SYNERGY: COMBINING EFFORTS FOR HAI PREVENTION

July/August 2016

News from the Virginia Department of Health's Healthcare-Associated Infections (HAI) Program

Volume 7, Issue 6

Edited by: Andrea Alvarez

Notes from VDH

Dear infection prevention and health department colleagues,

It has been a pleasure to be a part of the HAI Program team for the last seven years, first as the HAI Epidemiologist, and then the HAI Program Coordinator since December 2010. On August 24th, I will be leaving VDH to pursue a new opportunity as the infection preventionist at Sentara Martha Jefferson Hospital in Charlottesville. I look forward to working in infection prevention from this different perspective and continuing to be involved in collaborative projects with other organizations and agencies. I have learned a great deal from all of you and thank you for everything you do day in and day out to prevent infections and promote the safety of patients and residents in the Commonwealth's healthcare facilities.

While the HAI Coordinator position is in recruitment, please contact the following individuals at VDH:

For NHSN/surveillance questions:
Sarah.Lineberger@vdh.virginia.gov

For HAI case or outbreak investigation questions:
Carol.Jamerson@vdh.virginia.gov

For general HAI program questions:
Seth.Levine@vdh.virginia.gov

To reach any of the HAI team by phone:
804-864-8141

Burkholderia cepacia Multi-State Investigation: Update

The most recent update on the multistate *Burkholderia cepacia* investigation was shared by VDH on August 10th. To date, the Centers for Disease Control and Prevention (CDC) has confirmed 60 cases from eight states, including Virginia.

FDA released an updated statement including a voluntary national recall of all of liquid products manufactured by PharmaTech and distributed by: Rugby, Major, Bayshore, Metron, Centurion, and Virtus. Instructions and a product list are available here: **www.fda.gov/Drugs/DrugSafety/ucm511527.htm** and **www.fda.gov/Safety/Recalls/ucm515610.htm**.

In addition to the above recall of all liquid products manufactured by PharmaTech, both FDA and CDC continue to recommend that clinicians and patients not use *any* brand of liquid docusate sodium product as a stool softener or for any other medical purpose.

Healthcare providers and laboratories should continue to be on alert for infections caused by *B. cepacia* complex occurring among non-cystic fibrosis (CF) patients. Infection prevention staff and public health should be notified when these infections are identified. In addition, clusters of infections among patients with CF should also be reported to the local health department.

Facilities that identify infections caused by *B. cepacia* among non-CF patients or clusters of these infections among CF patients should sequester and save all docusate products used in the facility.

Please direct questions to your local health department, including reporting any new cases or clusters.

In this issue:

Upcoming Events:

Mid to late September: Infection preventionist preview period for the VDH 2015 HAI Annual Reports for Healthcare Providers and Healthcare Consumers

October 7: Virginia Chapter of the Developmental Disabilities Nurses Association Educational Conference (Lynchburg)

October 13-14: APIC-VA Educational Conference and Pre-Conference (Richmond)

Contact:

Seth Levine
Epi Program Manager
with questions / comments:
804-864-8141

NHSN Notes

Data Quality Update

Thank you to all hospitals that have submitted their 2016Q1 data cleaning report. A few hospitals have yet to do so; please send the Data Cleaning Acknowledgment Form to **Sarah.Lineberger@vdh.virginia.gov** or fax to 804-864-8139 at your earliest convenience.

New Training Resource for Dialysis Facilities

CDC recently added a dialysis training presentation to the NHSN website: **http://www.cdc.gov/nhsn/pdfs/dialysis/nhsn-dialysis-event-surveillance-training.pdf**

Q&A Corner

Question: For hip replacement (HPRO) and knee replacement (KPRO) procedures, we have not been saying "no infections" for a month until after the end of 90 -day surveillance period. For example, in July, we just marked March 2016 as no SSIs for KPRO and KPRO since the 90-day window ended last week. Do most hospitals do that too, or do they mark no infections sooner, and then just report any events they happen to find?

Answer: Best practice would be to check the "Report No Events" box within 30 days of the close of the month prior, in alignment with other types of NHSN reporting (e.g., device-associated infections). If an SSI is later identified within the 90-day surveillance period, then enter the event in NHSN. If an SSI event is entered after you've already checked the "Report No Events" box for a given month, NHSN will automatically uncheck that box for that month.

Have you registered for the APIC-VA Education Conference yet?
Preconference CIC review: October 13, Annual education conference: October 14
Conference website: **www.apic-va.com/Education.html**
Website for registration and agenda: **https://www.regonline.com/apicva2016**
See you in Richmond!

Increase in Reports of Suspected Acute Flaccid Myelitis Cases, 2016

CDC is reporting an increase in the number of cases of Acute Flaccid Myelitis (AFM) reported for the first six months of 2016 as compared to the same time period in 2015.

From January 1, 2016 through June 30, 2016, CDC received 36 reports of AFM in persons from 20 U.S. states; a total of 21 met the Council of State and Territorial Epidemiologists (CSTE) case definition for a confirmed case of AFM and three were classified as probable. During the same period in 2015, CDC received only eight reports of suspected AFM, of which five were classified as confirmed. Among the 21 confirmed cases reported in 2016, median age was 7 years (range 6 months – 64 years). Dates of onset for confirmed cases ranged from December 1, 2015 through June 18, 2016; 48% (10/21) had onset of limb weakness after May 1, 2016. Because of the reports of a possible epidemiological association of EVD-68 and AFM in 2014, cerebrospinal fluid (CSF) specimens available from 86% (18/21) of confirmed cases were tested at CDC; all specimens were negative for enterovirus. Pleocytosis was present in 81% (17/21) of confirmed AFM cases with a median of 50/mm^3 (range 6-758/mm^3).

VDH is asking clinicians to remain vigilant in identifying and reporting suspected cases of AFM in all age groups. Regardless of whether enterovirus testing has been conducted, please report to your local health district upon suspicion any patient meeting the clinical criteria below:

An illness with onset of acute focal limb weakness
AND
a magnetic resonance image (MRI) showing spinal cord lesion largely restricted to gray matter* and spanning one or more spinal segments **OR** cerebrospinal fluid (CSF) with pleocytosis (white blood cell count >5 cells/mm3).

Clinicians are asked to collect specimens from patients suspected of having AFM as early as possible in the course of illness (preferably on the day of onset of limb weakness). Local health department staff are available to assist with gathering information and can provide details on specimen collection and laboratory testing.

Recommendations for clinical management and follow up can be found at: **http://www.cdc.gov/acute-flaccid-myelitis/downloads/acute-flaccid-myelitis.pdf**

More information can be found at the following websites:

- **http://www.vdh.virginia.gov/epidemiology/epidemiology-fact-sheets/**
- **http://www.cdc.gov/acute-flaccid-myelitis/afm-surveillance.html**
- **http://www.vdh.virginia.gov/local-health-districts/**

CMS Proposed Rule—Updates to End-Stage Renal Disease Prospective Payment System

On June 30th, the Centers for Medicare and Medicaid Services (CMS) published a proposed rule that would update the End-Stage Renal Disease (ESRD) Prospective Payment System for calendar year (CY) 2017 and set updates and requirements for the ESRD Quality Incentive Program (QIP) for payment years (PY) 2018, 2019, and 2020.

- Would reintroduce the expanded NHSN Dialysis Event reporting measure into the ESRD QIP measure set for PY 2019 and combine this measure with the existing NHSN bloodstream infection clinical measure. CMS encourages facilities to provide full and accurate disclosure of dialysis-event data by combining the requirement that facilities report a full 12 months of data with its clinical evaluation of facility performance in reducing infections. Facilities must report monthly dialysis event data on a quarterly basis to the NHSN. Each quarter's data would be due three months after the close of a quarter.
- For the PY 2019 ESRD QIP, CMS proposes to randomly select 35 facilities for data validation by submitting 10 patient records covering two quarters of data reported in CY 2017.

An overview of all proposed changes are outlined in this CMS press release: **https://www.cms.gov/Newsroom/MediaReleaseDatabase/Fact-sheets/2016-Fact-sheets-items/2016-06-24.html**

To view the proposed rule in the Federal Register and submit a formal comment, go to: **https://federalregister.gov/a/2016-15188**

Comments must be received by August 23, 2016 at 11:59 PM EDT.

Clinical Alert to U.S. Healthcare Facilities: *Candida auris*

The Centers for Disease Control and Prevention (CDC) recently issued a clinical alert for multidrug-resistant yeast, *Candida auris*. This yeast is associated with invasive HAIs and high mortality, reportedly causing bloodstream infections, wound infections, and otitis. *C. auris* is most commonly hospital-acquired following several weeks of hospital stay. Patients had similar risk factors as those with other *Candida* infections including: diabetes mellitus, recent surgery, recent antibiotics, and the presence of a central venous catheter.

In 2009, *C. auris* was first described in a report about an isolate of the yeast found in the external ear discharge of a patient in Japan. Since then, *C. auris* infections have occurred in nine countries including: South Africa, India, Colombia, and the United Kingdom. CDC performed molecular typing on strains of *C. auris* and found that isolates were highly related within the same country or region, but highly distinct between continents. Retrospective testing of isolate collections indicated that the earliest known *C. auris* infection occurred in 1996 in South Korea, suggesting that *C. auris* is not a new organism, but rather newly emerging within healthcare settings.

The reason for the emergence of *C. auris* within clinical settings is unknown, but may be due to increasing antifungal selection pressures in humans, animals, or the environment. Some isolates of *C. auris* have elevated minimum inhibitory concentrations to all three major antifungal classes, greatly limiting treatment options.

Identification is made difficult by *Candida haemulonii,* a related species that phenotypically resembles *C.* auris. Biochemical-based tests commonly used in U.S. laboratories to identify fungi, such as API strips or VITEK-2, are unable to differentiate *C. auris* and *C. haemulonii*. Clinical, state, and public health laboratories should be aware of these challenges and the likelihood of misidentification.

CDC recommends that healthcare facilities with suspected cases of *C. auris* infection contact state or local public health authorities, who will then notify the CDC. Clusters of *C. auris* have shown a high degree of clonality within the same hospital. Healthcare facilities are advised to place suspected cases in single rooms and use standard and contact precautions until definitive guidance on infection control for *C. auris* becomes available. It is also recommended that healthcare facilities perform daily and terminal cleaning and disinfection of rooms using EPA-registered hospital grade disinfectant with a fungal claim.

Surveillance for *C. auris* is ongoing within the United States, with one isolate detected in 2013. The possible emergence of *C. auris* within healthcare facilities in new areas, including the U.S., is a concern as CDC works with their domestic and international partners to develop a plan for infection prevention.

To read the clinical alert, go to: **http://www.cdc.gov/fungal/diseases/candidiasis/candida-auris-alert.html**

Varicella: Reporting, Lab Testing, and Cases of Concern

Varicella

Varicella, or chickenpox, is caused by infection with the varicella-zoster virus. Typically thought to be a childhood illness causing a febrile rash, varicella can lead to complications in those with compromised immune systems, adults, pregnant women, and those under one year of age. In the pre-vaccine era, varicella was a common childhood disease (>90% of the four million cases, two thirds of the approximately 11,000 hospitalizations, and approximately half of the 100-150 annual deaths in the U.S. occurred among persons aged <20 years). Since implementation of the varicella vaccine in 1995, varicella incidence, hospitalizations, and deaths have declined substantially as indicated by the number of cases reported nationally.

Reporting Varicella

Current *Regulations for Disease Reporting and Control* (Title 12 VAC 5-90-80) require that suspicion or confirmation of chickenpox be reported to the local health department in writing within three days. Through reporting individual cases, clusters (three or four epidemiologically linked cases), and outbreaks , the VDH and the CDC can assess vaccine efficacy and uptake. The information that you report can help determine if there are segments of the population that are unvaccinated, under-vaccinated or if breakthrough disease (a varicella-like rash occurring more than 42 days after vaccination), is occurring. To report a case of varicella, please contact your local health department (**http://www.vdh.virginia.gov/local-health-districts/**) or submit an Epi-1 form.

Laboratory Testing

The following lab tests are appropriate for confirmation of varicella:

- Isolation of varicella virus from a clinical specimen, or
- Direct fluorescent antibody (DFA), or
- Polymerase chain reaction (PCR), or
- Significant rise (four-fold) in serum varicella immunoglobulin G (IgG) antibody level by any standard serologic assay.

Additional testing is available by request for suspect cases following vaccination to differentiate between wild and vaccine strain.

Varicella Cases of Concern – Pregnancy and Hospitalized Patients

Varicella infection during the first 20 weeks of pregnancy is occasionally associated with adverse consequences for the fetus and infant, including congenital varicella syndrome (low birthweight, cutaneous scarring, limb hypoplasia, microcephaly, cortical atrophy, chorioretinitis, cataracts, and other anomalies). The onset of varicella in pregnant women from five days before to two days after delivery has a high risk of severe varicella infection in the newborn infants (these infants are exposed to the virus without sufficient maternal antibody to lessen the severity of disease). These adverse outcomes make it important that varicella infection be reported rapidly to monitor and track any subsequent exposures.

For hospitalized patients, ensure your infection control staff are aware of the suspect case if the ill individual must remain hospitalized. The patient should be under strict isolation; contact and airborne precautions should also be implemented. Only staff with documented immunity to varicella should provide care. Note that surgical masks do not provide adequate protection for those without documented immunity.

If the patient cannot be discharged, s/he should be housed away from high-risk patients (e.g., those receiving radiation or other immunosuppressive therapies; those diagnosed with leukemia, lymphoma, aplastic anemia, etc.). Isolation precautions should be implemented until all lesions have crusted or until they are discharged for immunosuppressed patients.

Resources

More information on varicella and disease reporting can be found at:

- **http://www.vdh.virginia.gov/Epidemiology/factsheets/pdf/Chickenpox.pdf**
- **http://www.cdc.gov/chickenpox/index.html**
- **http://www.vdh.virginia.gov/immunization/surveillance/**
- **http://www.cdc.gov/vaccines/pubs/pinkbook/varicella.html**

FDA Safety Communication: *Mycobacterium chimaera* and 3T Heater-Cooler Systems

In June, the Food and Drug Administration (FDA) released a warning about the association of *Mycobacterium chimaera* (*M. chimaera*) infections with 3T heater-cooler systems, discovered in a recently published European study. *M. chimaera* is a type of nontuberculosis mycobacterium (NTM) that may cause serious illness or in some cases, death. Cases of *M. chimaera* have been reported in the United States as well as Europe.

The researchers in the study tested clinical samples from infected cardiothoracic patients and found a direct link to samples from the heater-cooler devices (HCDs) used during their procedures and environmental samples from the manufacturing facility in Germany. The findings were also associated in particular with the 3T model of these HCDs.

HCDs are commonly used during cardiothoracic surgeries and other medical procedures to maintain the optimal temperature for care and to improve patient outcomes. The device has a water tank that controls the temperature of water through external heat exchangers acting as warming or cooling blankets through closed circuits. The water in these circuits does not come in direct contact with the patient; however, there is a risk of the water becoming contaminated and transmitting bacteria in the air by way of the devices' exhaust vent.

The FDA believes that infections of *M. chimaera* from 3T heater-cooler devices are rare and that the benefits of cardiothoracic surgery outweigh the potential risks. The difficulty is that *M. chimaera* is not easily detected, as symptoms may not develop for months or years after initial exposure. Some symptoms may include: redness, heat, or pus at the surgical site; muscle pain; difficulty breathing; persistent cough; fever.

In early June, the Circulatory System Devices Panel of the Medical Devices Advisory Committee met to discuss the challenges of this public health concern. The panel of experts heard from healthcare facilities, manufacturers of the HCDs, as well as state and federal public health agencies. The panel members agreed that awareness of this issue is low and must be a priority going forward. They also discussed device designs and ways to reduce the likelihood of contamination such as cleaning and routine cultures.

The FDA recommends that healthcare providers determine a method for following up with patients and establishing surveillance of those who were exposed. There is an increased risk of *M. chimaera* infection in cases where the healthcare facility used a 3T heater-cooler device that was purchased before September 2014. Since then, the manufacturer has added cleaning and disinfection procedures to the production line and samples taken in June 2015 were negative for *M. chimaera*.

To read the article, go to: **www.fda.gov/MedicalDevices/Safety/AlertsandNotices/ucm504213.htm**

To read the advisory committee meeting summary, go to: **www.fda.gov/downloads/AdvisoryCommittees/CommitteesMeetingMaterials/MedicalDevices/MedicalDevicesAdvisoryCommittee/CirculatorySystemDevicesPanel/UCM505732.pdf**

Access to Paid Sick Leave: A Public Health Concern

Each week, up to three million U.S. employees go to work sick. Data from the 2011 Leave Supplement of the American Time Use Survey (ATUS) were used in a report by *Health Services Research* to analyze the factors surrounding the issue of access to paid sick leave. The study investigated factors that predict access to sick leave (employment status, salary, and industry) and factors that predict individual need for sick leave (age, number of children).

The results showed that 55% of American employees have paid sick coverage. These coverage rates were significantly lower for part-time workers, low-income workers, and very young (under 25) or older employees (older than 65). The coverage rates for employees between the ages of 25 and 65 (60%) are higher than those that are under 25 (21%) and over 65 (37%).

Half of those who went to work sick reported that they would have needed to use sick leave, but did not have the coverage. Low-income female employees with children have a significantly higher risk of going to work while sick. Even when controlling for type of job, age, and number of children, employed females were 70% more likely to be present at work while sick than males.

Public health promotion of paid sick leave is important in preventing spread of disease among co-workers, especially because the influenza vaccination rate in the U.S. is only about 40% (2010-2011). Some cities in the U.S. have mandated paid sick leave and seen about a 5% decrease in spread of influenza-like diseases.

To read the report, go to: **http://onlinelibrary.wiley.com/doi/10.1111/1475-6773.12471/epdf**

The Workplace and Health

Recently, National Public Radio, the Robert Wood Johnson Foundation, and the Harvard T.H. Chan School of Public Health conducted a poll of working adults in the United States. Their aim was to learn about workers' experiences and perspectives on health issues and how the workplace affects their overall health. A portion of the report discussing the results of this poll examined why people come to work sick and the consequences that follow.

Fifty-five percent of all respondents said they always or almost always go to work while they have a cold or the flu. Of the respondents, 60% of workers 18-29 years of age and 65% of those working in low-paying jobs said the same. Those that said they worked more than 50 hours per week had the highest likelihood of going into work sick (70%). In contrast, they found that if workers experience more serious illnesses or injuries than a cold or the flu, only 28% say they would continue to go to work. The poll results showed that 60% of respondents who work at hospitals and 50% who work in restaurants report going to work while having a cold or the flu. The high percentage of sick healthcare workers continuing to work while sick is concerning given their necessary and frequent contact with patients. Illnesses such as norovirus may be easily transmitted, especially when standard and contact precautions are not strictly followed by sick healthcare workers. It takes only about 20 virus particles for someone to become sick with norovirus, which easily spreads from surface to surface.

The driving forces behind working while sick are different across job types and personal circumstances. According to Laura Brown, a behavioral scientist from the CDC's National Center for Environmental Health, 40% of people say they would not get paid for taking sick leave, which could cause financial burdens. However, Brown has observed that this problem is mainly due to concerns over losing their job if they do not come to work and not wanting their fellow staff members to work shorthanded. In cases where workplaces had on-call workers who could fill in, workers were less likely to go to work while sick.

Examination of the perspectives and factors surrounding this issue is useful in determining how to educate people on the risks of disease transmission and in indicating areas where employers can improve support and promotion of their employees' overall health.

To read the article, go to: **http://www.npr.org/sections/health-shots/2016/07/11/482799063/sick-people-say-they-still-go-to-work-even-when-they-shouldnt**

To read the report, go to: **http://www.npr.org/documents/2016/jul/HarvardWorkplaceandHealthPollReport.pdf**

VHQC 2015 Quality Awards

VHQC recently awarded several Virginia hospitals the "VHQC Quality Award" for achieving top performance in infection prevention in 2015. The top 10% of VHQC-participating hospitals in Virginia and Maryland were chosen based on their Hospital Consumer Assessment of Healthcare Providers and Systems (patient satisfaction) scores and HAI cumulative attributable difference scores.

Congratulations to:

- Augusta Health
- Carilion New River Valley Medical Center
- Sentara Halifax Regional Hospital
- Virginia Hospital Center

In addition, VHQC celebrated those facilities that met the VHQC goal for central line-associated bloodstream infection (CLABSI), catheter-associated urinary tract infection (CAUTI) and *Clostridium difficile* infection (CDI) prevention. Of 36 hospitals, 23 met the CLABSI goal, 34 met the CAUTI goal, 26 met the CDI goal, and 15 hospitals met all three! Keep up the great work!

For more information on these awards, please contact Deb Smith at VHQC (dsmith@vhqc.org).

HAI Team in Action! VDH HAI Program epidemiologists Sarah Lineberger and Mefruz Haque, shadowing the IP team at Bon Secours Memorial Regional Hospital

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