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SHARP: Bringing HAIs into Focus

Surveillance for Healthcare-Associated and Resistant Pathogens Unit
Michigan Department of Health and Human Services

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What's New with the SHARP Unit

Look for SHARP presentations at the following upcoming events:

APIC-Great Lakes, April 29th
Allie: NHSN and TAP

Communicable Disease Conference, May 18th
Allie: Multidrug-resistant *Pseudomonas aeruginosa*

National APIC, June 11th-14th
Allie: Multidrug-resistant *Pseudomonas aeruginosa*

Noreen: the Special Pathogen Response Network in Michigan (poster)

CSTE, June 19th-21st
Mike: Multidrug-resistant *Pseudomonas aeruginosa* (for Allie), the Special Pathogen Response Network in Michigan (poster, for Noreen), and the Regional Approach to CRE Surveillance and Prevention, Michigan, 2012-2014 (poster, for Brenda)

Multidrug-Resistant Organisms on Patients' Hands

A Missed Opportunity

A research letter published in JAMA on March 14, 2016 addressed the increasingly prevalent occurrence of Multidrug-resistant organisms (MDROs) in post-acute care (PAC) facilities. The risk of MDRO cross-transmission increases in these facilities because patients may need assistance with activities of daily living and are encouraged to be mobile outside of their room for rehabilitation, dining, and other recreational activities. The article can be viewed here: http://archinte.jamanetwork.com/article.aspx?articleid=2500025.

On March 15th, NPR covered this letter, detailing the findings. Researchers focused on inner-city Detroit and found that almost 1 in 4 adults who left the hospital had a virus, bacteria, or another kind of microbe that was resistant.

They state that encouraging doctors and nurses to wash their hands frequently has always been considered an effective way to curb the spread of infection in hospitals and other health facilities. However, an often underused strategy for reducing the odds of getting sick while in a health care facility is getting patients themselves to wash their hands.

Conventional wisdom has long held that doctors and nurses who go from patient to patient are most likely to transmit germs. Therefore, few healthcare settings really make patient handwashing a major priority. Leah Binder, president of the Leapfrog Group, a nonprofit organization that grades hospitals on patient safety, stated that, "we have to revise hand hygiene policies to include patients. One of the main strategies on hand hygiene is to make it easy to wash hands."

Hand washing should be only part of the strategy to prevent infection. Medical tools and machines need to be kept clean. Also, patients should feel comfortable asking each other if they've washed their hands, and steer clear of those who might be infectious. The NPR article can be found at: http://www.npr.org/sections/health-shots/2016/03/15/470514034/patients-leave-the-hospital-with-superbugs-on-their-hands.

Olympus Validates Updated Reprocessing Instructions for Duodenoscope Models TJF-160F and TJF-160VF: FDA Safety Communication

As noted in the FDA's February 2015 Safety Communication, the complex design of duodenoscopes may impede effective reprocessing. Reprocessing is a detailed, multistep process to clean and disinfect or sterilize reusable devices. If not properly reprocessed, residual body fluids and organic debris may remain in microscopic crevices of the device following an attempted cleaning and high-level disinfection.

If residual fluids contain microbial contamination, subsequent patients may be exposed to serious infections. The FDA has been working with duodenoscope manufacturers as they modify and validate their reprocessing instructions to further enhance the safety margin of their devices and show with a high degree of assurance that their reprocessing instructions, when followed correctly, effectively clean and disinfect the duodenoscopes.

In March 2015, Olympus submitted the test protocols and data used to validate the reprocessing instructions and reprocessing protocols were modified. In January 2016, the Agency notified Olympus that the updated reprocessing instructions for the 160F/VF duodenoscope models were adequate.

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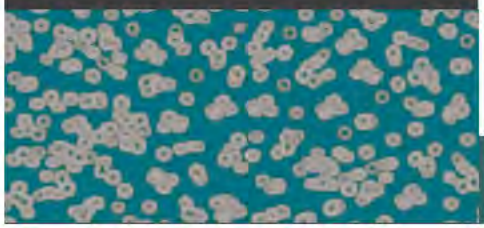

NHSN Surveillance Update

NHSN March 2016 Newsletter

New Terms and Concepts

- Non-culture based testing: identification of microorganisms using a method of testing other than a culture (including but not limited to PCR and ELISA)
- Gross anatomical exam: physical examination with or without invasive procedure
- Exclusion for reporting is specific and applies only to patients who are declared brain dead AND are being supported for organ donation purposes (not all patients who are declared brain dead)
- Documentation that the patient has been observed or suspected of accessing their vascular access lines must appear in the medical record. Accession indicates the patient was observed or suspected of injecting into the line. Accession into vascular access lines DOES NOT include manipulation or contamination
- LabID Event Reporting: if your facility is required to conduct surveillance in all emergency departments (EDs) and 24-hour observation locations, they must be mapped in NHSN, and listed individually on the monthly reporting plans. Surveillance in NHSN using the FacWideOut location does not constitute the required surveillance of ED and/or 24-hour observation locations

Re-baseline Update

- Analysis will be completed during the summer of 2016
- CLABSI events reported to NHSN as MBI-LCBI will be excluded from the numerator when performing risk-adjustment of 2015 CLABSI data
- Under the new 2015 baseline, the complex 30-day SSI SIRs will exclude SSIs reported as Present at time of surgery (PATOS). This will be assessed for the other SSI models separately
- 2015 baseline will be used for SIRs 2015 and forward
- 2015 and 2016 data can be analyzed compared to 2015 or historical baselines

Training Opportunities

- Interactive Training Modules: April-May 2016
- APIC Webinar: May 5, 2016: http://webinars.apic.org/
- Archived Training Videos: May 2016
- 2016 APIC Conference Live Training: June 2016

Reminder: 2015 Q4 data and 2015-2016 HCP influenza vaccination summary data must be entered by May 15, 2016!

—Allison Murad, MuradA@michigan.gov

CRE Surveillance and Prevention Initiative

CRE Surveillance and Prevention Initiative- Phase 3
Active recruitment for Phase 3 is now over. An enrollment flyer was distributed to Infection Prevention groups; certain facilities were specifically asked to join due to geographic location or increasing CRE incidence. The goal was to enroll 7-10 additional facilities. Thankfully, 11 facilities expressed interest in enrolling. Joining the initiative will be 4 new acute care facilities, 4 LTACs, and 3 LTCs. We retained all of our Phase 1 and Phase 2 facilities and increased coverage in the central and northern-lower peninsula areas. Phase 3 facilities received their Letter of Intent and Data Use Agreement, and submitted those to MDHHS. Similar to Phase 2, baseline for Phase 3 will be retrospective. All facilities started implementing CRE Prevention Plans in March 2016.

Regional Incidence Reports and Prevention Progress Reports
CRE Regional Incidence Report (2015 Quarter 3 and Quarter 4) were distributed to the collaborative, all participating facilities, regional epidemiologists (for distribution at local IP meetings), and other interested groups. These reports are a way to communicate CRE incidence around the state as well as novel carbapenemase activity to individuals who may not participate in the initiative. If you would like to receive this report, please let Brenda know.

CRE Detection and Laboratory Practices Survey
Mike (our CSTE Fellow) will be leading the charge on resurrecting the CRE detection and laboratory practices survey. Mike and Brenda will be meeting with folks at the BOL to update/add questions to the electronic survey and send out to clinical labs around the state and directly to Phase 1 and Phase 2 facilities. We will be looking at automated systems used, breakpoints, antimicrobial panels, confirmatory testing, etc.

Submitting Isolates for CRE Confirmatory Testing
The Bureau of Labs will soon be able to test for VIM and OXA-48 carbapenamases in addition to KPC and NDM-1. Once the tests are validated, a communication will be sent to all clinical labs across the state announcing the new capabilities. Facilities will be encouraged to submit isolates for confirmatory testing, especially from high-risk patients and those with an international travel history. Stay tuned for more details!

CRE Incidence in Michigan
545 inpatient cases (460 Phase 1 and 85 Phase 2) have been reported since September 2012. Baseline rate for all facilities combined is 0.94 cases per 10,000 patient-days and our intervention rate is 0.64 cases per 10,000 patient-days (*p-value* 0.001 – statistically significant). Since September 2012, participating facilities have prevented 205 infections of CRE (43 of those in LTACs).

—Brenda Brennan, BrennanB@michigan.gov

Olympus Duodenoscopes, continued...

Olympus sent a letter (March 14, 2016) to health care facilities and other users of the 160 F/VF duodenoscope models outlining the updated, validated reprocessing instructions. The key changes are:

Precleaning:

- Flush the elevator wire channel with water

Manual Cleaning:

- Additional brushing of the forceps elevator recess area and the elevator wire with two different sized brushes
- In addition to the brushes that are currently used to clean the elevator recess area, the MAJ-1534 is a new brush required for further cleaning of this area (see guidance for acceptable brushes for each respective brushing point)
- Additional flushing of forceps elevator recess area and the elevator wire
- Additional raising/lowering the forceps elevator

Manual High Level Disinfection:

- Additional manual flushing steps and increased flushing volume for each channel, as well as elevator recess area
- Additional raising/lowering the forceps elevator

Events/Calendar

Please visit our SHARP Unit Calendar, found on the SHARP Unit homepage. If you would like to add an event to this calendar, please email: MDHHS-SHARP@michigan.gov

Helpful Links

www.michigan.gov/hai

www.mhakeystonecenter.org

www.mpro.org

www.mi-marr.org

www.msipc.org

www.apic.org

www.hhs.gov/ash/initiatives/hai/

www.hospitalcompare.hhs.gov

www.cdc.gov/nhsn

www.cdc.gov/HAI/prevent/prevention.html

www.cdc.gov/HAI/organisms/cre

www.cdc.gov/HAI/organisms/cdiff/Cdiff_infect.html

Recent SHARP Investigations

Since our last newsletter the SHARP unit has been involved in some interesting investigations.

Tampon-associated Toxic Shock Syndrome:
MDHHS, CDC and FDA have been investigating a cluster of apparent tampon-associated toxic shock cases. Five young women were hospitalized from the end of December 2015- February 2016. The girls were from 4 different local health jurisdictions. To date, the only commonalities found between these cases have involved product selection. Four out of five were using super absorbency tampons and four out of five were using the Playtex Sport brand. All 5 case patients were positive for *Staphylococcus aureus*. Available samples from 4 of the case patients tested positive for *Staphylococcus aureus* but did not have matching PFGE results.

Nontuberculous mycobacteria associated with Heater-Cooler devices:
In fall of 2015 the FDA and CDC released communications regarding the need for increased maintenance on Heater-Cooler devices and surveillance for Non-tuberculous Mycobacterium (NTM). Due to the long incubation period, infection can present up to 4 years post-surgery; keep NTM infection in mind when evaluating and treating patients that have had exposure to these devices, typically cardio-thoracic surgery. Follow manufacturer and FDA recommendations for device maintenance and use.

Elizabethkingia:
The *Elizabethkingia* bacteria are usually found in soil and are considered environmental contaminants. In early 2016, MDHHS identified 1 case of *Elizabethkingia spp.* infection associated with a confirmed outbreak. To date, there are 61 confirmed cases from 3 states (Wisconsin, Illinois and Michigan) and no source has been identified. Most cases are older and have serious underlying health conditions. The overall mortality rate in this outbreak is 32%.

-Noreen Mollon, MollonN@michigan.gov

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