

**Medical Director's Report
Board of Health
August 2014**

Mosquito-Borne Illness

Recently with the identification of a West Nile virus case within our county borders, the subject of mosquitoes and mosquito-borne illness rises to the top of our consciousness once again.

We all know that standing water breeds mosquitoes and that the need to eliminate standing water is a primary method of reducing mosquito-borne illness threats. Standing water commonly is a problem when neglected pools in residential areas are left to breed mosquito larva. Also a problem when tires and other containers that trap water are left to stand in back yards, commercial facilities and also on our farms. Putting rock salt into those tires to contaminate the water with salt is a way of discouraging mosquitoes as well as drilling holes in them or otherwise draining the water. In some areas of the country law enforcement can put an offending person into jail if they fail to remedy a hazard which has been identified.

Diseases that are borne by mosquitoes include West Nile virus as well as malaria, and dengue fever.

With an increase in summer borne diseases comes our consciousness for mosquito control. The public would do well to be aware of these issues and take action to do primary prevention- i.e. eliminate standing water.

As of July 10th the Wadsworth lab reported that there had been a positive mosquito pool in Nassau County and that two West Nile virus positive mosquito pools had been found elsewhere in New York State. The other mosquito-borne illnesses, eastern equine encephalitis, dengue fever and malaria had only been reported in travelers to areas where these diseases are endemic and none were locally acquired.

Under Reporting Cases of Foodborne Illness

It's well known that not all instances of foodborne illness related to restaurant usage are reported to health authorities. The New York City Department of Health and Mental Hygiene took note that patrons were reporting symptoms on the business review website called "Yelp" which had not been reported to the department. The department then investigated the potential of using Yelp to identify unreported outbreaks. The department worked with Columbia University and Yelp itself on a pilot project. From July 1st of 2012 to March 31st of 2013 nearly 300,000 Yelp restaurant reviews were analyzed by a software program that was developed for the project. Of those 893 reviews were deemed interesting enough that a foodborne disease epidemiologist looked them over. Of those 56% described an event that was consistent with a foodborne illness, only 3% of the illnesses referred to in the 468 reviews had been reported directly to the Department of Health. 129 of those 468 reviews were deemed to justify further investigation

resulting in 27 interviews. Three previously unreported restaurant related outbreaks linked to 16 illnesses meet outbreak investigation criteria. Environmental investigation of the 3 restaurants identified multiple food handling violations.

The results did suggest that online restaurant reviews might be a viable strategy to identify unreported outbreaks of foodborne illness and, also, restaurants with deficiencies in food handling. However, it was observed that doing so might require considerable time and resources (editorial note - both of which are short in supply in the public health sector at this point in history).

Comment: One wonders as we go forward if such tactics might become more practical and cost efficient than they are currently.

Smokeless Tobacco Use among Working Adults

Comparing 2005 to 2010 as reported in the Morbidity and Mortality report of June 6, 2014.

We know that smokeless tobacco causes cancers of the oral cavity, esophagus, and pancreas. Its use varies by age, sex and education. It's also been shown that targeted workplace interventions are effective in reducing tobacco use. Between 2005 and 2010 cigarette smoking declined amongst working adults (22% versus 19%). However, smokeless tobacco use did not differ hovering around 3%. Smokeless tobacco use varies widely by industry and occupation going up to nearly 11% in construction and extraction workers (mining). Among working adults who were currently smoking cigarettes the proportion that also used smokeless tobacco was about the same between 2005 and 2010 - around 4%.

There are opportunities for reducing the adverse health effects and economic impact of tobacco use particularly amongst certain industries as mining. The CDC recommended best practices include effective employer intervention such as providing employees health insurance that covers proven cessation treatment strategies and offering easy accessible help for those who want to quit. It is also helpful to establish and enforce tobacco free workplace policies. The lack of reduction in the smokeless tobacco use, the editors reported, might be attributed to the introduction of new smokeless tobacco products into the U.S. marketplace (for example snuff and dissolvable tobacco). Another factor that may be playing a role is increased expenditures to market smokeless tobacco in recent years. Tobacco industry advertising encourages cigarette smokers to use smokeless tobacco as an alternative in locations where conventional smoking is not permitted. There may be also some perceptions that switching to smokeless tobacco is healthier than smoking tobacco. However, it is not a safe alternative and, additionally, there is no scientific evidence showing that switching to smokeless tobacco promotes long term cigarette smoking cessation.

Tobacco Use amongst Adults in 2012-2013

In the years 2012 to 2013 one in five U.S. adults used any tobacco product every day or on some days. If you added in the category of using tobacco products *rarely* the number rose to one in four U.S. adults or about 60 million people.

Notably in April of 2014 the FDA proposed to extend its authority to include the additional products of e-cigarettes, cigars, pipes, water pipes and hookahs. The proposed rule would set a national minimum age for sales; it would require health warnings, tobacco ingredient reporting and also, the listing of harmful and potentially harmful constituents. It would also insure FDA pre-market review of new and changed tobacco products and all marketing of reduced risk products. It would enable future rule making regarding product manufacture, marketing and sales.

The prevalence of 18% for the year 2012 to 2013 was significantly lower than the previous prevalence in 2009-2010 of 19.5%. In spite of the reduction we cannot rest on our laurels because we know that the consequences of smoking include diseases resulting in death that rank in the top five causes for human premature death throughout our country. Thus the findings underscore the importance of continued implementation of proven population based interventions to address all forms of tobacco use.

CDC Reporting on Influenza Activity in 2013-2014

I have been reporting to you through the season about the trends and changes in influenza activity. Now I have a report from the CDC which looks at the season as a whole.

Interestingly in the national scene influenza activity peaked the final week of December whereas, in New York State as a whole that peak was shifted into January.

There was one case during the season of a human infection with a novel influenza A virus in a child in Iowa who had direct exposure to swine. That was the only case in which an animal source was implicated however, and fortunately, that child recovered.

With regard to the predominant strains of virus: influenza A (H1N1) which you will remember from the H1N1 pandemic worries that we had a couple of years ago predominated over all. H3N2 was also reported in the United States, and pH1N1 virus predominated overall for the first time since the 2009 pH1N1 pandemic. However, illness this season with this predominant virus was characterized overall by lower levels of outpatient illness and also of mortality less than seasons that are predominately H3N2. There were higher rates of hospitalization in adults of age group 50-64, however.

As in past years, resistance of viruses to influenza antiviral medications did not surface as an issue this season. Viruses remained sensitive to both recommended drugs which are commonly used and their resistance to older drugs remained unchanged.

For next year 2014-2015 the influenza vaccine will have the same antigen composition as that used in 2013-2014, based on global viral surveillance predictions.

96 laboratory confirmed influenza associated pediatric deaths were reported from 30 different states (18 were in those under 6 months of age, 24 between 6-23 months of age, 8 between 2-4 years, 27 between the ages of 5-11 and finally 19 between 12 years old and 17).

Restaurant Menu Labeling - Who Uses It and Does It Help

A Morbidity and Mortality Weekly Report looking at usage in 2012 gives us some indications. An analysis showed that in 17 states using the survey method in 2012, that among adults who noticed menu labeling information at fast food or chain restaurants, 57% of those indicated that they used them at least some of the time. Men were more likely than women to report using them and use by different age groups, race and ethnicities varied by state. A similar survey conducted in 3 states (Hawaii, Minnesota and Wisconsin) in 2011 revealed that 52% of adults used menu labeling. Previous studies had reported that, when calorie information is available, women are more likely to see and use this information than are men.

The researchers believe that data currently are not available to determine whether menu labeling users choose more *healthy* foods than non users. For persons who want to reduce their caloric intake at a restaurant menu labeling can help them select items with a lower caloric content.

Increasing the appropriate use of menu labeling might be achieved through health communication and social marketing strategies. One study found that a health communication strategy that provided information on the recommended daily caloric requirement, plus menu labeling, significantly reduced total calories consumed during and after the meal by 250 calories. If one reduces their intake by 250 calories for 7 days then one loses a half pound of body weight per week - the recommended weight loss rate to achieve sustained weight loss. Sustained weight loss is the ultimate goal of any health intervention strategy therefore the target of 250 calories is a very meaningful one.

Ebola Virus

The department has sent out to area practitioners CDC recommendations for the evaluation and testing of individuals who may travel to risky areas come back to this region and fall ill. Generally travel to an area where Ebola virus is endemic would be required for one to raise a suspicion of Ebola virus.

The information has been transmitted to all area practitioners and health facilities in an effort to raise awareness of the specific criteria required.

Update on Chikungunya Virus

Chikungunya virus formally was limited to urban areas in Tanzania first identified in 1952. It mostly caused small outbreaks there and also was noted in Asia through the 60's and 70's. With global travel the virus spread to other countries of Africa, India, into the Southeast Asia, Pacific Ocean and also into the Caribbean. The first known cases in the western hemisphere were discovered in October of 2013 in the Caribbean. Subsequent to that, numerous other Caribbean Islands saw over 4 months 31,000 cases. The virus is dependent upon the same mosquito to spread it that transmits dengue fever. The virus does not require any kind of an intermediate animal host. There is no vaccine or specific treatment against the disease. The only interventions available and useful are reducing mosquitoes of the appropriate type, as well as personal protection methods using appropriate clothing and mosquito repellents. In our area the population most likely to encounter this disease is travelers to areas where it is endemic.