STATE OF MARYLAND

DHMH

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July 8, 2011

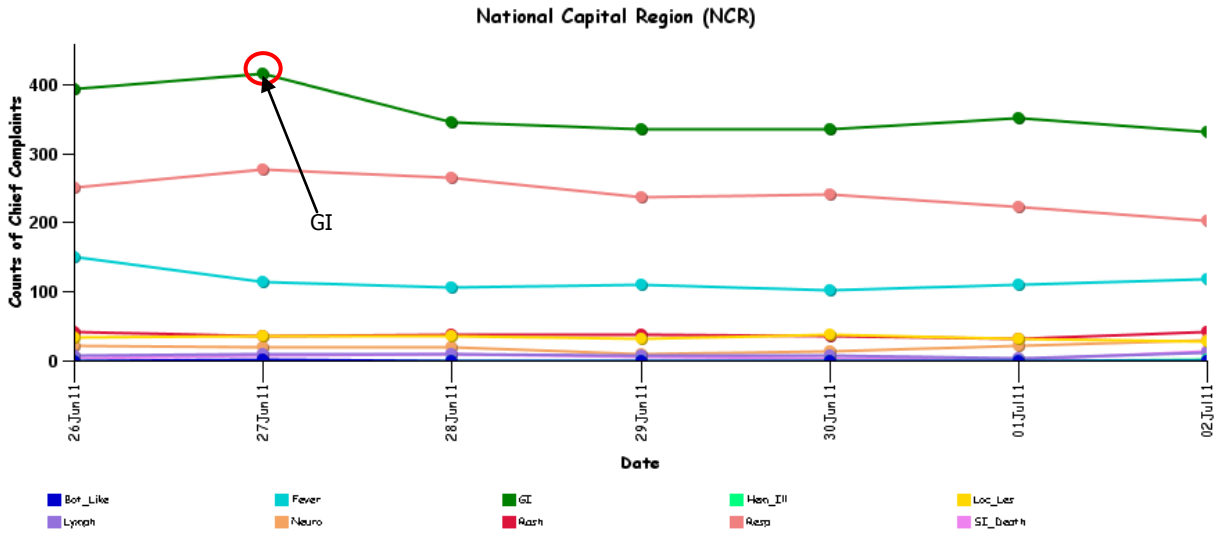
Public Health & Emergency Preparedness Bulletin: # 2011:26 Reporting for the week ending 07/2/11 (MMWR Week #26)

CURRENT HOMELAND SECURITY THREAT LEVELS

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

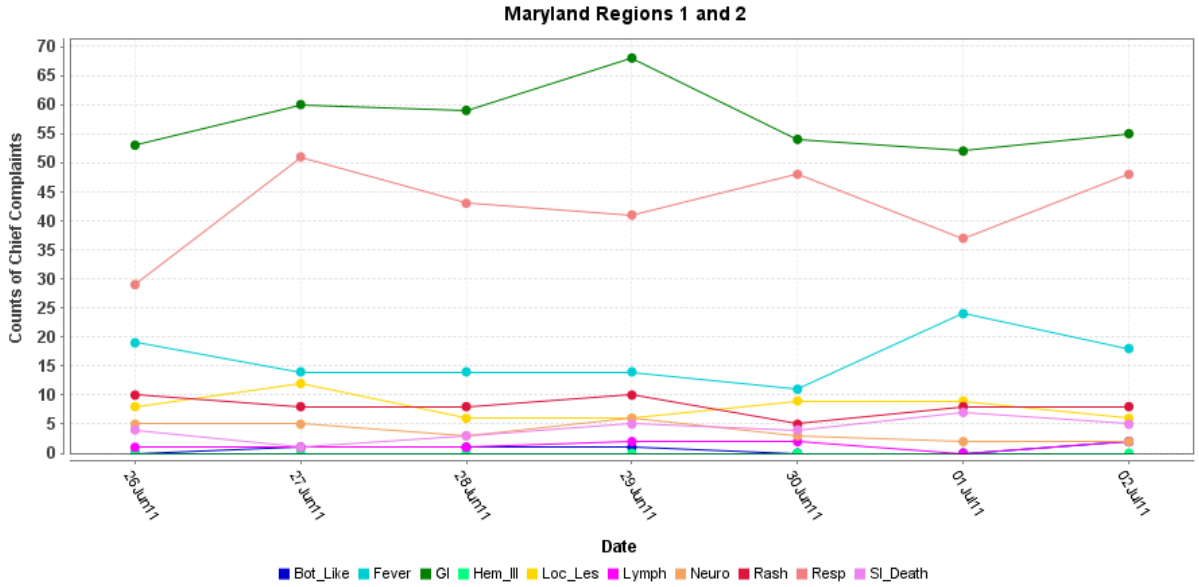
SYNDROMIC SURVEILLANCE REPORTS
ESSENCE (Electronic Surveillance System for the Early Notification of Community-based Epidemics):
Graphical representation is provided for all syndromes, excluding the "Other" category, all age groups, and red alerts are circled. Red alerts are generated when observed count for a syndrome exceeds the 99% confidence interval. Note: ESSENCE – ANCR uses syndrome categories consistent with CDC definitions.

Overall, no suspicious patterns of illness were identified. Track backs to the health care facilities yielded no suspicious patterns of illness.

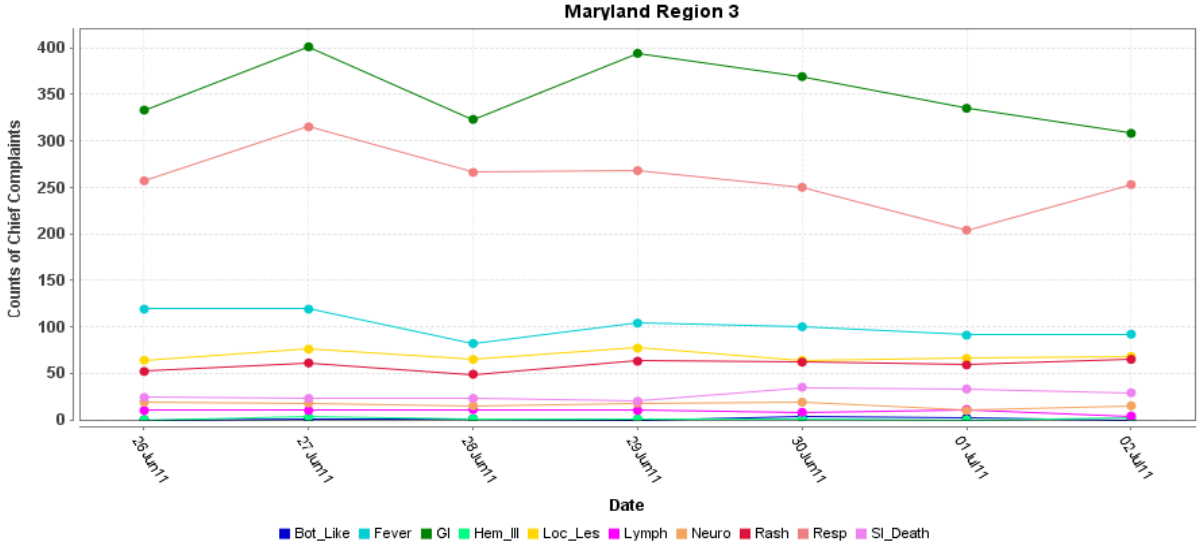


*Includes EDs in all jurisdictions in the NCR (MD, VA, and DC) reporting to ESSENCE

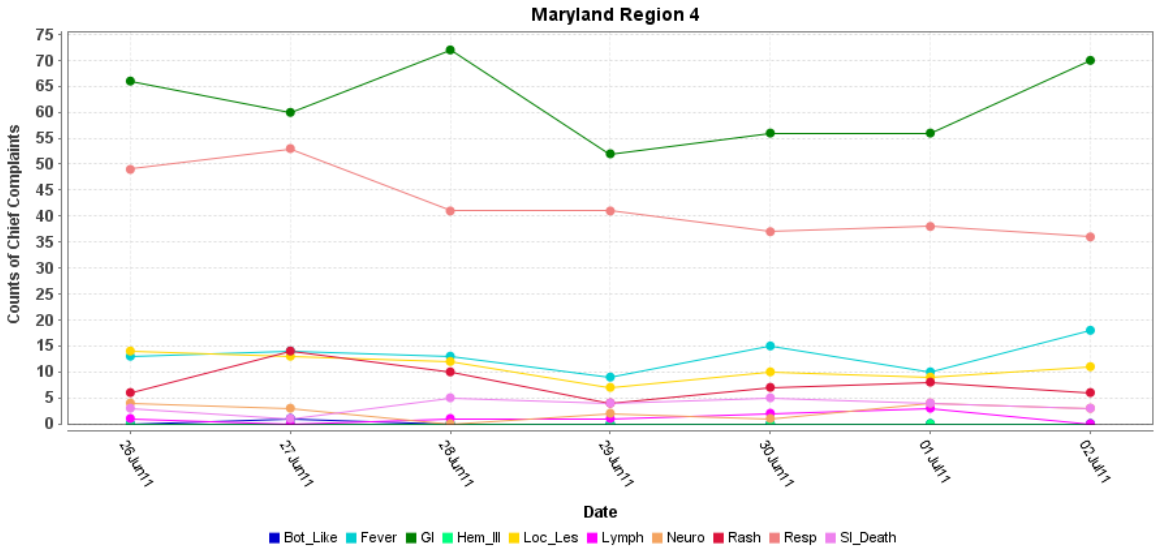
MARYLAND ESSENCE:



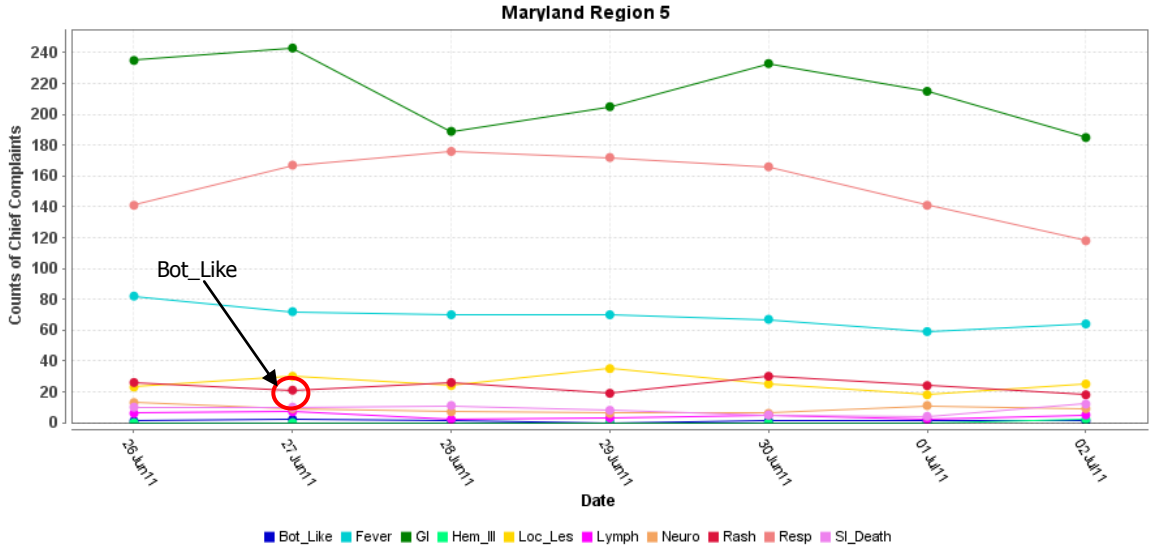
* Region 1 and 2 includes EDs in Allegany, Frederick, Garrett, and Washington counties reporting to ESSENCE



* Region 3 includes EDs in Anne Arundel, Baltimore City, Baltimore, Carroll, Harford, and Howard counties reporting to ESSENCE



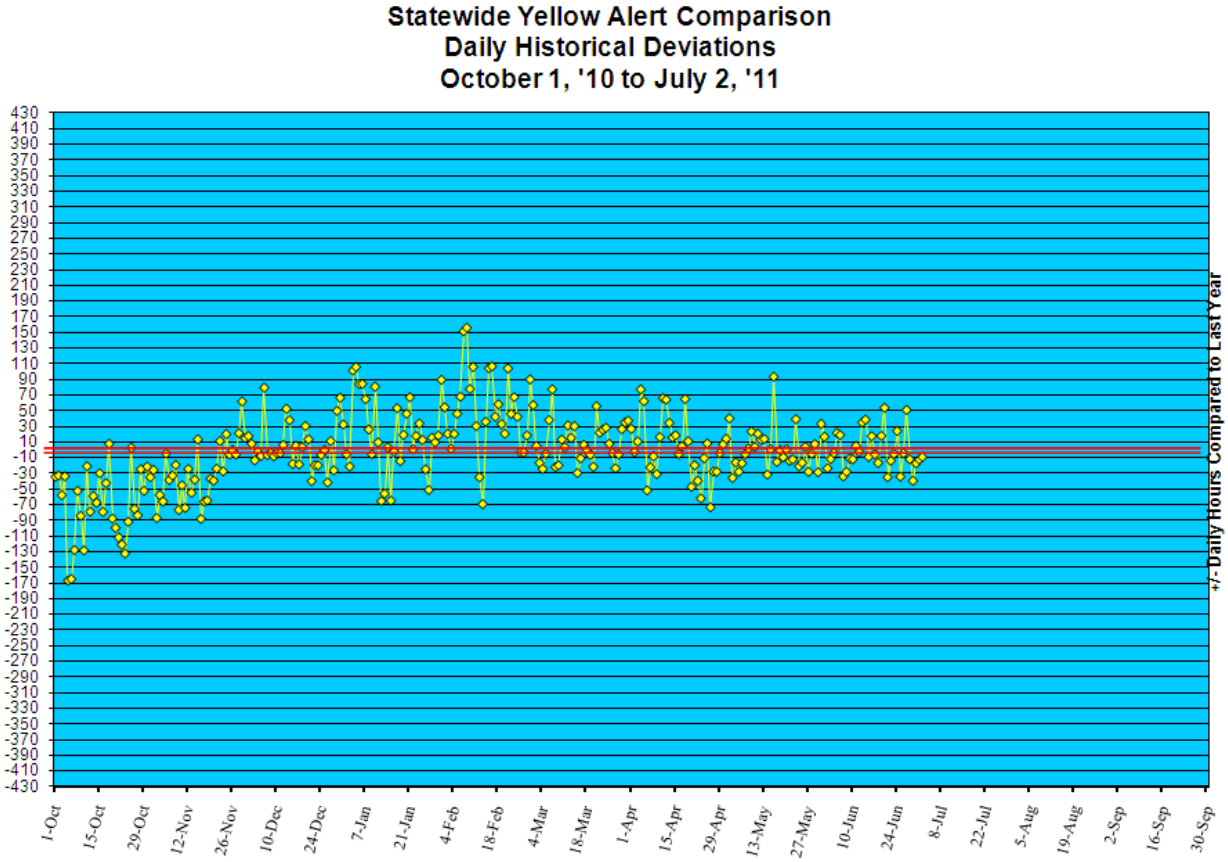
* Region 4 includes EDs in Cecil, Dorchester, Kent, Somerset, Talbot, Wicomico, and Worcester counties reporting to ESSENCE



* Region 5 includes EDs in Calvert, Charles, Montgomery, Prince George's, and St. Mary's counties reporting to ESSENCE

REVIEW OF EMERGENCY DEPARTMENT UTILIZATION

YELLOW ALERT TIMES (ED DIVERSION): The reporting period begins 10/01/10.



REVIEW OF MORTALITY REPORTS

Office of the Chief Medical Examiner: OCME reports no suspicious deaths related to an emerging public health threat for the week.

MARYLAND TOXIDROMIC SURVEILLANCE

Poison Control Surveillance Monthly Update: Investigations of the outliers and alerts observed by the Maryland Poison Center and National Capital Poison Center in June 2011 did not identify any cases of possible public health threats.

REVIEW OF MARYLAND DISEASE SURVEILLANCE FINDINGS

COMMUNICABLE DISEASE SURVEILLANCE CASE REPORTS (confirmed, probable and suspect):

Meningitis:	**Aseptic**	**Meningococcal**
New cases (June 26 – July 2, 2011):	15	0
Prior week (June 29 – June 25, 2011):	7	0
Week#26, 2010 (June 27 – July 3, 2010):	15	0

1 outbreak was reported to DHMH during MMWR Week 26 (June 26– July 2, 2011).

1 Rash illness outbreaks

1 outbreak of AFRD in a Nursing Home

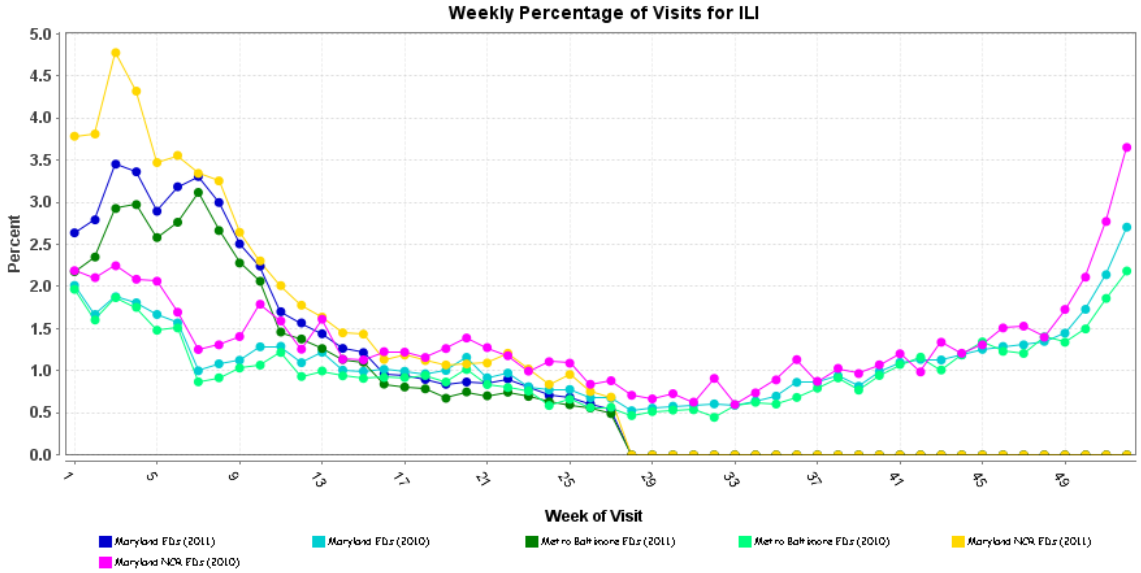
MARYLAND SEASONAL FLU STATUS

Seasonal Influenza reporting occurs October through May.

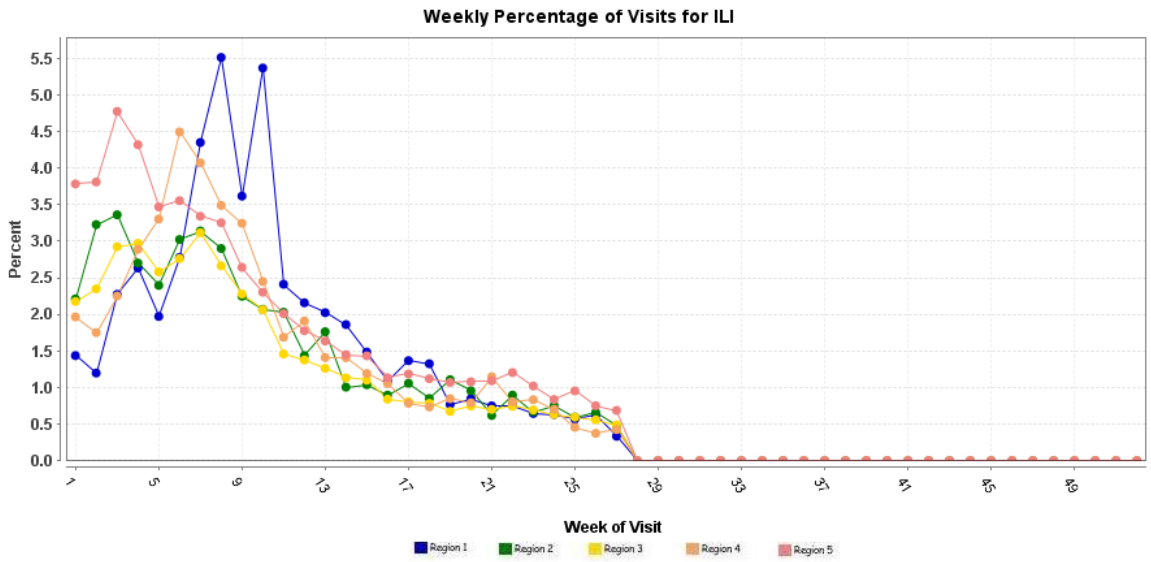
SYNDROMIC SURVEILLANCE FOR INFLUENZA-LIKE ILLNESS

Graphs show the percentage of total weekly Emergency Department patient chief complaints that have one or more ICD9 codes representing provider diagnoses of influenza-like illness. These graphs do not represent confirmed influenza.

Graphs show proportion of total weekly cases seen in a particular syndrome/subsyndrome over the total number of cases seen. Weeks run Sunday through Saturday and the last week shown may be artificially high or low depending on how much data is available for the week.



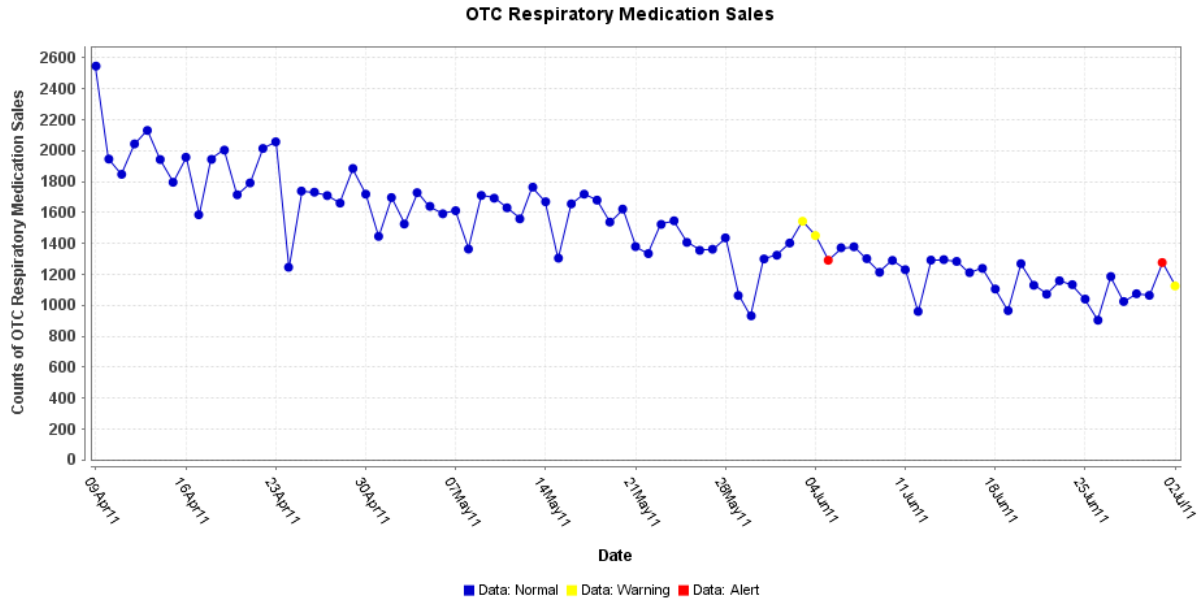
* Includes 2010 and 2011 Maryland ED visits for ILI in Metro Baltimore (Region 3), Maryland NCR (Region 5), and Maryland Total



*Includes 2011 Maryland ED visits for ILI in Region 1, 2, 3, 4, and 5

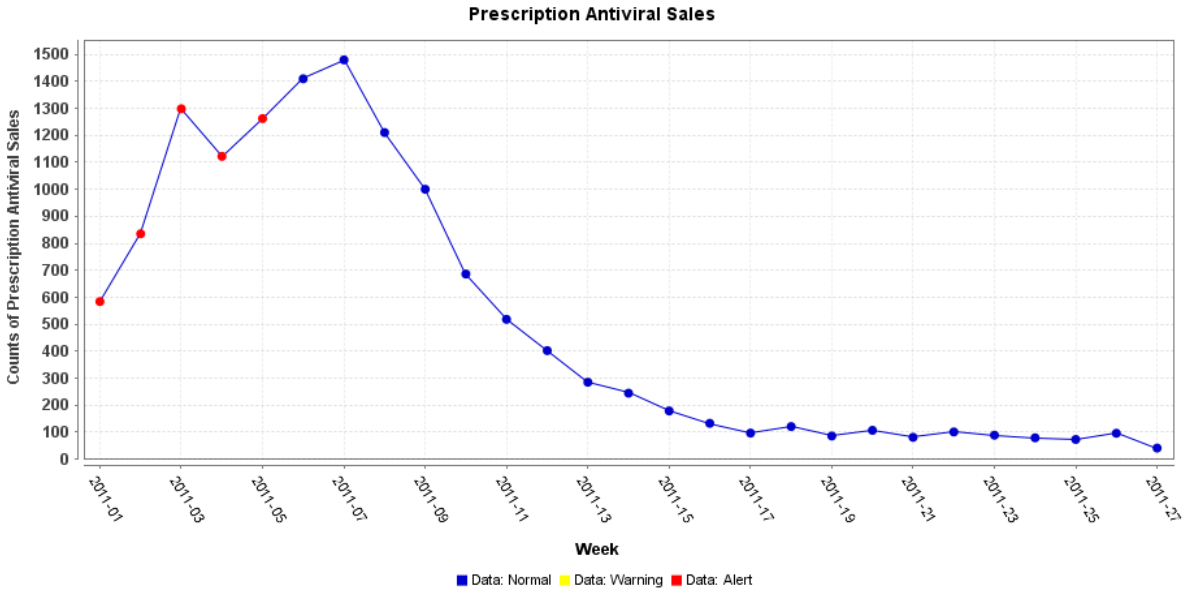
OVER-THE-COUNTER (OTC) SALES FOR RESPIRATORY MEDICATIONS:

Graph shows the daily number of over-the-counter respiratory medication sales in Maryland at a large pharmacy chain.



PRESCRIPTION ANTIVIRAL SALES:

Graph shows the weekly number of prescription antiviral sales in Maryland.



PANDEMIC INFLUENZA UPDATE / AVIAN INFLUENZA-RELATED REPORTS

WHO update: The current WHO phase of pandemic alert for avian influenza is 3. 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.

In **Phase 3**, an animal or human-animal influenza reassortant virus has caused sporadic cases or small clusters of disease in people, but has not resulted in human-to-human transmission sufficient to sustain community-level outbreaks. Limited human-to-human transmission may occur under some circumstances, for example, when there is close contact between an infected person and an unprotected caregiver. However, limited transmission under such restricted circumstances does not indicate that the virus has gained the level of transmissibility among humans necessary to cause a pandemic.

As of June 22, 2011, the WHO-confirmed global total of human cases of H5N1 avian influenza virus infection stands at 562, of which 329 have been fatal. Thus, the case fatality rate for human H5N1 is approximately 59%.

AVIAN INFLUENZA, HUMAN (EGYPT): 22 June 2011, As of Wed 22 Jun 2011 the Ministry of Health of Egypt has notified WHO of a new case of human infection with avian influenza A (H5N1) virus. The case is a 27 year old man from Qena governorate, Deshna district. He developed symptoms on 5 Jun 2011, was hospitalized and was put on oseltamivir treatment on 13 Jun 2011. He died on Tue 14 Jun 2011. Investigations into the source of infection indicate that the patient had exposure to poultry suspected to have avian influenza. The case was confirmed by the Egyptian sub-national laboratory for Influenza in Aswan and the Central Public Health Laboratories in Cairo, a National Influenza Centre of the WHO Global Influenza Surveillance Network. Of the 150 cases confirmed to date in Egypt, 52 have been fatal.

NATIONAL DISEASE REPORTS

POWASSAN VIRUS (MINNESOTA): A woman in her 60s from northern Minnesota has died from a brain infection [presumed to be encephalitis] due to Powassan (POW) virus infection. This is the 1st death in the state attributed to the disease. One other likely POW virus infection case has been identified this year [2011] in Minnesota, in an Anoka County man in his 60s who was hospitalized with a brain infection and is now recovering at home. POW virus is transmitted through the bite of an infected tick. Both 2011 cases became ill in May after spending time outdoors and noticing tick bites. The fatal case was likely exposed to ticks near her home. The case from Anoka County might have been exposed near his home or at a cabin in northern Minnesota. Health officials say this death serves as a reminder of the vital importance of preventing tick bites. "Although Powassan cases are rarely identified, it is a severe disease which is fatal in about 10 percent of cases nationwide, and survivors may have long-term neurological problems" said Dr Ruth Lynfield, state epidemiologist with the Minnesota Department of Health (MDH). "Powassan disease is caused by a virus and is not treatable with antibiotics, so preventing tick bites is crucial." In Minnesota, POW virus can be transmitted by the blacklegged tick (also called the deer tick), which can also carry Lyme disease, anaplasmosis, and babesiosis. The blacklegged tick is abundant during our warm weather months in hardwood and mixed-hardwood forests of Minnesota. When a tick infected with POW virus attaches to a person, it might take only minutes of tick attachment for the virus to be transmitted. POW virus infection was first detected in Minnesota in 2008, in a Cass County child who was exposed near home. In 2009-2010, 5 additional POW cases were identified in Minnesota. These cases were likely exposed to infected ticks in north-central or east-central counties (Cass, Carlton, Hubbard, Itasca, or Kanabec). In addition to these human cases, MDH has found POW-infected ticks in northern counties (Cass, Clearwater, and Pine) and in southeastern Minnesota (Houston County). POW virus was first described in 1958 in Powassan, Ontario. Since then, about 60 cases have been identified in North America. Most of these cases were from eastern Canada and the northeastern USA until the last decade, when cases began to be reported from Michigan, Wisconsin, and now Minnesota. POW virus is related to West Nile virus (WNV). Like WNV, POW virus can cause severe disease of the central nervous system, involving inflammation of the brain (encephalitis) or the lining of the brain and spinal cord (meningitis). People with POW may have fever, headache, vomiting, weakness, confusion, loss of coordination, speech difficulties, and memory loss. Signs and symptoms occur within 1 to 5 weeks of an infectious tick bite. To prevent tick-borne diseases, always use tick repellents containing DEET (up to 30 percent concentration) or permethrin when spending time in tick habitat. Products with DEET can be used on the skin or clothing. Permethrin-based products, which are only applied to clothing, are highly effective and can last through several washings and wearings. Also, wear long pants and light-colored clothing to help detect and remove ticks before they've had time to bite. People with homes or cabins near the woods can also use landscape management and targeted pesticide applications to reduce exposure to disease-carrying ticks. After returning from outdoors, check your body carefully for ticks and promptly remove any you find. The process of bathing or showering shortly after returning indoors can help remove ticks before they bite or before they've been attached for long. The back end of the adult female blacklegged tick is reddish-orange in appearance and teardrop-shaped. The nymph, or immature, stage of the blacklegged tick is about the size of a poppy seed and dark-colored. It is so small that it often goes unnoticed. When the nymph is noticed, it is easily mistaken for a speck of dirt or small freckle on people's skin. Blacklegged ticks are smaller and darker in color than American dog ticks (also known as wood ticks). They also lack the dog tick's characteristic white markings. To remove a tick, use tweezers to grasp it by its head close to the skin and pull it out gently and steadily. (Viral Encephalitis is listed in Category B on the CDC List of Critical Biological Agents)*Non-suspect case

SALMONELLOSIS (USA): CDC is collaborating with public health officials in many states and the FDA to investigate a multistate outbreak of *Salmonella* [*enterica* serotype] *Enteritidis* infections linked to alfalfa sprouts and spicy sprouts. There is no connection between this outbreak and the European *E. coli* O104:H4 outbreak. Investigators are using DNA analysis of _Salmonella_ bacteria obtained through diagnostic testing to identify cases of illness that may be part of this outbreak. As of 27 Jun 2011, a total of 21 persons with the outbreak strain of *S. Enteritidis* have been reported from 5 states: Idaho (3), Montana (7), North Dakota (1), New Jersey (1), and Washington (9). Among persons for whom information is available, illnesses began between 12 Apr 2011 and 7 Jun 2011. Ill persons range in age from 12 years to 77 years old, with a median age of 35 years. 71 percent are female. Among the 10 ill persons with available information, 3 (30 percent) persons have been hospitalized. No deaths have been reported. (Food Safety Threats are listed in Category B on the CDC List of Critical Biological Agents) *Non-suspect case

INTERNATIONAL DISEASE REPORTS

CHOLERA (HAITI): There was a rise in the number of cholera cases reported in May and early June 2011, particularly around Port-au-Prince and in the southern peninsula (Grand Anse, Nippes, Sud and Sud-Est) as well as in Artibonite and Nord. This increase may be due in part to the beginning of the rainy season and the flooding that hit the capital. Between 2 May 2011 and 12 Jun 2011, a total of 18 182 new cases were notified in Port-au-Prince, where 90 percent of the 2300 beds in cholera treatment facilities were occupied. As of 21 Jun 2011, the occupancy rate had dropped to 72 percent. On 12 Jun 2011, the Ministry of Public Health (MoPH) reported 344 623 cases of cholera and 5397 related deaths (average case fatality rate 1.6 percent) since the beginning of the outbreak in October 2010. Poor access to clean water and proper sanitation remains the main challenge in fighting the epidemic. Water-trucking is now down to 20 percent of what it was after the earthquake. According to the Water and Sanitation Cluster, about 1/3rd of the non-governmental organizations (NGOs) supporting camps in Port-au-Prince will be closing down their water-trucking and sewage removal activities over the next few months because funds are running out. Lack of sanitation facilities and the maintenance of existing latrines remain critical problems in the camps. WHO/PAHO supports all cholera treatment facilities to ensure safe water is available for patients and sanitation measures are respected. According to Health Cluster partners, as of 14 Jun 2011 there were 38 cholera treatment centres and 216 cholera treatment units functioning in Haiti. Most of the facilities are financed by NGOs. While support continues in Port-au-Prince, many NGOs are scaling down operations in rural areas and transferring responsibilities to the MoPH, which does not have sufficient funds to cover health personnel. (Water Safety Threats are listed in Category B on the CDC List of Critical Biological Agents) *Non-suspect case

CHOLERA (DOMINICAN REPUBLIC): The Dominican Medical Association (CMD) Wed 29 Jun 2011, called the country's cholera epidemic out of control, and asked the Government to be more responsible in dealing with society's ample segments of poverty. CMD president Senen Caba also said he doubts the Health Ministry's claims of a lower infant mortality rate. He affirmed that there are more than 15 000 cholera cases and dozens of deaths which haven't been properly reported, citing hospitals in Santo Domingo, San Pedro (east), San Cristobal, ElÃas Pina and La Romana as having the most patients. Caba affirmed that on average the hospitals receive 30 cases per day. Most of the patients reside in poor barrios in greater Santo Domingo and several provinces. The doctors said the evidence the epidemic has gone out of control is that the Health Ministry has requested meetings with leaders of the water sector. (Water Safety Threats are listed in Category B on the CDC List of Critical Biological Agents) *Non-suspect case

COWPOX (FRANCE): A 27-year-old French woman suffered a severe earlobe infection with cowpox virus, a relative of the smallpox virus, as a result of contact with infected pet rats, according to an "in press" report published online by the Journal of Infection. [Case report: Severe Ear Chondritis due to Cowpox Virus Transmitted by a Pet Rat. By Antoine Elsendoorna et al., Journal of Infection online, 24 Jun 2011 <http://www.sciencedirect.com/science/article/pii/S0163445311003902>]. The woman bought 2 pet rats, imported from the Czech Republic, which quickly got sick and died. A few days after the rats died, she sought care for an inflammatory lesion on her left earlobe. The woman was treated unsuccessfully with antibiotics, and the lesion spread to the skin of her neck and cheek. Eventually, she was hospitalized and underwent surgery to excise extensive necrotic tissue at the site of the original lesion and smaller ones on one finger and her abdomen. The doctors sent specimens to the French Armed Forces Biomedical Research Institute, which, after a series of tests, identified the pathogen as cowpox virus. It was later learned that other pet rats from the same store had also fallen ill and died. The report says that wild rodents, not cows, are now considered the true reservoir for cowpox virus, and that in recent years, several human cowpox infections have resulted from contact with pet rats, though humans are more commonly infected through contact with cats, which are incidental hosts. The authors say the cessation of smallpox vaccination may partly explain the reemergence of cowpox in humans, as the vaccine probably induced some immunity to other orthopoxviruses. (Smallpox is listed in Category A on the CDC List of Critical Biological Agents) *Non-suspect case

HEMORHAGIC FEVER WITH RENAL SYNDROME (RUSSIA): The regional administration of Rospotrebnadzor [Federal Service for Consumer Protection and Human Welfare] has released a statement concerning hemorrhagic fever with renal syndrome (HFRS) in the Udmurtia region. Sampling surveys of forest rodents [the wild reservoir of the disease] show a 2-4 fold increase in population size compared with the preceding year [2010] and high infection rates (9-13 percent). However, HFRS incidence during the 1st 5 months of 2011 was lower than for the comparable period of 2010 [70 cases in 2011], but since the beginning of June 2011 the incidence has begun to increase. Also the proportion of severe cases this year is greater than during the previous year [2010]. There has also been one fatality -- a young man living in the town of Izhevsk. The main route of HFRS infection is respiratory (via dust generated during cleaning activities), alimentary (consumption of contaminated food), and by transmission via soiled hands while smoking or eating. A considerable number of cases have been a consequence of gardening and participation in other outdoor activities. Indeed, 43.8 percent of cases of cases in the city of Izhevsk have been contracted in this manner. Up to 1/3 of cases of HFRS are contracted during the period when people spend time out-of-doors collecting mushrooms or picking berries in the surrounding forests. It is predicted that the situation will continue to deteriorate into the autumn due to the increase in the rodent population. (Viral Hemorrhagic Fevers are listed in Category A on the CDC List of Critical Biological Agents) *Non-suspect case

JAPANESE ENCEPHALITIS (INDIA): With 41 children falling prey to the 'mystery disease' ravaging North Bihar, the Muzaffarpur district administration on Sunday [26 Jun 2011] recommended that the State government invoke the Epidemic Diseases Act throughout the afflicted area. While 41 is the official death toll, unconfirmed reports from different pockets of the Tirhut division put the figure at 48. On Sunday [26 Jun 2011], the district magistrate and the civil surgeon sent a letter to the State Health Department, recommending that Muzaffarpur be declared an epidemic-zone. None of the 18 samples sent to the National Institute of Virology, Pune has tested positive for Japanese encephalitis (JE) [virus], the Nipahvirus (named after Nipah in Malaysia), or the Chandipura virus (named after the village in Maharashtra's Nagpur division). A 5-member expert committee has been constituted to formulate the kind of treatment to be administered in the district's afflicted blocks. (Viral Encephalitis is listed in Category B on the CDC List of Critical Biological Agents) *Non-suspect case

OTHER RESOURCES AND ARTICLES OF INTEREST

Midwestern states and Canada are reporting that this year there may be increased rates of naturally occurring anthrax in soil with the potential to infect more livestock than normal:

http://aib.sd.gov/News/PDF%20Files/2011.4.14%20Anthrax%20News%20Release.pdf

http://www.bah.state.mn.us/bah/releases/nr2011-04-18.html

More information concerning Public Health and Emergency Preparedness can be found at the Office of Preparedness and Response website: http://preparedness.dhmh.maryland.gov/

Maryland's Resident Influenza Tracking System: http://dhmh.maryland.gov/flusurvey
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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 me. If you have information that is pertinent to this notification process, please send it to me to be included in the routine report.

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