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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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Notes from VDH

Happy International Infection Prevention Week (IIPW) from the HAI/AR team! This important week highlights the role that infection prevention plays in keeping patients safe. The theme this year is Protecting Patients Everywhere. Read on to learn more about IIPW!

We also want to remind our readers that the 2018-2019 flu season has started. This issue contains several important flu updates, including updates on flu surveillance, and a recap of our recent flu press conference.

2016 Virginia Healthcare-Associated Infections Report – Now Available!

The 2016 Virginia HAI Report was released on September 27, 2018. This annual report summarizes the performance of Virginia's acute care hospitals on HAIs reportable to VDH as well as healthcare personnel influenza vaccination. The purpose of the report is to enable readers to view hospital-specific HAI performance, understand Virginia's HAI performance as a whole, and to compare a hospital's HAI performance to that of the rest of the country. A version of the report for healthcare leaders and consumers is available.

Additionally, a Tableau dashboard has been created in order for users to interact with and better visualize the data in the HAI Annual Report. The dashboard currently includes data for 2015 and 2016.

Overall, Virginia acute care hospitals have shown progress in preventing CLABSI and MRSA bacteremia laboratory-identified events in 2016 when compared to the national experience. Further action is needed to reduce other HAIs, including CAUTIs and SSIs following abdominal hysterectomies and colon surgeries for adult patients, as hospitals did not show any significant changes in 2016 from the national baseline. Prevention of *Clostridium difficile* infections also remains a priority for Virginia, as the data did not show any significant improvement for hospitals in this measure.

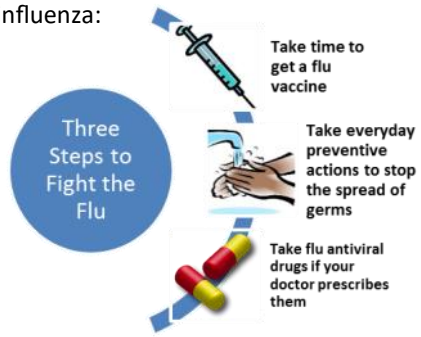
You can find the reports and the dashboard on the VDH HAI/AR Program website here.

For questions or comments about the 2016 HAI Report, please contact the HAI Epidemiologist at HAI@vdh.virginia.gov.

Influenza Surveillance in Virginia

Sunday, September 30th marked the start of the 2018-19 flu season. VDH is excited to announce a new *Weekly Influenza Activity Report* available to all external partners. This report contains all of the information from previous reports such as geographic activity level, the percent of emergency department and urgent care visits for an influenza-like illness (ILI), and confirmatory lab results. Additionally, VDH has included a comparison of ILI across multiple flu seasons, including the 2009 pandemic, an intensity measure that presents the morbidity burden of ILI by region, outbreak data by facility type and by region, death data for both influenza-associated pediatric deaths and pneumonia and influenza (P&I) mortality in all ages, and a full page on talking points. VDH welcomes all feedback on this report! Please send comments or questions to flu@vdh.virginia.gov.

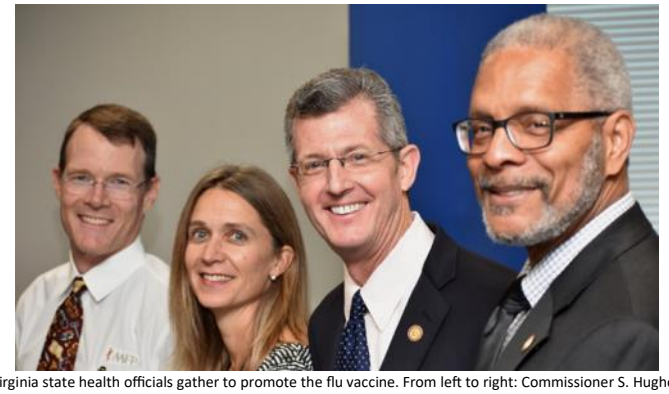
Nationally, 2017-18 was the first flu season to be considered a high severity season for every age group. Newly released U.S. numbers estimate that there were 80,000 deaths and upwards of 900,000 hospitalizations from influenza. In Virginia, the percent of visits for ILI reached the highest it has been since the 2009 pandemic at 11.6%. This serves as a sobering reminder to follow the CDC's **Take 3** actions to prevent the spread of influenza:



For general information about the flu, click here.

Influenza Press Conference

On October 3rd, Virginia state health officials gathered together to encourage Virginians to get their flu vaccine, and to receive a flu shot themselves. Speaking about the importance of getting the vaccine were State Health Commissioner M. Norman Oliver, MD, MA, and Secretary of Health and Human Resources Daniel Carey, MD. Both speakers urged everyone over the age of six months to receive their flu vaccine, as it is the most effective way to prevent the flu. Also there to promote the flu vaccine were Behavioral Health and Developmental Services Commissioner S. Hughes Melton, MD, MBA, and VDH Deputy Commissioner for Population Health, Laurie Forlano, DO, MPH. To read more about this important event, click here.



Virginia state health officials gather to promote the flu vaccine. From left to right: Commissioner S. Hughes Melton, Deputy Commissioner Laurie Forlano, Secretary Daniel Carey, and Commissioner M. Norman Oliver.

VDH Commissioner M. Normal Oliver receiving his flu shot.

Importance of Healthcare Worker Influenza Vaccinations

This flu season, we would like to highlight the importance of healthcare workers receiving their flu vaccine. Data show that healthcare worker vaccination against influenza can promote a safe healthcare environment for patients. A systematic review including four randomized trials and four observational studies concluded that influenza vaccination of healthcare workers reduced mortality and influenza-like-illness in patients[1]. Similarly, data from long-term care facilities in Pennsylvania demonstrated that high influenza vaccine coverage was strongly associated with reduced patient hospitalizations[2]. Make sure to get your flu vaccine to help improve patient outcomes!

1. Faruque Ahmed, Megan C. Lindley, Norma Allred, Cindy M. Weinbaum, Lisa Grohskopf; Effect of Influenza Vaccination of Healthcare Personnel on Morbidity and Mortality Among Patients: Systematic Review and Grading of Evidence, *Clinical Infectious Diseases*, Volume 58, Issue 1, 1 January 2014, Pages 50–57, https://doi.org/10.1093/cid/cit580
2. Thitichai P, Smith E, Hoff BP, Hepner J, Boktor SW. The Effect of Influenza Vaccination Coverage Among Health-Care Personnel (HCP) in Long-Term Care Facilities (LTCFs), 2014-2015 Influenza Season, Pennsylvania. In: 2016 CSTE Annual Conference; 2016 June 19-23; Anchorage, AK.

Concerning Trend in Outpatient Antibiotic Prescribing

According to a study published this past March in *Infection Control & Hospital Epidemiology*, antibiotics are continually prescribed at disturbingly high rates in outpatient settings, despite current efforts to reduce unnecessary prescribing. The study used claims data to retrospectively analyze outpatient antibiotic prescriptions for three years (2013-2015). Monthly prescriptions were tracked for all antibiotics. The study found that annual antibiotic prescribing rates did not change, but trends were observed according to season. Prescribing rates were highest in winter months, and lowest in late summer months (Figure 1), supporting previous studies indicating antibiotics are often inappropriately prescribed during winter months for viral infections. It is also possible that these antibiotics are appropriately prescribed, as some common antibiotics are used to treat pneumonia, which often appears in the winter months.

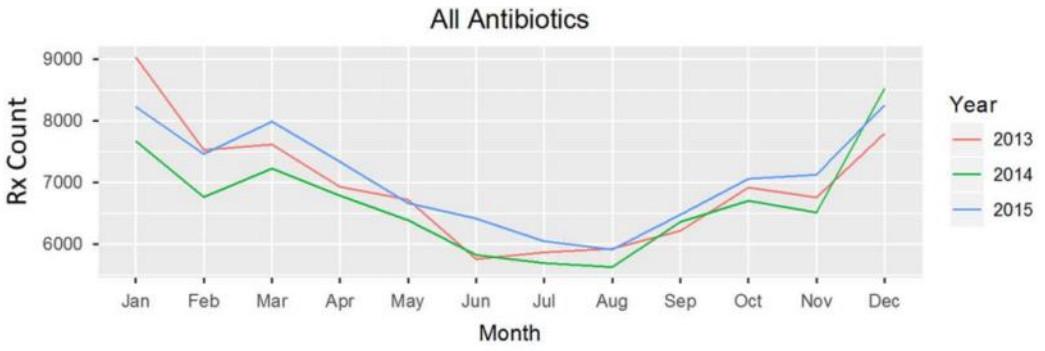


Figure 1: Monthly variation of rate of outpatient antibiotic use overall.

Find the article here.

Congratulations to APIC Virginia Chapter

The Virginia chapter of the Association for Professionals in Infection Control and Epidemiology (APIC) was recognized with a chapter excellence award at the International APIC Education Conference held in Minnesota in June.

The APIC award recognized the Virginia chapter in the category of "Synergistic Alliances," selecting a chapter that demonstrated excellence in identifying, evaluating, and pursuing opportunities for synergistic alliances. Highlights of the chapter submission included: APIC-VA membership in the Virginia HAI Advisory Group working to reduce HAIs across Virginia; participation and support of the 2017 consensus statement on the annual vaccination of healthcare workers for influenza prevention; and leadership in the education workgroup that developed new education programs for long-term care settings across Virginia.

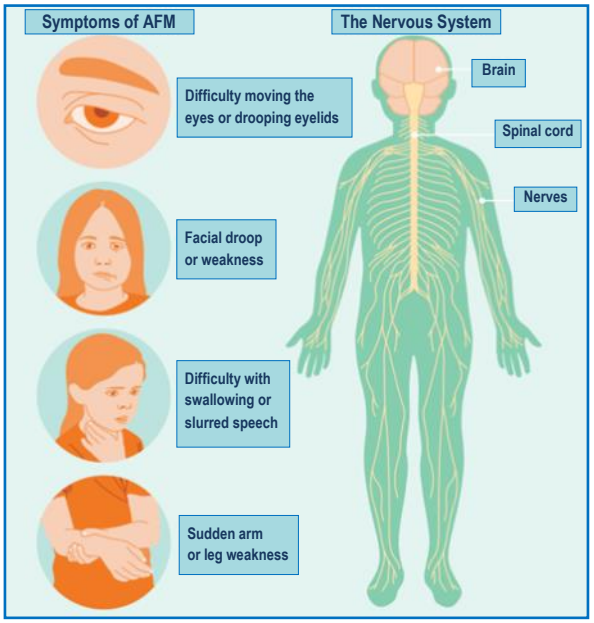
APIC is a professional association for infection preventionists (IPs) with more than 15,000 members. Their mission is to create a safer world through the prevention of infection. To learn more about APIC and associated education and membership click here. For a complete listing of 2018 APIC award winners click here.

Reminder! Call for Suspect Cases of Acute Flaccid Myelitis

Virginia is in the peak of a very active enterovirus season. While most cases of enterovirus infection do not cause serious illness, some enterovirus infections can result in a condition known as acute flaccid myelitis (AFM).

Clinicians who suspect AFM should report the case to their local health department. Local health department staff are available to assist with submission of specimens to the state public health lab (DCLS) and to CDC. Infection preventionists are encouraged to establish surveillance and reporting for AFM cases in conjunction with neurology, infectious disease, pediatrics, hospitalist service, and laboratory staff.

For more information, click here.



https://www.cdc.gov/acute-flaccid-myelitis/infographic.html

International Infection Prevention Week – October 14-20, 2018

The Association for Professionals in Infection Control and Epidemiology (APIC) encourages you to join the international public awareness effort of **Protecting Patients Everywhere** during International Infection Prevention Week (IIPW) October 14-20, 2018. Established in 1986, IIPW highlights the importance of infection prevention among healthcare professionals, legislators, and consumers. Join your colleagues and friends in sharing messages of the important role infection prevention provides to reduce the threat of healthcare-associated infections and improve patient safety.

APIC has resources and tools to promote IIPW, advocate for safe healthcare, break the chain of infection, and protect patients everywhere. For a list of resources including infographics, posters, activities, and social media posts please click here.

On Tuesday, October 16 at 12 PM ET, APIC will host a Twitter chat to discuss how healthcare providers, patients, and others can prevent infections throughout the continuum of care. Follow @APIC on Twitter and use hashtag (#IIPWChat) to join.

See page 7 to view the attached Governor's Proclamation declaring IIPW in Virginia.

Upcoming Events

Health Literacy Month and Global Handwashing Day

October is Health Literacy Month, and October 15 is Global Handwashing Day! Handwashing is the single most effective tool for preventing healthcare-associated infections. Empowering patients with information about how and why they and their healthcare providers should practice good hand hygiene allows for additional opportunities to break the chain of infection. In the spirit of Health Literacy Month and Global Handwashing Day, take the opportunity to arm yourself and your patients with health promotion materials, training and education opportunities, and other handwashing resources from the CDC or the World Health Organization.

CDC Pink Book Webinars

Throughout the summer and fall, CDC has been offering an online series of 15 webinars, called the "Pink Book Webinar Series." These webinars provide information on the principles of vaccinations, vaccine-preventable diseases, immunization tactics, and other immunization topics. Each webinar details one chapter from the 13th edition of the *Epidemiology and Prevention of Vaccine-Preventable Diseases*, a.k.a. "The Pink Book," which provides healthcare workers and others with comprehensive information on vaccinations and the diseases they prevent. All webinars have been completed, but continuing education is still available for the later courses. Find out more information about registration and continuing education for the courses here.

Antibiotics Awareness Week

November 12-18 is U.S. Antibiotics Awareness Week! Keep an eye out for a special edition *HAI High Sign* newsletter to be released that week, and also check out VDH on social media for posts that week from the HAI/AR team.

HAI Advisory Group

We would like to remind our readers about the Virginia Healthcare-Associated Infections (HAI) Advisory Group. This group is a voluntary, statewide, multidisciplinary group that coordinates the efforts of the Commonwealth's HAI stakeholders to prevent HAIs and antimicrobial resistance. The group is co-led by the 1) Virginia Department of Health, 2) Virginia Hospital and Healthcare Association, and 3) Health Quality Innovators, the Virginia Quality Innovation Network – Quality Improvement Organization. The HAI Advisory Group has three workgroups that collaboratively work on specific goals and topics: infection prevention education, antibiotic stewardship, and an annual priority topic.

Find out more about the three workgroups and current membership on the HAI Advisory Group website, here.

Follow VDH on Social Media

Twitter: @VDHgov

Facebook: @VDHgov
@VdhClinicalCommunity

LinkedIn: Virginia Department of Health

Multidrug-Resistant *Aspergillus fumigatus*

A recent CDC Morbidity and Mortality Weekly Report (MMWR) highlighted ten cases of rare, multidrug-resistant *Aspergillus fumigatus* in the U.S. – including two cases identified in Virginia. *A. fumigatus*, an environmental mold, can cause serious opportunistic infections and has a 50% mortality rate among high risk patients. Treatment primarily includes triazole antifungal medications, however, *A. fumigatus* can develop resistance to triazoles resulting in treatment failure and increased mortality. It is unclear what the true prevalence of triazole-resistant *A. fumigatus* is in the U.S. because it is not reportable, and only passive surveillance is being conducted.

A concern surrounding this multidrug-resistant mold is the possibility that resistance can not only be acquired through previous exposure to triazoles, but that it can also be acquired through the environment. Four of the cases had no known exposure to antifungal medications, supporting the possibility of environmentally-acquired resistance. It is important for physicians to be aware of azole-resistant *A. fumigatus*, even if the patient has not previously had exposure to triazoles. Find out more about the recent report here.

Update on Ebola Virus Disease

Since 1976, outbreaks of Ebola virus disease (EVD) have occurred sporadically on the African continent. Most recently, outbreaks have been limited to specific regions within the Democratic Republic of the Congo (DRC). The World Health Organization has determined that the public health risk from these outbreaks is considered low globally, although it is still high nationally and regionally in the DRC.

The CDC advises healthcare providers in the U.S. to continue to obtain a travel history from all patients seeking care. Providers should promptly isolate patients who have symptoms compatible with EVD and a recent (within 21 days) history of travel to affected areas pending diagnostic testing. Providers should also consider other infectious disease risks that are much more common in returning travelers, including malaria.

VDH will continue to monitor for ongoing outbreaks and provide updates as new information becomes available. Updated information and guidance are available from the CDC here.

Super Resistant Gonorrhea

The concern of "super-bugs" and the growing amount of resistant bacteria continue to expand. In March of 2018 "super resistant gonorrhea" was detected in the UK. This infection was resistant to the common therapies of azithromycin and ceftriaxone. A 3-day course of intravenous ertapenem was eventually used to treat (and cure) this infection, but this antibiotic is typically reserved for more serious infections, rather than STIs. Months later, cases with similar resistance patterns later appeared in Australia.

Experts believe it is not if gonorrhea becomes resistant globally, but a matter of when. Gonorrhea affects 78 million people globally and while specialized antibiotics may work for some (like the situation described above) that treatment is not ideal for a larger audience. Ertapenem has not been studied on a larger scale for treatment of resistant gonorrhea. Gonorrhea has a long history of becoming resistant to the standard therapies. From sulfonamides (discovered in 1935) to penicillin, to tetracycline, to fluoroquinolones, to macrolides all have eventually resulted in failure of treatment. Even the current treatment in the United States, a dual approach of azithromycin and ceftriaxone, has shown increased azithromycin resistance from 1% in 2013 to 4% in 2017.

Outside of the United States, 55 countries have reported resistance or decreased susceptibility to ceftriaxone or cefixime and 62 countries have reported resistance to azithromycin. Another aspect of the growing resistance is the increasing incidence of gonorrhea cases. From 2013-2017, the CDC reported the number of gonorrhea cases grew 67%. The United Kingdom also saw an increase of 22% in just one year from 2016-2017. This could be attributed to decreasing condom use and the decrease of federal funding for STD prevention programs in the United States.

New treatments and drugs could be the answer to combat resistant gonorrhea, though these antibiotics could be years away. During a phase 2 study, solithromycin showed promising results. Additionally, zoliflodacin and gepotidacin are also in phase 2 trials in partnership with The Global Antibiotic Research and Development Partnership (GARDP) to help accelerate the process. However, future resistance may be inevitable. Therefore, prevention, education, and gonorrhea surveillance are the main defenses of "super resistant gonorrhea".

For more information, please click here.

NHSN Notes

Data Quality Update

Thank you to all the IPs who reviewed their hospital's 2018Q1 data cleaning report and submitted their acknowledgment form. We appreciate all the work you do to collect, enter, and quality assure HAI data for your hospital. **Please remember to update the HAI/AR Team with any IP contact changes.**

CLABSI SIRs Updated

The CDC NHSN team sent out an email on September 7 to inform users that revisions are being made to update the central line-associated bloodstream infection (CLABSI) predictive models for acute care hospitals developed for the 2015 NHSN Standardized Infection Ratio (SIR) re-baseline effort.

CDC deemed it necessary to update the acute care hospital CLABSI model and calculate the resulting SIRs using the revised 2015 risk model, which includes some previously excluded oncology location central line denominator data, in order to improve model accuracy. The improvement impacts approximately 100 acute care hospitals per quarter, resulting in an SIR change of approximately 0.001.

CDC has implemented the updated model in the NHSN application and applied the improvement to all acute care hospital CLABSI data from 2015 and forward. The SIR guide has been updated and can be found on the NHSN website here. In the 9/7/18 email, a document was attached that outlined which factors in the model have been updated with new parameter estimates.

This model update does not impact program results for CMS hospital quality reporting or value-based programs for the current performance period. CMS programs will use the updated model beginning with the 2019Q1 reporting time period (i.e., January 2019 data). Questions related to CMS programs can be directed to qnetsupport@hcqis.org.

NHSN Educational Roadmaps – Available Now!

The NHSN Educational Roadmaps provide a guided tour of the training materials and information needed to provide a solid foundation of NHSN – from the basics to more advanced training for each individual component or protocol. Within each component is a selection of educational and supplemental materials and tools to improve your comprehension of NHSN surveillance definitions, reporting, and analysis (while supporting your work as an NHSN user). This training should be used after the enrollment/activation process.

Access the NHSN Education Roadmaps here.

Healthcare-Associated Infections and Antimicrobial Resistance Program
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CERTIFICATE of RECOGNITION

By virtue of the authority vested by the Constitution of Virginia in the Governor of the Commonwealth of Virginia, there is hereby officially recognized:

INFECTION PREVENTION WEEK

WHEREAS, the health and safety of all Virginians is important to the happiness, prosperity, and well-being of our Commonwealth's families and communities; and

WHEREAS, many medical procedures may result in infectious complications, and with over 850,000 hospital discharges in Virginia each year, the need to prevent such complications is imperative; and

WHEREAS, preventing healthcare-associated infections reduces the risk of occurrence of infection, the burdensome cost of healthcare, and significant morbidity and mortality; and

WHEREAS, prevention of infections can be improved through the diligent adherence to recommended infection control and prevention procedures in all healthcare settings; and

WHEREAS, healthcare facilities employ dedicated professionals who advocate for infection prevention every day; and who are important to the health and safety of the community by improving the quality and safety of healthcare and in reducing its costs; and

WHEREAS, improved health practices, such as thorough hand washing, sterilization, and after-care can significantly reduce the risk and spread of infections; and

WHEREAS, healthcare facilities and agencies, such as acute care, long-term care, assisted living, ambulatory care, in-home care, and the Virginia Department of Health collaborate to protect patients in healthcare facilities across the Commonwealth; and

WHEREAS, Infection Prevention Week encourages all Virginians to educate themselves on the symptoms and impact of infections and the actions they can take to prevent healthcare-associated infections, thereby reducing the burden of human suffering and disease;

NOW, THEREFORE, I, Ralph S. Northam, do hereby recognize October 14-20, 2018, as **INFECTION PREVENTION WEEK** in our **COMMONWEALTH OF VIRGINIA,** and I call this observance to the attention of all our citizens.

Ralph S. Northam
Governor

Kelly Thomasson
Secretary of the Commonwealth