Norovirus in Healthcare Settings

Since January 1, 2014; a total of 110 norovirus outbreaks have been reported in Michigan. Sixty-four percent of these outbreaks were reported in healthcare facilities.

Norovirus symptoms, including vomiting and diarrhea, start 12–48 hours after exposure and can last for 1–2 days. The virus is extremely contagious and is typically spread from person-to-person. Hand sanitizers are not effective at killing the virus and should not be used during an outbreak. Washing hands with soap and warm water for 20 seconds is the best method for disinfection of contaminated hands. Ill employees should not return to work until 72 hours after symptoms resolve. Cleaning with bleach is the most effective method of disinfecting contaminated surfaces. Facilities should report suspected norovirus outbreaks to their local health department. Free testing can be arranged with the Michigan Department of Community Health (MDCH) Bureau of Laboratories (BOL).

During the 2014–2015 norovirus season, MDCH is participating in a research study to evaluate a rapid test to detect norovirus. A validated rapid test would assist healthcare providers in diagnosing gastroenteritis illness in individual patients. Due to requirements of the study, norovirus sample submission is slightly modified this season. Specimens should be collected within 3 days of onset of symptoms and immediately mailed to MDCH BOL. BOL will pay for mailing cost and testing. For more norovirus information, including environmental cleanings, please visit: www.michigan.gov/cdinfo or contact Jennifer Beggs or Shannon Johnson at the Michigan Department of Community Health at (517) 335-8165.

—Jennifer Beggs, BeggsJ@michigan.gov
**New CMS Reporting Requirements**

**Acute Care Hospitals:**
- Beginning with the 2014-2015 influenza season, acute care hospitals should begin reporting healthcare worker influenza vaccination summary data from personnel working in hospital outpatient departments along with the counts from personnel working in the inpatient locations of the acute care hospital.
- Beginning January 1, 2015, acute care hospitals should begin reporting CLABSI and CAUTI data form all patient care locations that are mapped as NHSN adult and pediatric medical, surgical, and medical/surgical wards, in addition to the ongoing reporting from ICUs.

**Inpatient Rehab Facilities:**
- Beginning with the 2014-2015 influenza season, IRFs should begin reporting healthcare worker influenza vaccination summary data.
- Beginning January 1, 2015, IRFs should begin reporting MRSA Bacteremia and CDI LabID Events by location from all CMS IRF units within acute care hospitals or at the facility-wide inpatient level (FacWideIn) if free-standing.

**Long-Term Acute Care Facilities:**
- Beginning with the 2014-2015 influenza season, LTACs should begin reporting healthcare worker influenza vaccination summary data.
- Beginning January 1, 2015, IRFs should begin reporting MRSA Bacteremia and CDI LabID Events at the facility-wide inpatient level (FacWideIn).

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**NHSN Surveillance Update**

**Definition changes in NHSN will be implemented Jan 1, 2015**

**General HAI Changes**
- **NHSN Infection Window:** 7-day period during which all site-specific infection criterion must be met. It includes the day the first positive diagnostic test included as part of the site-specific infection criterion was obtained, the 3 calendar days before and the 3 calendar days after.
- **Date of Event:** date the first element used to meet a site-specific infection criterion occurs for the first time within the defined 7-day window.
- **Repeat Infection Timeframe (RIT):** 14-day period during which repeat infections of the same type will not be reported to NHSN.
- **Secondary BSI Attribution Period:** will determine the time period during which a BSI can be attributed as secondary to another infection site, if all other required guidelines are met. This will include the 17 days that make up the Infection Window of the primary infection as well as that infection’s RIT.
- **Definitions for infections (Chapter 17 of manual) have been updated.**

**BSI Changes**
- **Secondary BSI definitional change:** an organism in a blood culture is a “logical pathogen” for another specific site of infection will no longer be used.
- **Protocol change:** core temperatures will no longer be required to document infant fevers. Documented temperature should be used; do not convert based on route.

**UTI Changes**
- **UTI definitions will no longer include:** SUTI criteria 2 and 4 due to removal of colony counts of less than 100,000 CFU/ml and urinalysis results, urine cultures positive only for yeast, mold, dimorphic fungi, or parasites, and a uropathogen list for ABUTI.
- **Protocol Changes:** presence of fever alone will not exclude ABUTI in >65 years, dysuria can no longer to meet infant criteria for SUTI 4, and core temperatures will no longer be required to document infant fevers. Documented temperature should be used; do not convert based on route.

**CLABSI and CAUTI Denominator Data**
- **Introduction of once-weekly sampling:** number of patient days and central line days or urinary catheter days may be collected on a single day once a week. Total monthly patient days will also need to be collected, which will provide an estimate of central line or urinary catheter days.

**SSI Changes**
- **Infection Present at Time of Surgery (PATOS) denoting that an infection is present at the start of, or during, the index surgical procedure.**
- **HPRO and KPRO Revision Procedures:** if total or partial revision HPRO or KPRO is performed, it should be evaluated if specific ICD-9 diagnoses or procedure codes were coded in the 90 days prior to and including the index HPRO or KPRO revision.
- **Along with the current NHSN definition of diabetes, assignment of the discharge ICD-9 codes in the 250-250.93 range will be acceptable for use to answer yes.**
- **Scope risk factor field will be updated to:** “check Y if the NHSN operative procedure was coded as a laparoscopic procedure performed using a laparoscope/robotic assist; otherwise, check N.”

**MDRO/CDI Changes**
- **Denominator reporting from inpatient locations with a different CCN should be excluded.**
- **Facilities participating in FacWideIn reporting will be required to map and report outpatient LabID events from emergency departments and 24-hour observation locations.**
- **New optional questions to LabID event form, including:** “Last physical overnight location of patient immediately prior to arrival into facility” and “Has patient been discharged from another facility in past 4 weeks? If yes, from where (check boxes).”

- Allison Murad, murada@michigan.gov

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*Allison Murad, murada@michigan.gov*
CRE Surveillance and Prevention Initiative

CRE Surveillance and Prevention Initiative Summary Report
The CRE Surveillance and Prevention Initiative, highlighting the efforts of 21 facilities across Michigan, just passed the 2 year mark! We had 6 months of baseline data collection (September 2012–February 2013) which allowed us to determine a baseline CRE incidence rate for our state. Then we had our intervention period (March 2013–August 2014) that was able to demonstrate how effective prevention measures implemented at each facility were at reducing CRE transmission. The summary report will highlight data collected throughout the 2 year period. The summary report will be available later this winter.

New Facilities (Phase 2)
There were 9 facilities that recently joined the CRE Surveillance and Prevention Initiative. Their baseline data collection ran from March 2014–August 2014. These facilities have received their individual baseline rates illustrating CRE incidence in their facility and how they compare to the other Phase 2 facilities. The averaged CRE baseline incidence rate for these facilities was 0.98 per 10,000 patient-days. For comparison, Phase 1 facilities (n=21) had a baseline rate of 0.93 per 10,000 patient-days.

CRE Partners in Prevention Quarterly Call
The quarterly CRE Partners in Prevention call is scheduled for December 17th at 2:00pm.

CRE Incidence in Michigan
Three hundred and twenty seven cases were reported by participating facilities across Michigan, just passed the 2 year mark! We had 6 months of baseline data collection (September 2012–February 2013) which allowed us to determine a baseline CRE incidence rate for our state. Then we had our intervention period (March 2013–August 2014) that was able to demonstrate how effective prevention measures implemented at each facility were at reducing CRE transmission. The summary report will highlight data collected throughout the 2 year period. The summary report will be available later this winter.

Number of cases, patient-days, crude incidence rate with 95% confidence interval (CI), and p-value during the baseline and intervention periods for acute care facilities, long-term acute care facilities (LTAC), and all facilities combined (overall) –Phase 1 facilities only.

<table>
<thead>
<tr>
<th></th>
<th>No. of cases</th>
<th>Total no. of patient-days</th>
<th>Crude incidence rate, 95% CI</th>
<th>p-value</th>
</tr>
</thead>
<tbody>
<tr>
<td>Acute care</td>
<td>271</td>
<td>3,640,049</td>
<td>0.75 (0.66-0.84)</td>
<td>0.13</td>
</tr>
<tr>
<td>Baseline</td>
<td>81</td>
<td>931,782</td>
<td>0.87 (0.69-1.08)</td>
<td>---</td>
</tr>
<tr>
<td>Intervention</td>
<td>190</td>
<td>2,708,267</td>
<td>0.70 (0.61-0.81)</td>
<td>---</td>
</tr>
<tr>
<td>LTAC</td>
<td>13</td>
<td>110,364</td>
<td>1.18 (0.63-2.01)</td>
<td>0.01</td>
</tr>
<tr>
<td>Baseline</td>
<td>8</td>
<td>27,281</td>
<td>2.93 (1.26-5.78)</td>
<td>---</td>
</tr>
<tr>
<td>Intervention</td>
<td>5</td>
<td>83,083</td>
<td>0.60 (0.19-1.40)</td>
<td>---</td>
</tr>
<tr>
<td>Overall</td>
<td>284</td>
<td>3,750,413</td>
<td>0.76 (0.67-0.85)</td>
<td>0.03</td>
</tr>
<tr>
<td>Baseline</td>
<td>89</td>
<td>959,063</td>
<td>0.93 (0.75-1.14)</td>
<td>---</td>
</tr>
<tr>
<td>Intervention</td>
<td>195</td>
<td>2,791,350</td>
<td>0.70 (0.67-0.85)</td>
<td>---</td>
</tr>
</tbody>
</table>

Michigan 2013 HAI Trends
Preliminary 2013 Michigan HAI Surveillance Report Data Highlights
- The MRSA Inpatient LabID rate decreased significantly to 0.9321 events per 1,000 patient days. The MRSA bacteremia LabID event standardized infection ratio (SIR) was 0.957, which indicates 4.3% fewer events than expected.
- The CDI Inpatient LabID rate increased significantly to 20.7778 events per 10,000 patient days. The CDI LabID event SIR was 0.928, which indicates 7.2% fewer events than expected, and the 95% confidence interval of 0.897-0.959 shows that there were significantly fewer infections than expected.
- The CAUTI SIR increased significantly to 1.259 (95% CI: 1.187, 1.335), while the CLABSI Overall SIR remained significantly lower than 1 at 0.436 (95% CI: 0.392, 0.484). The ICU-only CLABSI SIR was even lower at 0.427 (95% CI: 0.380, 0.477). The NICU-only CLABSI SIR was slightly higher, but still significantly less than one at 0.516 (95% CI: 0.380, 0.687).
- The SSI Overall SIR was 0.895 (95% CI: 0.842, 0.950), which shows significantly fewer infections than expected. The colon surgery SIR was also significantly lower than one at 0.906 (95% CI: 0.829, 0.989). The abdominal hysterectomy SIR was 1.123 (95% CI: 0.966, 1.300), which shows more infections than expected; however, this was not statistically significant.
- Rates and SIRs were provided for MRSA bacteremia LabID events, CDI LabID events, CAUTI, and CLABSI stratified by: Teaching vs. Non-Teaching, Region (3 groups), and bed size (<200 beds vs. >200 beds). -Allison Murad, murada@michigan.gov
Dear Friends,

In this newsletter I must inform you that I will be leaving the SHARP Unit. I have accepted a new position within MDCH as the HIV Clinical Care Coordinator. One of my greatest accomplishments in my career has been to be part of the SHARP Unit and the great prevention and surveillance work the Unit does for the State of Michigan. It has been an honor to work with Jennie Finks and a privilege to work with such intelligent and knowledgeable co-workers! I will miss them!

Some items CDI Prevention Initiative participants need to know:

- We strongly encourage you to submit your monthly CDI data through the NHSN Patient Safety Component (acute care facilities) and the NHSN Long Term Care Component (skilled nursing facilities).

- SNFs: continue to send paper reports until you are using the NHSN surveillance system. View the recorded presentations regarding facility enrollment at [http://www.michigan.gov/mdch/0,4612,7-132-2945_5104_55205-268147--00.html](http://www.michigan.gov/mdch/0,4612,7-132-2945_5104_55205-268147--00.html). You can also contact Allie Murad at murada@michigan.gov for assistance in enrolling your facility into NHSN.

- Continue your CDI surveillance! We need a minimum of 5 skilled nursing facilities to continue CDI reporting (preferably via NHSN) to incorporate SNF data into MDCH SHARP NHSN Surveillance Reports. Allie and Noreen (mollonn@michigan.gov) are here to help you along the way.

- Monthly reports will be discontinued. Instead, your data will be included in statewide semi-annual and annual reports, along with quarterly snapshot reports. These reports will display aggregate trends for all facility types throughout Michigan. You will also receive an individualized report at least once per year. Quarterly reporting deadlines will now follow the CMS reporting deadlines, which are 4.5 months after the end of each quarter. Reminders will be sent out prior to each deadline.

It has been a sincere pleasure to work with all the champions of the CDI Prevention Initiative! The champions are the leaders in health care, and they have the ability to lead patient safety and prevent harm to patients from healthcare-associated infections.

Sincerely,
Gail Denkins, RN BS