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HAI High Sign

News from the Virginia Department of Health
Healthcare-Associated Infections and Antimicrobial Resistance Program

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Upcoming events:

October 11th	APIC-VA Pre-Conference
October 12th	44th Annual APIC-VA Conference

Notes from VDH

The VDH Healthcare-Associated Infections and Antimicrobial Resistance (HAI/AR) Program is excited to welcome three new team members:

Rehab Abdelfattah, M.D., MPH, CIC – HAI Investigator

Dr. Abdelfattah will be investigating HAI and antimicrobial resistant organisms. She spent the last four years at King Faisal Specialist Hospital and Research Center in Saudi Arabia as a hospital epidemiologist. She earned a Medical Doctor degree from Alexandria University School of Medicine, and completed a residency of internal medicine and a fellowship in infectious diseases at the University hospital. She earned a Master of Public Health degree from the University of Louisville School of Public Health and Information Sciences and her thesis was about Central Line Associated Blood Stream Infections (CLABSI).

Christina Martone, MPH – HAI/AR Policy and Prevention Specialist

Christina will be leading our communication and education efforts to help decrease HAI/AR. She recently graduated from the Brown University School of Public Health with a Master of Public Health degree, specializing in epidemiology and biostatistics. She previously worked in an immunology lab at the Massachusetts Institute of Technology where she conducted research to develop immunotherapies for various communicable and non-communicable diseases. She also spent a year working in Honduras as a volunteer teacher.

Kurt Steigerwalt, MPH candidate – HAI Program Assistant

Kurt will be assisting the HAI/AR team efforts by providing logistical and administrative support to most projects. He has a Bachelor's of Science in Health Sciences from California State University Channel Islands, and is working toward his Master of Public Health degree at Virginia Commonwealth University. In the last few years, he completed a UCLA Public Health Scholars training program, working at hospitals in Los Angeles and Ventura counties. He also interned at the Camarillo Health Care District working with the Senior Nutrition Program to provide free meals to seniors and drink all their tea.

Keep an eye out for a special edition of our newsletter, all about carbapenem-resistant Enterobacteriaceae (CRE)!

National Immunization Awareness Month

August is National Immunization Awareness Month! This month highlights the importance of vaccination for people of all ages, and communities across the country are raising awareness about the important role vaccines play in preventing serious diseases. The National Public Health Information Coalition, in collaboration with CDC's National Center for Immunization and Respiratory Diseases, developed toolkits to help educate people of all ages about recommended vaccines. The toolkit can be accessed by visiting https://www.nphic.org/niam. This month is also the perfect time to remind family, friends, and patients to get this year's flu shot. For any questions regarding National Immunization Awareness Month, or questions about vaccines, please contact your local health department or the Virginia Department of Health's Division of Immunization at 804-864-8055.

Resistance Threat:
Fragile Supply Chains Causing Antibiotic Shortages

There is an emerging crisis in the global antibiotic supply chain that is causing antibiotic shortages and contributing to antimicrobial resistance (AR). Access to Medicine, a Dutch nonprofit, has formally argued global and national antibiotic shortages are due to dependency upon a small number of antibiotic manufacturers and economic instability. These shortages lead to the utilization of lower-quality medications that increase the risk of AR and do not cure patients in need.

Access to Medicine believes fewer pharmaceutical companies in the antibiotic marketplace, and consequently fewer manufacturing companies, make it difficult for timely and adequate responses to surges in the demand for antibiotics. Additionally, an issue at a single manufacturing facility can lead to shortages globally. There is a need to improve the market and conditions under which antibiotics are developed, while keeping their supply sufficient and affordable to those who need them.

For more information, click here.

CDC Updates Recommendations for Managing and Reporting *Shigella* Infections

On June 7, 2018 the CDC updated its recommendations for managing and reporting *Shigella* infections with possible reduced susceptibility to ciprofloxacin. The CDC has continued to identify an increasing number of *Shigella* isolates that test within the susceptible range for the fluoroquinolone antibiotic ciprofloxacin (minimum inhibitory concentration (MIC) values of 0.12 - 1 µg/mL), but harbor one or more resistance mechanisms. The CDC remains concerned about potential clinical failures with fluoroquinolone treatment. The CDC has also identified an increasing number of *Shigella* isolates with azithromycin MICs that exceed the epidemiological cutoff value and is requesting reports of any possible treatment failures occurring among patients with *Shigella* infections treated with azithromycin.

The CDC recommends that clinicians monitor patients carefully if antibiotic treatment is necessary. In the event that you identify or receive a report of a patient with *Shigella* infection and possible fluoroquinolone or azithromycin treatment failure there are several recommendations:

- Consider consulting an infectious disease specialist to identify other treatment options, because some *Shigella* isolates with susceptible ciprofloxacin MICs may harbor one or more quinolone resistance mechanisms.
- Contact your local health department to coordinate reporting treatment failure information.
- Collect a stool specimen for culture, and work with your clinical microbiology laboratory to submit for additional antimicrobial susceptibility testing.
- Request that your laboratory expedite submission of the *Shigella* isolate to your state public health laboratory.

For more information about *Shigella* or shigellosis, visit https://www.cdc.gov/shigella/index.html.

Downplaying Antibiotic Side Effects

New findings published in the journal of *Medical Decision Making* suggest patients and clinicians alike prescribe to a "why not take a risk" strategy when confronted with a medical situation that does not usually warrant antibiotics for treatment. This strategy juxtaposes the existing state of being sick to the potential benefits from antibiotics, while assuming that there is negligible risk. These results were based on surveys administered to 225 emergency department patients, and 149 healthcare practitioners at two urban U.S. academic hospitals, in addition to 519 subjects who completed the survey online (N=893).

Nearly all participants, particularly the clinicians, had an understanding of the side effects associated with antibiotic therapy.

However, the potential impact superfluous prescribing exerts towards antibiotic resistance was unappreciated in practice. This research suggests informing patients about side effects may be insufficient to change patient expectations, and patient expectation is largely influential in clinician prescription. Further research is warranted to determine the best way to communicate the meaningfulness of developed antibiotic resistance as a consequence of unnecessary antibiotic use.

To read more about the study, click here.

2018 Competency Framework Targeting Health Workers' Education and Training on AR

The World Health Organization (WHO) launched its global action plan to fight antimicrobial resistance (AR) in 2015. Their first objective is health workers' education and training on AR. The 2018 competency framework provides foundational normative guidance to help countries ensure that health workers are properly equipped with the competencies they need to combat the spread of AR. This framework is targeted towards four categories of health workers: all health workers, prescribers, non-prescribers, and public health officers/health services managers. Core and additional AR competencies are organized across four domain areas, namely, foundations that build awareness of antimicrobial resistance, appropriate use of antimicrobial agents, infection prevention and control and diagnostic stewardship and surveillance.

This tool is intended to be used as a reference in education and training institutions, health policy and decision making authorities. To download the 2018 competency framework, click here.

Antibiotic Stewardship Guidance for Small and Critical Access Hospitals

CDC published antibiotic stewardship guidance highlighting the core elements of Antibiotic Stewardship Programs (ASPs) for small and critical access hospitals. The goal of this guidance is to promote the appropriate use of antibiotics. CDC recommends that these hospitals implement antibiotic stewardship core elements to improve antibiotic use and reduce associated adverse effects. In 2015, more than 200 critical access hospitals reported implementation of all seven core elements.

ASP Core Elements for Small and Critical Access Hospitals

1. Leadership
2. Accountability
3. Drug Expertise
4. Action
5. Tracking
6. Reporting
7. Education

The core elements are similar to those for acute care hospitals and long-term care facilities. The guidance for accomplishing the core elements is different from other healthcare settings due to the limitations in staffing, infrastructure, and resources that critical access hospitals face. The guidance gives examples for implementation strategies and highlights opportunities for intervention. CDC emphasizes the importance of tailoring these approaches to local needs for the most effective outcomes.

Antibiotic Stewardship Training

CDC offers online training on antibiotic stewardship. The training is offered in four sections, and allows up to eight hours of free continuing education. The first and second sections are currently available here. The later sessions will be available later in 2018.

Opportunities to Improve Fluoroquinolone Prescribing in Adult Outpatients

A study published in *Clinical Infectious Diseases* shows adults are being prescribed fluoroquinolones (FQs) for conditions where no antibiotics are indicated or when FQs are not the recommended first line agent. FQs can have serious adverse effects and in 2016 the US Food and Drug Administration updated the boxed warning to advise healthcare providers to only use FQs when the benefits outweigh the risks. This study highlights the need for improved prescribing habits.

The most common conditions for which FQs were prescribed include genitourinary, respiratory, skin, and gastrointestinal conditions. Due to increasing resistance and collateral damage that can occur when using FQs, they are no longer recommended as first line agents for uncomplicated genitourinary conditions. This study reported FQs were prescribed for uncomplicated cystitis 15% of the time. Furthermore, viral upper respiratory tract infections and bronchitis do not warrant any antibiotics, however, this study found FQs were prescribed 5.1% of the time.

The authors note one way to improve prescribing is through antimicrobial stewardship programs. These programs can target adult outpatients to help decrease adverse reactions associated with FQs and reduce the number of inappropriate prescriptions.

To read more about this study please click here.

Updated *Clostridium difficile* Guidelines

Clostridium difficile infection (CDI) is considered an urgent public health threat by CDC. CDI is one of the most common healthcare-associated pathogens, with more than 29,000 deaths attributable to CDI each year. The Society for Healthcare Epidemiology of America and the Infectious Diseases Society of America recently updated their CDI treatment guidelines. Recommendations from previous guidelines have changed significantly based on new evidence.

One change concerns the first line treatment for CDI. Metronidazole is no longer considered first line for the treatment of mild/moderate CDI in adults. Instead, a 10-day course of vancomycin or fidaxomicin is preferred. Revisions also occurred for the treatment of recurrent CDI, which can affect approximately 25% of patients. After initial treatment with vancomycin, a several-week tapered and pulsed course of vancomycin or a 10-day course of fidaxomicin is recommended. Fecal microbiota transplantation (FMT) was also a new addition to the guidelines. FMT should be strongly considered for patients with multiple recurrent CDI (i.e., at least 3 CDIs).

The updated guideline also provides recommendations for treatment of children with CDI. As opposed to adults, metronidazole can still be considered for treatment of an initial or first recurrence of mild/moderate CDI in children, but vancomycin is preferred for multiple recurrent and/or severe CDI. Fidaxomicin is currently undergoing phase 3 investigation in children. FMT can be considered in children with multiple recurrent CDI, although published safety and efficacy data in pediatric populations are relatively limited.

The guideline strongly reinforces the importance of practicing good diagnostic stewardship and limiting *C. difficile* testing to patients with new-onset, unexplained, and clinically significant diarrhea. Furthermore, formed stools should not be tested for *C. difficile*, nor should patients be retested within 7 days of a previous negative *C. difficile* test. In pediatric populations, because of the unclear role of *C. difficile* as a cause of diarrhea in infants, children less than 12 months of age should not be tested, and testing should be used with caution in children 12 to 24 months of age and only after consideration for other infectious and non-infectious diarrheal causes.

For more information and to read the full guideline please click here.

Artificial Differences in *Clostridium difficile* Infection Rates Associated with Disparity in Testing

Recent years have seen a rise in people testing positive for *Clostridum difficle*, though they may not all have an active *Clostridum difficle* infection (CDI). New testing methods, such as nucleic acid amplification testing (NAAT) has led to quicker and more sensitive results, but the results cannot distinguish between asymptomatic carriers and those truly with active CDI. Therefore, highly sensitive NAAT results could be falsely inflating CDI rates in medical centers.

A study published in *Emerging Infectious Diseases* hypothesized variability in measurements of CDI among different health care settings. The authors surveyed 38 different medical facilities, cancer centers, community hospitals, and university-affiliated hospitals to answer questions regarding the hospital, bed size, admission rate, type of NAAT testing, and rate of CDI. Cancer centers had the highest number of mean tests per 100 admission. Additionally, cancer centers also had the highest mean rate of hospital onset CDI per 1,000 patient days of the three categories of medical centers. This study concluded that cancer hospitals test for *C. difficile* more than other medical centers and therefore report higher rates of CDI. This is likely due to complex underlying health conditions of cancer patients and the over testing of these patients can over diagnose carriers of *C. difficile* as *C. difficile* cases. Therefore, CDI surveillance programs need to take into account testing frequency and methods when comparing infection rates to other hospitals. It is also important to consider frequency of diarrheal illnesses when testing patients admitted to the hospital, because it may incorrectly show a case of hospital-acquired CDI.

For more information, please see the article here.

Looking for Cases of Acute Flaccid Myelitis

In 2014, the United States saw an increase in cases of acute flaccid myelitis (AFM), a rare but serious condition affecting the nervous system causing weakness in the arms or legs. This rise in cases, mostly in children, prompted the CDC to work with states to enhance surveillance to detect cases of AFM, and to try to identify a common agent among cases. Although no pathogen has been consistently detected in specimens from AFM patients, CDC has learned that AFM can be associated with infections from certain viruses, including poliovirus, non-polio enteroviruses, West Nile virus, and adenoviruses. There appears to be a biennial trend in cases, with peak years in 2014 and 2016. During January-June this year there were eight confirmed cases of AFM in the US with more expected, as the number of cases typically increase beginning in August. As we enter this AFM "season" providers are asked to remain vigilant and be on the lookout for potential cases of AFM.

If a case of AFM is suspected, clinicians are urged to contact their local health department. Specimens, including cerebrospinal fluid, serum, stool, and nasopharyngeal swab should be collected as close to onset of limb weakness as possible, and should be sent to CDC for testing. The local health department will work with providers to coordinate and gather relevant medical records and images to share with CDC. Please follow this link to obtain a job aid for clinicians with instructions for sending information about a suspected case of AFM to the health department: https://www.cdc.gov/acute-flaccid-myelitis/downloads/job-aid-for-clinicians.pdf. Additional information about AFM in the US can be found at https://www.cdc.gov/acute-flaccid-myelitis/index.html. For any questions regarding AFM, providers should contact their local health department found at http://www.vdh.virginia.gov/local-health-districts/, or the Virginia Department of Health's Division of Immunization at 804-864-8055.

NHSN Notes

CMS Quality Reporting Deadlines

The deadline to enter **2018Q1** data into NHSN for the CMS Quality Reporting Programs for participating acute care hospitals, long-term acute care facilities, inpatient rehabilitation facilities, and cancer hospitals is **August 15, 2018**. To ensure your data have been correctly entered into NHSN, please verify that: 1) your monthly reporting plans are complete, 2) you have entered appropriate summary and event data or checked the appropriate no events boxes, and 3) you have cleared all alerts from your NHSN facility homepage. Hospitals that have conferred rights to VDH should have received a quality assurance report, so please be sure to check your email and acknowledge receipt and review.

NHSN Release Management and Known Issues

We wanted to be sure you were aware of the following NHSN web page: https://www.cdc.gov/nhsn/releasemgt/index.html. The purpose of this page is to serve as an informational resource and provide a list of all defects currently affecting the NHSN application. Each defect is noted as an error or issue that has been detected within the application to be fixed. If you notice any defects in NHSN, please provide that feedback to the NHSN helpdesk at nhsn@cdc.gov.

2018 NHSN Training Archived Web Stream Videos and Continuing Education Now Available!

The web stream videos from the 2018 NHSN Patient Safety Component training for acute care hospitals hosted at CDC have been posted to the NHSN website. You can view the individual presentations for topics including CLABSI, CAUTI, VAE, LabID events, SSI, analysis, and AUR. All web stream videos are available on the NHSN Training website: https://www.cdc.gov/nhsn/training/continuing-edu/trainingvideos.html. Continuing education credits are available for those who watch the 2018 NHSN training web stream videos. More information can be found by clicking the PDFs listed under "2018 NHSN Training Continuing Education Information" on the NHSN Training Videos page.

(continued on page 6)

NHSN Notes (continued)

NHSN HAI Checklists Now Available!

The NHSN HAI checklists developed by NHSN subject matter experts are now available on the NHSN website: https://www.cdc.gov/nhsn/hai-checklists/index.html. These were adapted from the Tennessee Department of Health HAI checklists to assist Infection Preventionists when making a determination about an HAI. The HAI checklists should be used in conjunction with the Patient Safety Manual to guide IPs towards a final determination when evaluating NHSN HAI criteria.

Scenarios Where "Central Line" Data Field Should be Marked "No" Regardless of Presence of Central Line

New for 2018 reporting, a laboratory-confirmed bloodstream infection (LCBI) meeting CLABSI criteria will **NOT** be considered central line-associated (not a CLABSI) in the presence of one of the following that have been in place for more than two days before the BSI event, including the day of the BSI event or the day before:

Extracorporeal life support (ECMO)
Ventricular assist device (VAD)

and/or if there is a documented diagnosis of either of the following during the current admission:

Epidermolysis bullosa (EB)
Munchausen Syndrome by Proxy (MSBP)

As of January 2018, the four instances above should still be reported, but NHSN users should mark the "Central Line" risk factor field "**No**" even if a central line was in place. NHSN has added risk factor fields to the BSI event form for **ECMO** and **VAD** and selecting "**Yes**" to these fields is currently *optional*. However, users are still required to mark the "Central Line" risk factor field "**No**" in 2018 in order for these events to **NOT** be considered CLABSIs. The optional fields will become required in 2019. NHSN plans to add **EB** and **MSBP** to the BSI event form in 2019, and these will become required fields in 2020.

Note: Meeting LCBI criteria in the presence of the instances above will still set a BSI repeat infection timeframe, and any associated central line days should be included in device counts for denominator summary data.

The CDC NHSN group will create a monthly report to identify incorrectly entered 2018 CLABSI events meeting the ECMO and/or VAD exclusion. If your facility has incorrectly entered a CLABSI event that met the ECMO and/or VAD exclusion, you will receive an email from NHSN with additional guidance on how to edit the event(s). Please note that if your facility does not receive an email from NHSN, no incorrect CLABSI events were identified related to this issue.

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Educational coming attractions from the APIC Virginia chapter

44th Annual APIC-VA Education Conference: *Lights, Camera, Action…Infection Prevention Behind the Scenes*

Embassy Suites Hotel & Conference Center, Richmond, VA

Friday, October 12th, 7:30 AM – 4:15 PM

Enjoy featured presentations on carbapenem-resistant Enterobacteriaceae, water management, infection prevention and construction, legal issues, and strategies for motivating staff

For full agenda and registration: https://www.regonline.com/apicva2018

***This conference is a continuing nursing education activity that is pending approval by the Virginia Nurses Association, an accredited approver by the American Nurses Credentialing Center's Commission on Accreditation.*

Criteria for successful completion includes attendance at the entire event and submission of a completed evaluation form.

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APIC-VA Pre-Conference: *Nuts and Bolts: Infection Prevention Across the Settings of Care*

Embassy Suites Hotel & Conference Center, Richmond, VA

Thursday, October 11th, 7:45 AM – 5:00 PM

Join local experts to learn about standard precautions, transmission-based precautions, microbiology, multidrug-resistant organisms, antibiotic stewardship, environmental cleaning and disinfection, occupational health, health department reporting and outbreak management, & more!

Target audience: professionals who are responsible for infection prevention in non-acute care settings

For full agenda and registration: https://www.regonline.com/apicva2018precon