

New Mexico Healthcare-associated Infections Annual Report: January-December 2015

Prepared by: New Mexico Department of Health

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Healthcare-associated infection prevention in New Mexico

Healthcare-associated infections (HAI) are infections patients can acquire while receiving medical treatment. The New Mexico Department of Health (NMDOH) and New Mexico (NM) HAI Advisory Committee have facilitated statewide and regional HAI prevention efforts since 2008. NMDOH receives both voluntary and mandatory data from healthcare facilities and publishes an annual surveillance report. This annual report provides an update on NM HAI prevention progress in 2015. Facility specific information is available on the NMDOH website (<http://nmhealth.org/go/hai>) for hospitals reporting to NMDOH. State specific 2014 data (the most recent available) for all states is included in the Centers for Disease Control and Prevention (CDC) 2014 HAI Progress Report (www.cdc.gov/hai/progress-report)

HAI prevention progress is tracked using a standardized infection ratio (SIR) which compares the current number of infections to the number of predicted infections based on national baseline data; lower SIRs indicate better progress (i.e., fewer infections). National prevention targets are set by US Department of Health and Human Services (DHHS) and through the Healthy People framework. Infection data are collected through CDC's National Healthcare Safety Network (NHSN) database. HAI data provide healthcare facilities and public health agencies information needed to design, implement, monitor, and evaluate HAI prevention efforts.

2015 New Mexico key findings

- Central line-associated bloodstream infection SIR did not meet the national 2014 HHS prevention target of 0.50 but has remained statistically better than national baseline.
- For the 2015-2016 season healthcare personnel (HCP) influenza vaccination rate was better than the Healthy People 2014 target
- *Clostridium difficile* infection facility-onset SIR was worse than the national baseline and did not meet the 2014 HHS target
- Facility-onset methicillin-resistant *Staphylococcus aureus* infection SIR was better than the 2014 HHS target

What's inside?

Page 2: New Mexico progress on healthcare personnel (HCP) Influenza vaccination, HAI measures and surveillance

Page 3: New Mexico progress on central line-associated bloodstream infection (CLABSI), *Clostridium difficile* (CDI) and Methicillin-resistant *Staphylococcus aureus* (MRSA); what patients can do to reduce their risk of infections

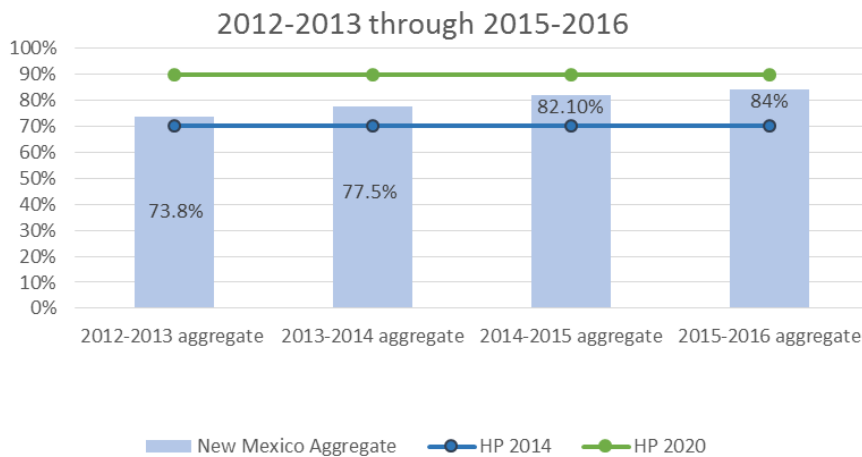
Page 4: Antibiotic resistance (AR) and the microbiome



Healthcare personnel (HCP) influenza vaccination

Annual influenza vaccination of healthcare personnel (HCP) can reduce influenza-related illness and its potentially serious consequences among HCP and their patients. Because persons infected with influenza virus (i.e., seasonal flu) can transmit influenza, even before showing symptoms, personnel who interact with patients or the patient care environment are encouraged to be vaccinated.

New Mexico Aggregate* HCP Influenza Vaccination Rates



For the 2015-2016 season, the aggregate NM HCP influenza vaccination rate was 84% among all HCP at 30 voluntarily reporting healthcare facilities. This exceeded the HP 2014 target of 70% and continues steady improvement toward the HP 2020 target of 90%.

Healthcare personnel influenza vaccinations are just one of the many strategies designed to reduce your risk of infections.

30 inpatient healthcare facilities voluntarily collected and submitted vaccination rates for employees, licensed independent practitioners (physicians, physician assistants and advance practice nurses), volunteers and students. The total numbers of personnel in all categories were used to create an aggregate rate. This aligns with the definition used for national HCP influenza vaccination reporting.

HAI Measures/Surveillance

Central line-associated bloodstream infection (CLABSI)* -

A central line is a tube placed in a large blood vessel usually of a patient's neck or chest for giving medications, drawing blood, or for monitoring purposes. When not inserted correctly or kept clean, central lines can become a pathway for germs to enter the body and cause infections in the blood that can be serious and even deadly.

Clostridium difficile

infection (CDI)* - A CDI occurs when a patient becomes ill from *Clostridium difficile* bacteria. Consequences of CDI range from diarrhea to life-threatening inflammation of the colon.

Methicillin-resistant

Staphylococcus aureus (MRSA) -

MRSA are bacteria that are resistant to many antibiotics. In the community, most MRSA infections are skin infections. In medical facilities, MRSA can cause life-threatening bloodstream infections, pneumonia and surgical site infections.

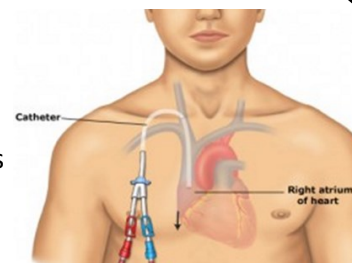
Healthcare personnel (HCP)

influenza vaccination - HCP (e.g., doctors, nurses, technicians, volunteers) can become ill with influenza (flu) and pass it to patients. It is recommended that HCP receive an influenza vaccination yearly to protect themselves and patients.

*Acute care hospital data sharing with NMDOH as required by New Mexico Administrative Code.

Central line-associated bloodstream infection (CLABSI)

In 2015, 38 NM acute care hospitals shared data on CLABSIs in a total of 122 units including intensive care units (ICU), neonatal intensive care units (NICU) and non-ICU wards.



CLABSI	NM aggregate 2015 SIR	95% confidence interval	Statistical comparison between NM SIR and national baseline (1.00)	Health People 2020 Target SIR (0.25)
Non-ICU	0.49	0.35,0.67	★ Better than national baseline	● Target not met.
ICUs	0.59	0.45,0.76	★ Better than national baseline	● Target not met.

While the central line will be managed by health care professionals, there are some ways that patients can help themselves. 1) research the hospital and learn about its CLABSI rate; 2) speak up to help healthcare providers follow the best infection prevention practices; 3) ask your provider about the central line such as if it is necessary and how long it will be in place.; 4) observe the bandage and the area around it. Tell a HCP if the bandage comes off or if bandage or area around it is wet or dirty; 5) do not get the central line wet; 6) tell a HCP if the area around the catheter is red or sore; 7) do not touch the catheter or let any visitors touch the catheter or tubing; 8) have all visitors wash their hands before and after their visit.

Clostridium difficile infection (CDI) and methicillin-resistant Staphylococcus aureus (MRSA)

In 2015, laboratory-identified CDI and MRSA hospital-wide data were shared for the second year with NMDOH. CDI data were shared by 37 facilities under NM Administrative Code. MRSA bloodstream infection data were voluntarily shared by 24 facilities.

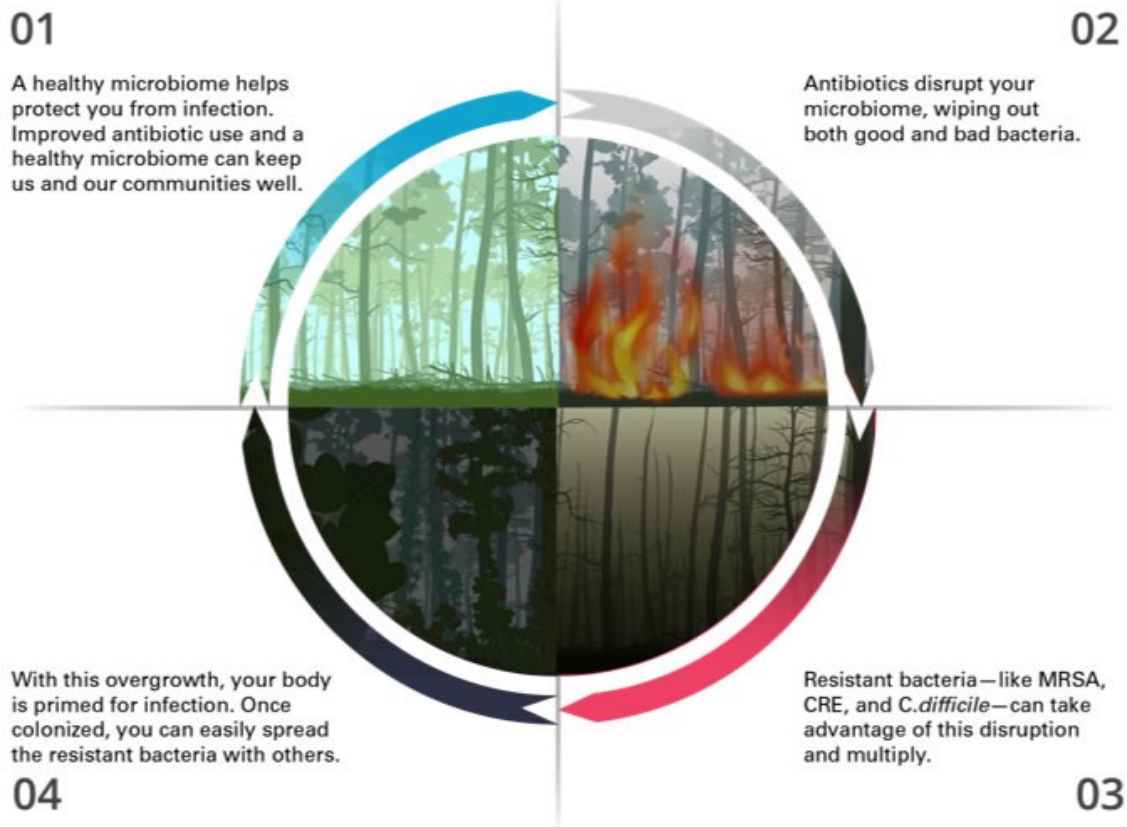
Infection	NM aggregate 2015 SIR	95% confidence interval	Statistical comparison between NM SIR and national baseline (1.00)	HHS 2013 Target SIR
CDI	1.22	1.12,1.31	● Worse than national baseline	● 0.70 Target not Met
MRSA	0.39	0.24,0.60	★ Better than national baseline	★ 0.75 Target Met

You can reduce your risk for CDI by doing the following: 1) consult with your healthcare provider to reduce/eliminate use of two types of drugs that decrease stomach acids (proton pump inhibitors (PPIs) sometimes called the “purple pill” and hydrogen pump blockers or H2 blockers sometimes called acid reducers.); 2) do not take antibiotics unnecessarily. Other risk factors for CDI include: steroids or immunosuppressive medications, prolonged hospital stays, and advanced age.

Antibiotic Resistance and the Microbiome

The microbiome is a community of naturally-occurring germs in and on our bodies. Bacteria live naturally on our skin, in our gut, in our mouths or respiratory tracts, and in our urinary tracts. Antibiotics are life-saving medicines, but they also change, unbalance, and disrupt your microbiome. This change could put people at risk for drug resistant infections. Therefore, it is important not to take antibiotics if they are not needed.

How Do Antibiotics Affect Your Microbiome?



The effects of antibiotics on your microbiome are like a fire in a forest. Good and bad bacteria living in harmony can be quickly wiped out by antibiotic drugs. Resistant bacteria can take advantage of this disruption and multiply, putting people at risk for infection and of spreading resistant bacteria to others.

By only using antibiotics when needed, we can avoid unnecessary disruption, better keep our microbiome and ourselves healthy, and avoid unnecessary risk for infections.

Source: CDC AR Solutions Initiative, October 2016

For More Information:

- National Action Plan for Combating Antibiotic-Resistant Bacteria: www.whitehouse.gov/sites/default/files/docs/national_action_plan_for_combating_antibiotic-resistant_bacteria.pdf
- Information sheets on HAI, including CDI and MRSA: <https://www.shea-online.org/index.php/practice-resources/patients>
- Hand Hygiene: <https://www.cdc.gov/handwashing/>
- CDC Antibiotic Resistance Project Programs: <https://www.cdc.gov/drugresistance/solutions-initiative/>