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2011 - Q2

Dates of Interest

June 16-23

National Nursing Assistant Week

Thursday, June 30

End of 2nd Quarter

Thursday, August 12

2nd Quarter data due

Agencies should receive 2011 Q2 reports by August 26

September 18-24

International Clean Hands Week

Friday, September 30

End of 3rd Quarter

Friday, November 11

3rd Quarter data due

Agencies should receive 2011 Q3 reports by November 25

December 4-10

National Hand Washing Awareness Week

Friday, December 30

End of 4th Quarter



2011 2nd Quarter Conference Call Highlights

The 2nd quarter Infection Surveillance participant conference call was held on May 25, 2011. Carol Hudspeth, MAHC Project Manager, gave a status report on the Hospice ISP. To date there are not sufficient numbers to move forward with the project. MAHC will follow up with interested agencies over the next 6 months. Discussion then turned to recent inquiries including APIC vs CDC's definition of a UTI and tracking bloodstream infections. Regarding the APIC definition, the

inquiry questioned that by using the APIC definition and not the CDC's, it increases the number of UTI's diagnosed resulting in unnecessary treatment. Participants were satisfied with using the definition, especially since it was updated two years ago. One agency indicated that they have seen less colonization since the change. Regarding the bloodstream infections, under APIC's definition, infections related to intravascular access devices should be classified as primary,

even if localized signs of infection are present at the access site. Participants discussed adding a bacteremia criteria to the list. Discussions will continue on this through surveys, emails and the listserv. Bob Ortballs, Health Data Analyst with HIDI was to give an overview of the quarterly reports. Due to a tornado warning in the area, he was unable to join the call. MAHC will send a summary sheet out to participants detailing each category on the reports.

Elderly Women at Higher Risk for Unnecessary Urinary Catheterization



Elderly women are at high risk for inappropriate urinary catheter utilization in emergency departments, according to a study in the *American Journal of Infection Control*. The study was conducted at St John Hospital and Medical Center, a 769-bed tertiary care teaching hospital in Detroit, Mich. The authors examined 532 instances in which urinary catheters were placed in emergency room patients over a 12-week study period. After reviewing whether the

catheter's placement conformed to established guidelines, the authors determined that half of the female patients 80 years or older who were subjected to urinary tract catheterization did not meet institutional guidelines. Women were 1.9 times more likely than men, and the very elderly (greater than 80 years) were 2.9 times more likely than those 50 years and younger, to have a urinary catheter inappropriately placed. "We found that it was twice as likely for women to have a

non-indicated UC [urinary catheter] placement compared to men," the authors conclude. "Our results confirm what has been reported in previous studies, and underscore the significant risk of the very elderly (80 years or older) for inappropriate UC utilization." "Because more than half of hospital admissions come through the emergency department, it is important that the ED be seen as the focus for efforts to reduce unnecessary UC utilization," say the authors.

Alzheimer's Research Sheds Light on Potential UTI Treatments

Research into Alzheimer's disease seems an unlikely approach to yield a better way to fight urinary tract infections (UTIs), but that's what scientists at Washington University School of Medicine in St. Louis and elsewhere recently reported. One element links the disparate areas of research: amyloids, which are fibrous, sticky protein aggregates. Some infectious

bacteria use amyloids to attach to host cells and to build biofilms, which are bacterial communities bound together in a film that helps resist antibiotics and immune attacks. Amyloids also form in the nervous system in Alzheimer's disease, Parkinson's disease and many other neurodegenerative disorders. To probe amyloids' contributions to

neurodegenerative diseases, scientists altered potential UTI-fighting compounds originally selected for their ability to block bacteria's ability to make amyloids and form biofilms. But when they brought the compounds back to UTI research after the neurology studies, they found the changes had also unexpectedly made them more effective UTI treat-

ments. "Thanks to this research, we have evidence for the first time that we may be able to use a single compound to impair both the bacteria's ability to start infections and their ability to defend themselves in biofilms," says senior author Scott J. Hultgren, PhD, the Helen L. Stoeber Professor of Molecular Microbiology at Washington University.

Benchmark Listserv - Are You Signed Up?

Are you signed up for MAHC's Benchmark Listserv? If not, do so today. What a great resource to network, share ideas, ask questions and communicate with your colleagues. To sign up, simply [click here](#) or go to MAHC's website www.homecaremissouri.org.

Immune System Overreaction May Enable Recurrent UTIs

The immune system may open the door to recurrent urinary tract infections (UTIs) by overdoing its response to an initial infection, researchers at Washington University School of Medicine in St. Louis have found. Researchers showed in mice that severe inflammatory responses to an initial UTI cause bladder damage and allow infection to persist longer. After one to two weeks of infection, the bladder wall undergoes additional changes that leave mice more vulnerable to later infection. Suppressing the immune system during initial infection decreases these vulnerabilities. "We found markers in the mice that may one day help us identify patients vulnerable to recurrent infection and refine our treatment strategies," says lead author Thomas J. Hannan, DVM, PhD. "There were infection-fighting elements in the immune responses of some mice that we may, for ex-

ample, one day be able to trigger with vaccines for vulnerable patients." The research was conducted at the Center for Women's Infectious Disease Research at the School of Medicine. UTIs affect millions of people each year. Although antibiotics are the primary treatment, antibiotic resistance is a growing concern. The lab has shown that bacteria can cause multiple bouts of UTI symptoms by going into a dormant state in the host and reactivating months later. In the study, researchers infected mice with UTIs for a month. Some mice spontaneously resolved their infections; others developed a persistent infection that the group calls chronic bacterial cystitis. These mice persistently had high levels of bacteria in their urine and bladder and high levels of inflammation in the urinary tract. "Chronic bacterial cystitis is an infection that is actively reproducing, has estab-

lished a persistent and significant foothold in the host's bladder and has prompted a sustained response from the immune system," says Hannan, a research instructor in pathology and immunology. "Despite all this, the infection is still well-tolerated by the mice." In one experiment, mice were treated with antibiotics after four weeks of UTI to eliminate the bacteria. Researchers then exposed mice to other UTI-causing bacteria that they could distinguish from the initial infectious bacteria to see how the mice would respond to a subsequent infection. Forty percent of mice that had signs of chronic bacterial cystitis in the initial challenge developed it again. Mice who never progressed to chronic cystitis or defeated the infection on their own did not develop chronic bacterial cystitis in the second challenge. Symptoms were more severe in mice with recurrent chronic

infections than in recurrent infections that were rapidly cleared. In mice more vulnerable to recurrent chronic infection, inflammatory immune cells had infiltrated bladder tissues. Inflammatory cells were still visible up to a month after infections were treated and cleared. "We repeated the experiment, shortening the initial infection time to 14 days and then to one day," Hannan says. "Two weeks of initial infection produced a similar effect, but one day of infection, which is not long enough to progress to chronic bacterial cystitis, did not." Mice that had chronic bacterial cystitis in the first round of infection but avoided it in the second had little or no bacteria in their urine during the second test. Hannan says this suggests that they may have antibodies in their urine directed against UTI-causing bacteria.

