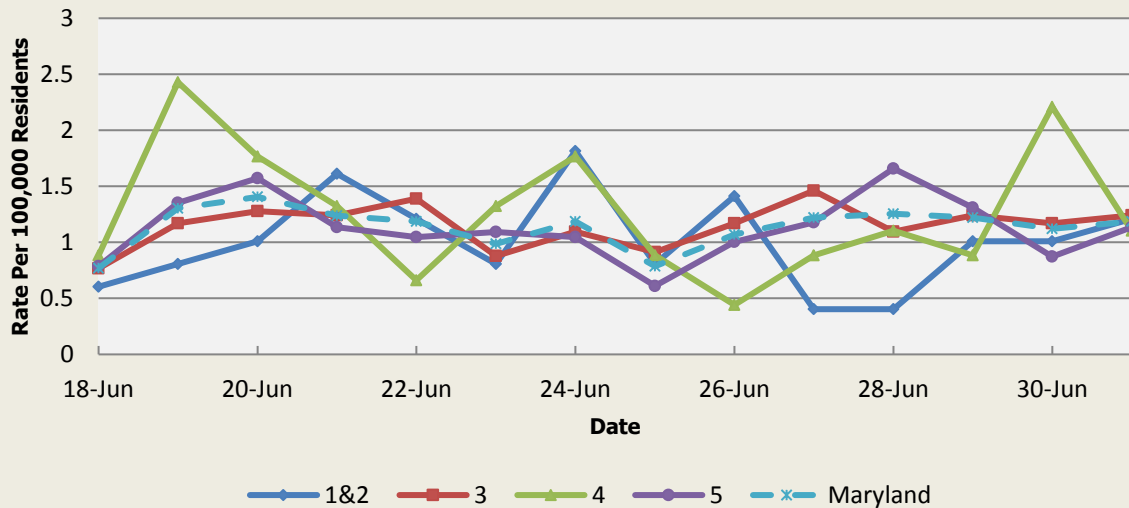


There was not an appreciable increase above baseline in the rate of OTC medication sales during this reporting period.

OTC Sales Baseline Data January 1, 2010 - Present					
Health Region	1&2	3	4	5	Maryland
Mean Rate*	3.69	4.79	2.67	8.26	5.87
Median Rate*	3.23	4.38	2.43	8.03	5.52

\* 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 during this reporting period.

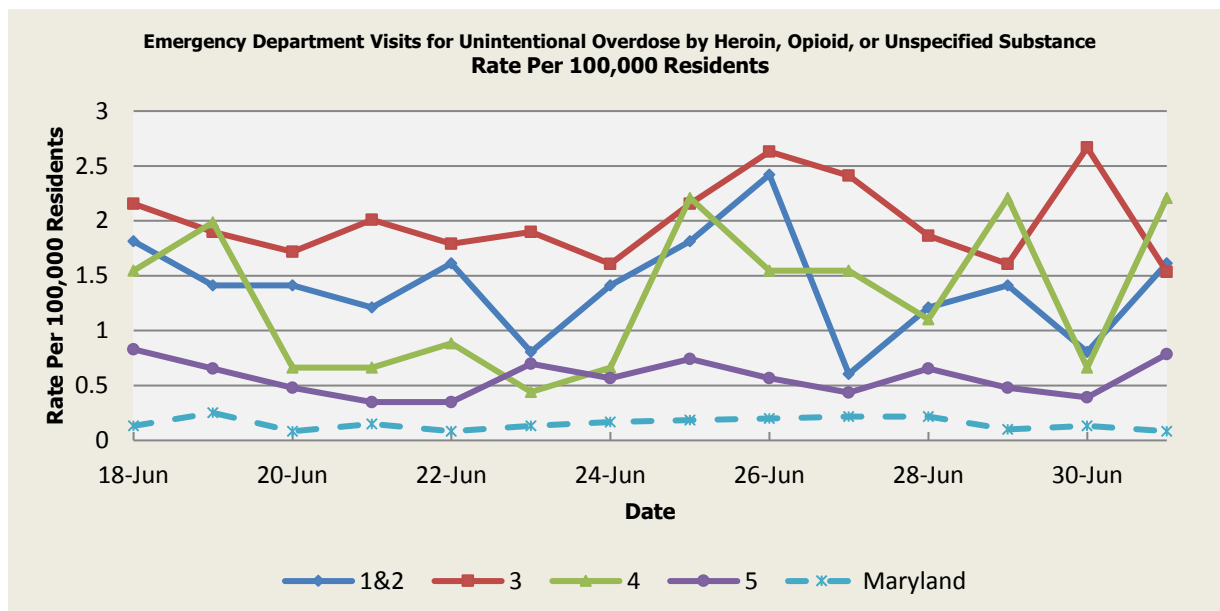
Thermometer Sales Baseline Data January 1, 2010 - Present					
Health Region	1&2	3	4	5	Maryland
Mean Rate*	3.29	3.16	2.44	4.22	3.52
Median Rate*	3.02	3.03	2.43	4.06	3.36

\* Per 100,000 Residents



## SYNDROMIC OVERDOSE SURVEILLANCE

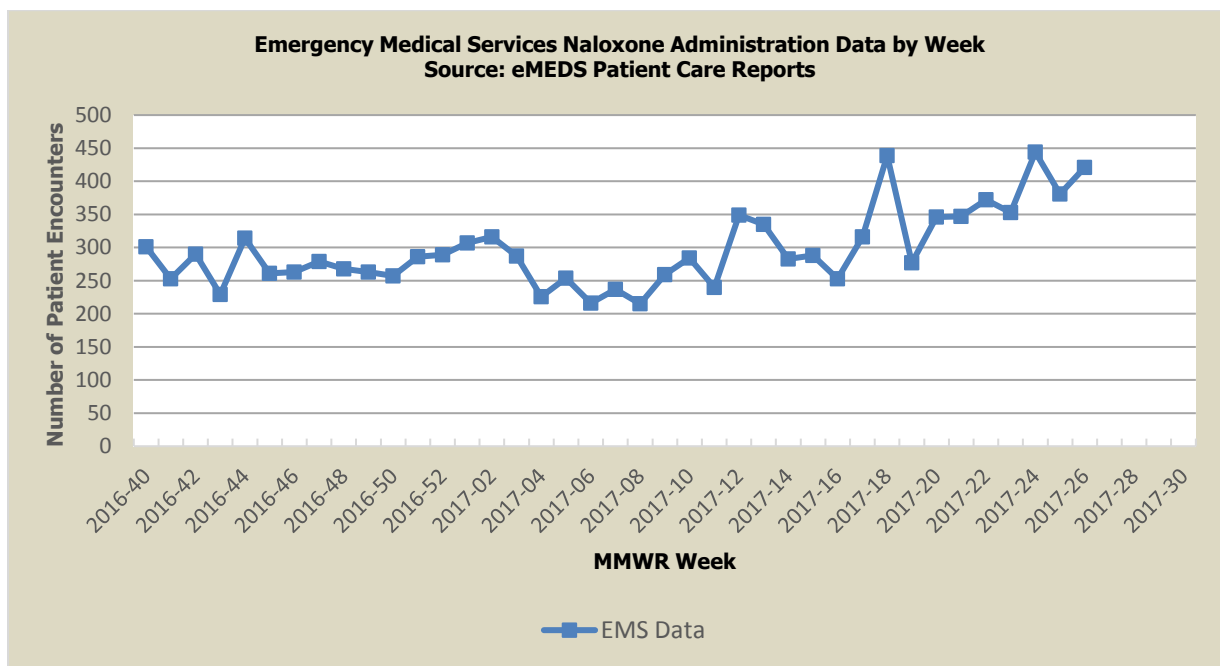
The purpose of this section is to characterize non-fatal ED visit trends for acute unintentional overdose by Heroin, Opioid or Unspecified substance among Maryland residents captured by ESSENCE data, including chief complaint and discharge diagnosis. ED visits that are identified as unintentional overdose by Heroin, Opioid or Unspecified substance include those with medical and non-medical use of a prescription Opioid or where the substance is not specified, given evidence that the majority of fatal overdoses are Opioid-related.



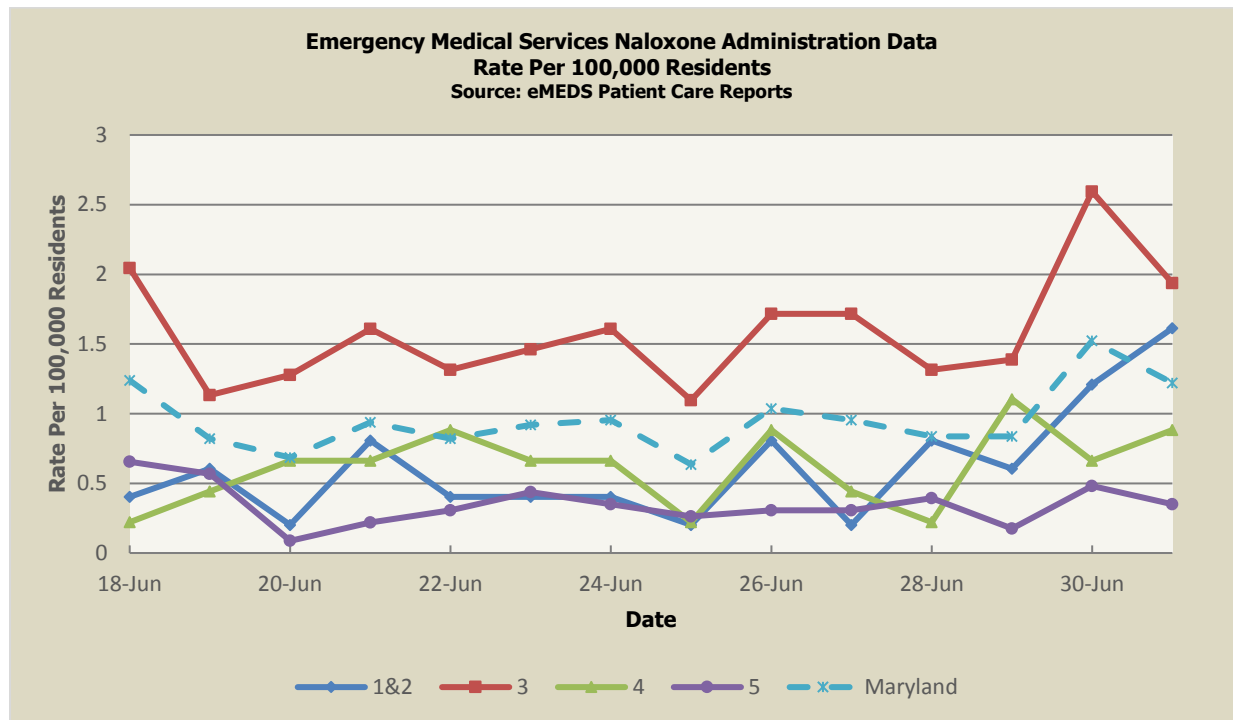
**Disclaimer on ESSENCE Overdose related data:** ESSENCE chief complaint and discharge diagnosis query for overdose-related illness includes but is not limited to the following terms: heroin, opioid, speedball, dope, fentanyl, naloxone, narcan, and overdose.

Non-fatal Overdose ED Visit Baseline Data January 1, 2010 - Present					
Health Region	1&2	3	4	5	Maryland
Mean Rate*	0.32	0.41	0.36	0.14	0.30
Median Rate*	1.01	1.32	1.10	0.48	0.99

\* Per 100,000 Residents



**Disclaimer on eMEDS naloxone administration related data:** These data are based on EMS Pre-hospital care reports where the EMS provider has documented that they administered naloxone. The administration of naloxone is based on the patient's signs and symptoms and not on any diagnostic tests. These data are reported for trending purposes only.



**Disclaimer on eMEDS Naloxone administration related data:** These data are based on EMS Pre-hospital care reports where the EMS provider has documented that they administered naloxone. The administration of naloxone is based on the patient's signs and symptoms and not on any diagnostic tests. These data are reported for trending purposes only.

EMS Naloxone Administration Data Baseline Data January 1, 2017 - Present					
Health Region	1&2	3	4	5	Maryland
Mean Rate*	0.38	1.16	0.57	0.24	0.70
Median Rate*	0.20	1.13	0.44	0.22	0.67

\* 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. Presently, 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 June 15, 2017, the WHO-confirmed global total (2003-2017) of human cases of H5N1 avian influenza virus infection stands at 859, of which 453 have been fatal. Thus, the case fatality rate for human H5N1 is approximately 53%.

## **AVIAN INFLUENZA**

**HPAI H5N1 (TOGO)**, 4 July 2017, Highly pathogenic avian influenza. The source of the infection and epidemic are unknown. Read More: <https://www.promedmail.org/post/5148865>

**HPAI H5N8 (FRANCE)** 4 July 2017, France's agriculture ministry confirmed on June 30<sup>th</sup> a new case of bird flu on a poultry farm in the northern Brillion region, near the French-Belgian border. "A case of highly contagious H5N8 bird flu was confirmed on a poultry farm in Brillion," the ministry said in a statement. Read More: <https://www.promedmail.org/post/5148229>

## **HUMAN AVIAN INFLUENZA**

**H7N9 (CHINA)**, 3 July 2017, According to the HFPC of Yunnan province on [28 Jun 2017], during the enhanced influenza and unknown pneumonia surveillance, 4 human H7N9 cases were reported by local CDC and reconfirmed by national CDC. All 4 cases were reported in Wenshan city, and these were the first report of local human H7N9 AIV case in Yunnan since 2017. One patient recovered and had been discharged from hospital, while other 3 patients (in stable condition) remained in designated hospital for treatment and quarantine. There has been no evidence of human-to-human transmission so far. All close contacts are under medical monitoring and no one showed ILI symptoms so far. Wenshan city closed live poultry market since 5 Jun 2017 accordingly. Read More: <https://www.promedmail.org/post/5145932>

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

## **NATIONAL DISEASE REPORTS**

**E. COLI (UTAH)**, 3 July 2017, The Southwest Utah Health Department is investigating an *E. coli* outbreak in Hildale, and family members confirm at least 2 young children have died. The parents of a 6-year-old from Hildale tell Fox 13 News their daughter died of kidney failure as a result of *E. coli*, and they say a young boy who is close friends with the girl and who lives in their housing complex is also deceased. The Southwest Utah Public Health Department states they are investigating an outbreak of *E. coli* in the Hildale, Utah area. Read More: <https://www.promedmail.org/post/5147181>

**VIBRIO VULNIFICUS (TEXAS)**, 3 July 2017, Reports of an Ingleside teacher infected with *Vibrio vulnificus* while wade fishing near Rockport indicate the man is being treated at a Corpus Christi hospital. Other than this information, San Patricio County Health Director Dr. James Mobley said he only can confirm there is a pending case of *Vibrio* and that it involves a serious infection. "It's bad," he said.

**E.COLI EHEC (UTAH)** 5 July 2017, Utah health authorities were investigating what triggered an \_E. coli\_ outbreak in a mostly-polygamous community on the Utah-Arizona border after the bacteria killed 2 children and sickened 4 others. Early indications suggest the E. coli may be linked to contaminated food or exposure to animals - not the town of Hildale's water supply, said David Heaton, spokesman for the Southwest Utah Public Health Department. He said it appears isolated to one neighborhood.

## **INTERNATIONAL DISEASE REPORTS**

**JAPANESE ENCEPHALITIS (CHINA)** 1 July 2017, the male patient, aged 38 with good past health, has developed fever and headache since 18 June and was admitted to Tuen Mun Hospital for management on 28 June. The clinical diagnosis was encephalitis and he has been in stable condition. His cerebrospinal fluid and blood samples tested positive for immunoglobulin M antibodies against JE upon laboratory testing. Read More: <https://www.promedmail.org/post/5143730>

**ZIKA (AMERICAS)** 1 July 2017, More cases in Mexico's Jalisco and Tamaulipas states are suspected. Read More: <https://www.promedmail.org/post/5144254>

**MERS-CoV (LEBANON)** 1 July 2017, Since the last update of MERS-CoV on [9 Jun 2017], 41 additional cases of MERS-CoV have been reported, 40 from Saudi Arabia and one reported by Lebanon in a Lebanese citizen returning from Saudi Arabia. Read More: <https://www.promedmail.org/post/5144892>

**MEASLES (ROMANIA)**, 2 July 2017, A measles outbreak affecting several European countries has killed 30 people in Romania, most of them children, health authorities in Bucharest said on Friday. More than 7200 people in the European Union's 2nd-poorest country have contracted the illness since late 2016, Romania's contagious disease monitoring centre said. Read More: <https://www.promedmail.org/post/5145654>

**CYCLOSPORIASIS (ONTARIO)** 3 July 2017, The Public Health Agency of Canada is collaborating with provincial public health partners, the Canadian Food Inspection Agency and Health Canada to investigate locally acquired *Cyclospora* infections in two provinces. The source of the outbreak has not been identified. Previous outbreaks in Canada and the United States (US) have been linked to imported fresh produce. The investigation is ongoing. Read More: <https://www.promedmail.org/post/5146527>

**DOLPHIN DIE OFF (RUSSIA)** 3 July 2017, "Mass dolphin deaths have been registered beginning in March of this year 2017. The highest number of animals washed up ashore was discovered in May 2017 (84 cases), in June 2017 (16 cases). Scientific organizations concluded that in 99 percent of cases, the mammals died not in the coastal areas of Krasnodar Territory. They were simply thrown ashore by the sea," Tabelsky said at a regional prosecutors' forum on local environmental safety issues on June 27 2017. The scientists who investigated mass dolphin deaths have yet to come to a unanimous opinion as to the causes of what happened. Read More: <https://www.promedmail.org/post/5147445>

**CHIKUNGUNYA (AMERICAS, ASIA)**, 4 July 2017, Reported cases of chikungunya fever in the Americas, by country or territory - 2017 to EW 26 [week ending 30 Jun 2017]. Read More: <https://www.promedmail.org/post/5149989>

**JAPANESE ENCEPHALITIS (INDIA)**, 5 July 2017, Fresh suspected cases of Japanese encephalitis (JE) have surfaced in the city of Jamshedpur. District officer for Integrated Disease Surveillance Programme (IDSP), Sahir Pall said they got 2 blood samples of suspected Japanese encephalitis (JE) cases, which were sent to the microbiology department of MGM Medical College in Dimna. "We got the

samples from a local hospital which has been sent to the lab for a test. The report is expected in the next 72-hours," he said. Read More: <https://www.promedmail.org/post/5151252>

**HEPATITIS A (EUROPEAN UNION)**, 5 July 2017, New cases of hepatitis A cases have soared in Western Europe over the past 6 months as a result of an epidemic in gay and bisexual men, the European Centre for Disease Control reported last week. ECDC says that almost 1500 cases of hepatitis A have been identified as linked, in 3 outbreaks, predominantly in men who have sex with men. A further 2660 cases are still being investigated and 10 countries have reported an increase in cases compared with 2016. Public authorities in France, Portugal and the United Kingdom have already issued warnings about the hepatitis A outbreak to gay men, recommending that gay men get vaccinated. Read More: <https://www.promedmail.org/post/5147994>

**MERS-CoV (SAUDI ARABIA)**, 5 July 2017. 1673 laboratory-confirmed cases of MERS-CoV infection, including 679 deaths, 978 recoveries, and 16 currently active cases/infections. Read More: <https://www.promedmail.org/post/5153627>

### **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.health.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 MDH website: <http://phpa.health.maryland.gov/influenza/fluwatch/Pages/Home.aspx>

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

