

SYNERGY: COMBINING EFFORTS FOR HAI PREVENTION

October 2013

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

Volume 4, Issue 9

Edited by:
Andrea Alvarez

Notes from VDH

Thanks to those of you who shared some of the ways you celebrated International Infection Prevention Week (IIPW) (Oct 20-26)! Our favorite was an infection prevention tip line that changes each day of IIPW. If callers write down the tips from all 5 days and submit them, they are entered to win a drawing for a raffle basket. IP staff at the hospital track where the calls are coming from, so they know who's getting educated.

Speaking of education, are you looking for a fun, interactive way to educate about safe injection practices and single dose vs. multi-dose vials? If so, check out the One & Only Campaign's new infographic on this topic: <http://www.oneandonlycampaign.org/single-dose-multi-dose-vial-infographic>. It includes a quick quiz to check learning and links to additional safe injection resources from CDC.

Antibiotic-Resistant Threats in the United States, 2013

In September, the Centers for Disease Control and Prevention (CDC) released a landmark report on the threat and burden of antibiotic-resistant organisms in the United States. The report starts with an overview of the current antibiotic resistance problem, highlighting that at least **2 million illnesses** and **23,000 deaths** occur each year in the United States that are attributable to antibiotic-resistant organisms (bacteria or fungi). An additional 250,000 illnesses and 14,000 deaths per year are due to *Clostridium difficile* infections, which are related to the use of broad-spectrum antibiotics.

The report outlines four core actions to help prevent the further spread of antibiotic resistance and how CDC is working to address each one.

1. Prevent infections, thereby preventing resistance
2. Track infection risk factors and resistance patterns
3. Improve antibiotic prescribing practices through antibiotic stewardship

4. Develop new antibiotics and diagnostic tests

Finally, each microorganism is ranked according to its hazard level (urgent, serious, or concerning). The top three urgent threats identified are *Clostridium difficile*, carbapenemase-resistant Enterobacteriaceae, and drug-resistant *Neisseria gonorrhoeae*. The report is very easy to read and contains many high-quality graphics. Each antibiotic-resistant organism has a user-friendly information page with details on actions healthcare providers, healthcare administrators, public health agencies, and the general public can take to help fight the spread of that particular organism.



You can access the full report at CDC's website: www.cdc.gov/drugresistance/threat-report-2013.

In this issue:

Notes from VDH	1
Antibiotic-Resistant Threats in the US, 2013	1
Results from the VDH/DCLS CRE Lab Survey	2
<i>C. difficile</i> Prevention Collaborative Wrap-Up	3
2013 APIC-VA Educational Conference Recap	3
New Annual Cost Estimates for HAIs in the United States	3
Much Ado About Flu	4
Managing Patients for Zoonotic Disease in Hospitals	4
HHS HAI Action Plan Conference Recap	4

Upcoming Events:

November 15:

Reporting deadline for April-June 2013 data for acute care hospitals, inpatient rehab facilities, and long-term acute care facilities participating in CMS quality reporting programs

November 18-24:

Get Smart About Antibiotics Week

Contact:

Andrea Alvarez,
HAI Program Coordinator
with questions /
comments:
804-864-8097

Results from the VDH/DCLS Carbapenem-Resistant Enterobacteriaceae Laboratory Survey

In June, the Virginia Department of Health (VDH) and the Division of Consolidated Laboratory Services (DCLS) conducted a brief survey to better understand local and regional laboratory practices regarding the identification and internal notification of carbapenem-resistant Enterobacteriaceae (CRE) in Virginia. A total of 58 laboratories completed the survey, including 48 hospital laboratories. Fifty-seven respondents (98%) reported performing antimicrobial susceptibility testing (AST) for gram-negative bacilli. Highlights from the survey include:

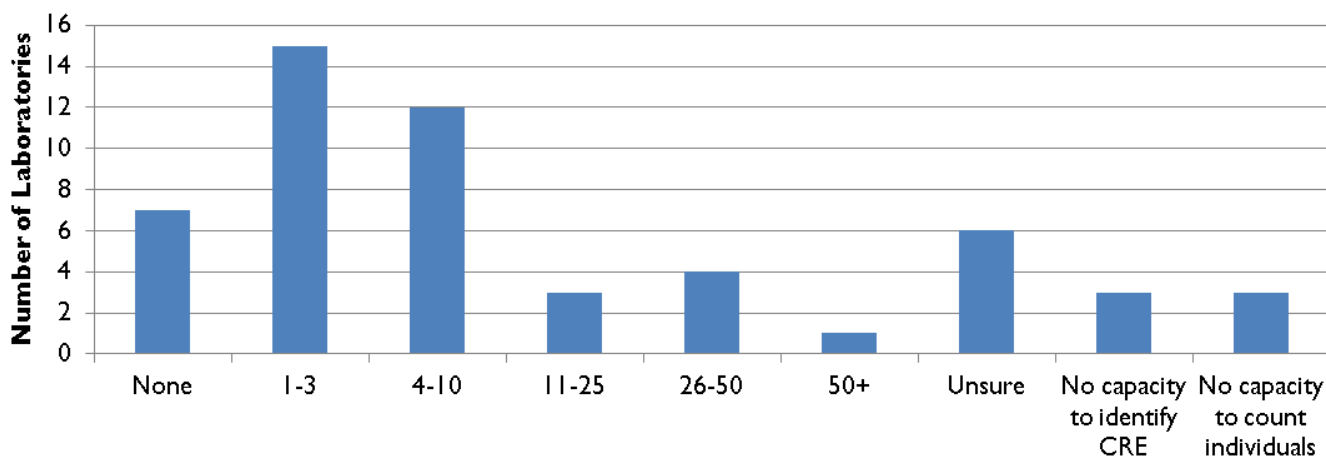
- ◇ 51 respondents (89%) use an automated system for identifying suspected carbapenemase-producing Enterobacteriaceae; the most common types used were Vitek 2 (n=32) and Microscan (n=18).
- ◇ 20 respondents (35%) employ ertapenem, imipenem, **and** meropenem for susceptibility testing
 - 13 (22.8%) also include third-generation cephalosporins (ceftriaxone, ceftazidime, **and** cefotaxime) in the susceptibility panel for Enterobacteriaceae.
- ◇ 22 laboratories perform the Modified Hodge Test (MHT) on non-susceptible isolates of Enterobacteriaceae to confirm carbapenemase production. Only three labs have molecular testing capabilities (PCR) to confirm carbapenemase production.
- ◇ 11 laboratories reported that their laboratory information management system cannot flag carbapenem non-susceptible organisms, record minimum inhibitory concentrations (MICs) or record

sensitive-intermediate-resistant (S-I-R) interpretations.

- ◇ Of 42 laboratories that reported identifying CRE in 2012, 22 (52%) reported 100% of CRE identified were *Klebsiella* spp., *Enterobacter* spp., or *Escherichia coli*; 4 (9.5%) of those responding reported 90-99% of CRE identified were *Klebsiella* spp., *Enterobacter* spp., or *Escherichia coli*; 3 laboratories reported 0% of CRE identified were due to those organisms.
- ◇ Ten respondents (20%) reported their laboratory had validated methods to detect carbapenem-resistant or carbapenemase-producing, *Klebsiella* spp. and *E. coli* from rectal swabs; however, about half (53%) reported the ability to implement this protocol during an outbreak situation.
- ◇ Laboratory staff reported notification of the following staff when the isolate is determined to be a CRE: infection prevention (n=38), charge nurse (n=14), infectious disease physician (n=10), attending physician (n=13), inpatient floor (n=17), pharmacy (n=7), public health (n=3), no notifications (n=3)
- ◇ Fewer than half of respondents (45%) reported *always* notifying Infection Prevention regarding a possible CRE, 32% sometimes, and 24% never.

Hospital infection preventionists are currently being surveyed about their CRE surveillance and identification practices. Results from that assessment will be shared in the near future.

Number of Individual Patients Identified to Have CRE, 2012



***Clostridium difficile* Prevention Collaborative Wrap-Up**

VHQC and VDH's HAI team recently completed a year-long collaborative project addressing *Clostridium difficile* (*C. difficile*) infection surveillance and prevention in Virginia hospitals and long-term care facilities. The collaborative's mission was to increase prevention efforts and minimize death, disability, and healthcare-associated costs resulting from *C. difficile* infections. The implementation of standardized surveillance practices and evidence-based prevention strategies were the focus of a series of webinars exploring these objectives.

Twenty-two hospitals and 16 nursing homes throughout the state participated in the project. Combined, acute care participants experienced a 28% decrease in the *C. difficile* healthcare-onset laboratory-identified incidence rate between the baseline period (Dec 2012-Feb 2013)

and July 2013. Over the same time period, long-term care participants reported a 41% decrease in their aggregate *C. difficile* laboratory-identified incidence rate. Information designed for patients, residents, and family members was developed and distributed to assist in answering questions and providing education on this serious infection.

Webinar recordings and a toolkit of resources for the acute care and long-term care settings can be viewed by visiting the VHQC online community at <http://community.vhqc.org>.

The VHQC Resource Center (<http://www.vhqc.org/qio/resources#firstLink>) and the VDH *C. difficile* website (<http://www.vdh.virginia.gov/Epidemiology/Surveillance/HAI/cdiff.htm>) also have information on this initiative.

2013 APIC-VA Annual Educational Conference Recap

The 39th annual education conference of the Virginia chapter of the Association for Professionals in Infection Control and Epidemiology (APIC-VA) was held in Richmond on October 10th and 11th. Nearly 100 attendees gathered to hear from experts addressing pressing issues in infection prevention across the healthcare spectrum. Infectious disease physicians and hospital epidemiologists from VCU Health System and the University of North Carolina Medical Center were joined by speakers from the Centers for Disease Control and Prevention, The Joint Commission, the Virginia Department of Health and infection preventionists from Carilion Medical Center and Lewis Gale Medical Center sharing engaging sessions for the attendees. Topics addressed included: the growing problem and challenges of antibiotic-resistant organisms and treatment; hand hygiene practices and compliance - the cornerstone of infection prevention; statistics and study design; ventilator-associated event surveillance

definitions; updates to standards of accreditation in healthcare facilities; and Virginia's experience with the recent multi-state outbreak of fungal infections associated with contaminated steroid injections. Breakout sessions featured discussions of high-level disinfection and sterilization best practices, environmental cleaning monitoring, environment of care rounds, and evaluating new products.

Prior to the conference, a daylong training was available for qualified healthcare professionals interested in becoming board certified (or re-certified) in infection prevention and control (CIC). Thirty participants preparing for the exam attended. The CIC designation remains a top priority for APIC as growing demands emerge in the field of infection prevention. For further information on the certification process please visit: <http://www.cbic.org/certification/exam>

Next year's annual education conference will be held in the fall in Lynchburg.

New Annual Cost Estimates for HAIs in the United States

A new review article published in *JAMA* in September analyzed data from the past 27 years to generate estimates for attributable costs of HAIs. Central line-associated bloodstream infections (CLABSIs) were the most costly (\$45,814 per infection, on average) and surgical site infections (SSIs) contributed the most to overall costs (33.7% of the total). Annual costs for the 5

major infections (CLABSI, SSI, *Clostridium difficile* infection, catheter-associated urinary tract infections, ventilator-associated pneumonia) totaled \$9.8 billion. The article's abstract is available free of charge at: <http://archinte.jamanetwork.com/article.aspx?articleID=1733452>.

NHSN News: October's NHSN newsletter has many updates! Make sure to read it for the latest on upcoming protocol changes, CMS reporting requirements for 2014, new educational opportunities with NHSN, and more! <http://www.cdc.gov/nhsn/PDFs/Newsletters/Oct-2013.pdf>

Much Ado About Flu

In October, the VDH HAI/Influenza team debuted a comprehensive flu website that includes information on surveillance, prevention, vaccination, novel/variant viruses, and resources targeted to specific populations (schools, healthcare facilities, businesses, etc.) Eight separate domains are covered, including flu basics, flu prevention, flu vaccination, flu surveillance, novel/variant/pandemic flu, resources for healthcare professionals, resources for other settings, and resources in other languages. Updated flu guidelines for healthcare facilities, signs, template letters, and other materials are included! The homepage to the new flu site is: www.vdh.virginia.gov/epidemiology/flu.

Flu FAQ:

Q. Is there a preference between high-dose flu vaccine and the traditional formulation for people age 65 and older?

A. No. CDC and ACIP (the Advisory Committee on Immunization Practices) have not expressed a preference between high dose (quadrivalent) and traditional (trivalent) influenza vaccine for people 65 and older. Every influenza vaccine is formulated to offer protection. The key is vaccination, and it is best to vaccinate before flu starts spreading in the community.

Managing Patients for Zoonotic Disease in Hospitals

A recent article written by Warwick and Corning discusses the management of zoonotic diseases in the hospital setting. Sixty-one percent of human diseases are considered to be zoonotic, meaning they are transmissible from animals to people. Zoonotic diseases can range from mild, self-limiting infections such as *Salmonella* to fatal diseases such as rabies. Improved awareness of zoonotic diseases in the hospital setting is not only important in providing appropriate treatment for the patient, but also in reducing the risk of disease transmission to healthcare personnel and other patients. This article outlines signs

and symptoms that may indicate whether or not a patient might be presenting with a zoonotic disease, provides guidance on assessing patients for possible zoonoses, and lists questions that may be helpful in identifying zoonotic diseases and their source associations. The article also emphasizes the need to have zoonotic diseases on the list of differential diagnoses. Many experts believe zoonotic pathogens will give rise to the next major pandemic.

To access the article, go to: <http://shr.sagepub.com/content/4/8/2042533313490287.full.pdf>.

US Department of Health and Human Services HAI Action Plan Conference Recap

On September 25th and 26th, the US Department of Health and Human Services (DHHS) sponsored a conference to discuss federal progress toward meeting the 2015 goals outlined in the *National Action Plan to Prevent Health Care-Associated Infections: Road Map to Elimination*. Representatives from the Centers for Disease Control and Prevention (CDC) and the Centers for Medicare and Medicaid Services (CMS), among others, presented progress towards metrics aimed at reducing HAIs in acute care, ambulatory surgery, end stage renal disease, and long-term care settings. Of

particular note, CDC reported that at the national level, acute care facilities are on target for meeting the central line-associated bloodstream infection (CLABSI) 50% reduction target, but have seen little to no progress in reducing catheter-associated urinary tract infections (CAUTIs). Then, stakeholders from all levels of healthcare broke into planning sessions to discuss suggestions for the 2020 HAI Action Plan. DHHS is analyzing stakeholder input and will be formulating a proposal for the 2020 HAI Action Plan. Subsequently, they will make the 2020 plan available for public comment.