



Colorado Department  
of Public Health  
and Environment

**Colorado Department of Public Health and Environment  
Healthcare-Associated Infections Plan for 2010-2011  
Health Facility and Emergency Medical Services Division  
Patient Safety Program**

**Introduction**

Healthcare-associated infections (HAI) are among the top ten leading causes of death in the United States. Colorado recognizes the seriousness of this public health problem and passed the HAI reporting legislation in 2006. House bill 1045 requires hospitals, hospital units, ambulatory surgery centers and dialysis centers to report healthcare-associated infections using the National Healthcare Safety Network (NHSN). This legislation created the Patient Safety Program at the Colorado Department of Public Health and Environment (CDPHE).

The Patient Safety Program at the CDPHE has been awarded \$977,516 by the U.S. Department of Health and Human Services, Centers for Disease Control and Prevention (CDC), American Recovery and Reinvestment Act (ARRA), Epidemiology and Laboratory Capacity for Infectious Diseases (ELC), Healthcare-Associated Infections – Building and Sustaining State Programs to Prevent Healthcare-associated Infections grant. This funding will allow the program to:

Activity B: (1) add program staff to assist in education efforts and add dialysis centers as reporting facilities to NHSN, (2) to conduct validation to improve the quality of data reported and, (3) to use the data validation results to modify surveillance definitions and develop education programs for infection prevention staff.

Activity C: An additional portion of the grant included funding to partner with an organization experienced in infection prevention to assist program staff in meeting certain goals. These goals include: (1) providing essential infection prevention education for our less experienced infection prevention staff at healthcare facilities, and (2) to form a prevention collaborative to help our facilities make progress toward meeting two of the HHS Action Plan 5-year prevention targets and lower their infection rates.

Questions about the State HAI Plan or other activities of the Patient Safety Program can be directed to the CDPHE Patient Safety Program Coordinator, Allison Wheeler, at 303-692-2861 or [allison.wheeler@state.co.us](mailto:allison.wheeler@state.co.us).

**PLAN**

**Table 1: Colorado infrastructure planning for HAI surveillance, prevention and control.**

Planning Level	Check Items Underway	Check Items Planned	Items Planned for Implementation (or currently underway)	Target Dates for Implementation
Level I	X	<input type="checkbox"/>	1. Establish statewide HAI prevention leadership through the formation of multidisciplinary group or state HAI advisory council	Established 4/2007
	X	<input type="checkbox"/>	<ul style="list-style-type: none"> <li>i. Collaborate with local and regional partners (e.g., state hospital associations, professional societies for infection control and healthcare epidemiology, academic organizations, laboratorians and networks of acute care hospitals and long term care facilities (LTCFs))</li> <li>ii. Identify specific HAI prevention targets consistent with HHS priorities</li> </ul>	8/2007
			<p><i>Other activities or descriptions (not required):</i></p> <ul style="list-style-type: none"> <li>i. Colorado has a well-established advisory committee as defined by House Bill 1045, passed in 2006. Members of the committee represent the demographic make up of the facilities that are required to report in NHSN: local hospital and ambulatory surgery center infection preventionists, the Association of Professionals in Infection Control (APIC) Mile High chapter members, a medical statistician, an infectious disease doctor, a health insurer representative, a consumer advocate and a purchaser of health insurance.</li> </ul> <p>A representative from the Colorado Hospital Association attends our advisory committee meetings on a regular basis and updates the committee on HAI projects the association has underway. A representation from the state Medicare QIO, the Colorado Foundation for</p>	

Planning Level	Check Items Underway	Check Items Planned	Items Planned for Implementation (or currently underway)	Target Dates for Implementation
			<p>Medical Care (CFMC), has attended our monthly advisory committee meetings. The Patient Safety Program Coordinator is in contact with CFMC to discuss partnering for HAI projects. Our goal is to create an environment of sharing infection prevention information to decrease HAIs throughout Colorado.</p> <p>ii. Certain procedures, as determined by the Colorado HAI legislation and our advisory committee, are required to be reported in NHSN by acute care hospitals, long-term acute care hospitals and ambulatory surgery centers. These procedures include cardiac, orthopedic and abdominal operative procedures. Central lines are monitored in the following locations: adult medical/surgical critical care units, adult medical cardiac critical care units, adult surgical cardiothoracic critical care, adult medical critical care, adult surgical critical care, neonate critical care level II/III units, neonate critical care level III unit and long-term acute care units. Acute care hospitals providing any of the procedures listed above or having any of the locations listed above for monitoring central lines, began reporting to NHSN on July 31, 2007. Currently we have 68/81 (84%) of our hospitals providing NHSN procedures and 68/68 (100%) of these hospitals are reporting in NHSN. Long-term acute care hospitals began reporting their central line data to NHSN on July 1, 2008. All nine of the state's long-term acute care hospitals are reporting in NHSN (100%). Ambulatory surgery centers (ASCs) began reporting their measures to NHSN on October 1, 2008. Of the 111 licensed ASCs in the state, 44 provide procedures tracked in NHSN (40%); 44/44 (100%) are currently reporting in NHSN. All of the HAI measures that our facilities are reporting are specific HAI prevention targets consistent with the Department of Health and Human Services (HHS) priorities (SSIs and CLABSI).</p>	

Planning Level	Check Items Underway	Check Items Planned	Items Planned for Implementation (or currently underway)	Target Dates for Implementation
	X	<input type="checkbox"/>	2. Establish an HAI surveillance prevention and control program	9/2007
	X	<input type="checkbox"/>	<ul style="list-style-type: none"> <li>i. Designate a State HAI Prevention Coordinator</li> <li>ii. Develop dedicated, trained HAI staff with at least one FTE (or contracted equivalent) to oversee the four major HAI activity areas (Integration, Collaboration, and Capacity Building; Reporting, Detection, Response and Surveillance; Prevention; Evaluation, Oversight and Communication)</li> </ul>	1/2009 - ongoing
			<p><i>Other activities or descriptions (not required):</i></p> <ul style="list-style-type: none"> <li>i. The Patient Safety Program Coordinator position was created in September of 2007. The current program coordinator has been with the program since January of 2009. Her role includes oversight of the advisory committee, supervision of 3 new patient safety program staff members, participating in CDC NHSN state user calls, serving as the NHSN group administrator for Colorado and providing training for NHSN users and resolving reporting issues. The coordinator meets monthly with the advisory committee to track the progress of the state mandated legislation, talk about future projects and improve the program.</li> <li>ii. The Patient Safety Program Coordinator is an epidemiologist with experience in disease control and prevention and data analysis. She has overseen the program since January of 2009. With grant funds the program has hired our first new staff member, a public health nurse consultant with significant experience in disease control and prevention. The program is in the process of hiring two additional staff members for the patient safety program: an epidemiologist and a quality improvement specialist. All staff members will have experience in infection prevention</li> </ul>	

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			<p>or be trained in infection prevention practices at the start of their employment. Each will be given the opportunity to take the certification for infection control and prevention (CIC) exam. Shortly after new program staff are hired, they will be provided with NHSN training through online courses on the NHSN website and training by the program coordinator. After the training all staff will be able to assist healthcare facilities throughout the state with NHSN. All program members will be significantly involved in the grant projects.</p>	
	X	<input type="checkbox"/>	<p>3. Integrate laboratory activities with HAI surveillance, prevention and control efforts.</p> <p style="padding-left: 40px;">i. Improve laboratory capacity to confirm emerging resistance in HAI pathogens and perform typing where appropriate (e.g., outbreak investigation support, HL7 messaging of laboratory results)</p>	Ongoing
			<p><i>Other activities or descriptions (not required):</i></p> <p>The state laboratory supports investigations of healthcare-associated infection outbreaks and works closely with the Communicable Disease Program in the Disease Control and Environmental Epidemiology Division. Submitted bacterial isolates are confirmed and characterized in more detail than is feasible in the healthcare setting. Depending on the organism being studied, this may include speciation and subtyping, polymerase chain reaction (PCR) analysis, toxin testing, antibiotic sensitivity, pulsed-field gel electrophoresis (PFGE), multilocus variable number of tandem repeat analysis, or DNA sequencing. High volume testing during an outbreak is possible for many organisms using PCR technology. The laboratory communicates results to CDC, such as PFGE results through PulseNet, antibiotic sensitivity data through NARMS, and</p>	

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			<p><i>Other activities or descriptions (not required):</i></p> <p>selects laboratory data using the HL7 messaging format. In the absence of dedicated funding, the laboratory currently has no capacity to confirm emerging resistance through susceptibility testing.</p>	
Level II	X	<input type="checkbox"/>	<p>4. Improve coordination among government agencies or organizations that share responsibility for assuring or overseeing HAI surveillance, prevention and control (e.g., State Survey agencies, Communicable Disease Control, state licensing boards)</p>	1/2009 - ongoing
			<p><i>Other activities or descriptions (not required):</i></p> <p>Colorado's patient safety program is located within the Health Facilities and Emergency Medical Services Division. This division also houses our state licensing board and state surveyors. In order for a facility to be re-licensed the patient safety program coordinator has to sign off on the re-licensure indicating the facility is in compliance with reporting their HAI data. If the facility is not in compliance at any point during the year, the program coordinator can cite the facility a deficiency through the state licensing group and the facility must write a plan of correction.</p> <p>The patient safety program coordinator has been working with the state surveyors and plans to expand our current work with the group. Currently all surveyors are inquiring about the facility's (hospitals, LTACs, and ASCs) use of NHSN when they survey the facility. The surveyors are reporting back to the patient safety program anytime they recognize a possible infection control breach during a survey.</p>	

<b>Planning Level</b>	<b>Check Items Underway</b>	<b>Check Items Planned</b>	<b>Items Planned for Implementation (or currently underway)</b>	<b>Target Dates for Implementation</b>
			<p>We plan to expand this part of the program to involve our new public health nurse consultant. She will be in charge of contacting the facility for follow-up education and resolution to the infection control issue.</p> <p>The state surveyors are scheduled to begin an infection prevention course in the spring of 2010 to refresh their knowledge of surveillance and general infection prevention practices in clinical practice. This will assist the surveyors in evaluating infection prevention practices when conducting surveys and refer any problems or concerns to the patient safety program for follow-up.</p> <p>The patient safety program coordinator also coordinates with the healthcare-associated infections medical epidemiologist in our disease control division at the state health department. The two meet on a regular basis to discuss overlap in our projects (State HAI and EIP) and coordinate our efforts.</p>	

Planning Level	Check Items Underway	Check Items Planned	Items Planned for Implementation (or currently underway)	Target Dates for Implementation
	<input type="checkbox"/>	<b>X</b>	<p>5. Facilitate use of standards-based formats (e.g., Clinical Document Architecture, electronic messages) by healthcare facilities for purposes of electronic reporting of HAI data. Providing technical assistance or other incentives for implementations of standards-based reporting can help develop capacity for HAI surveillance and other types of public health surveillance, such as for conditions deemed reportable to state and local health agencies using electronic laboratory reporting (ELR). Facilitating use of standards-based solutions for external reporting also can strengthen relationships between healthcare facilities and regional nodes of healthcare information, such as Regional Health Information Organizations (RHIOs) and Health Information Exchanges (HIEs). These relationships, in turn, can yield broader benefits for public health by consolidating electronic reporting through regional nodes.</p>	10% goal by December 2011
			<p><i>Other activities or descriptions (not required):</i></p> <p>i. The patient safety program will communicate with all acute care hospitals the potential to interface infection prevention software with NHSN to allow electronic laboratory reporting to NHSN using HL7 Clinical Document Architecture. The program will promote electronic reporting among hospitals with the IT ability to perform this task. The program will aim to have 10% of the acute care hospitals using this software to electronically report their microbiology lab results into NHSN by the end of the grant period.</p>	
<p>Please also describe any additional activities, not listed above, that your state plans to undertake. Please include target dates for any new activities.</p>				

**Table 2: Colorado planning for surveillance, detection, reporting, and response for HAIs.**

<b>Planning Level</b>	<b>Check Items Underway</b>	<b>Check Items Planned</b>	<b>Items Planned for Implementation (or currently underway)</b>	<b>Target Dates for Implementation</b>
<b>Level I</b>	<b>X</b>	<input type="checkbox"/>	1. Improve HAI outbreak detection and investigation i. Work with partners including CSTE, CDC, state legislatures, and providers across the healthcare continuum to improve outbreak reporting to state health departments	Ongoing
	<b>X</b>	<input type="checkbox"/>	ii. Establish protocols and provide training for health department staff to investigate outbreaks, clusters or unusual cases of HAIs.	Spring 2010 - ongoing
	<b>X</b>	<input type="checkbox"/>	iii. Develop mechanisms to protect facility/provider/patient identity when investigating incidents and potential outbreaks during the initial evaluation phase where possible to promote reporting of outbreaks	Ongoing
	<b>X</b>	<input type="checkbox"/>	iv. Improve overall use of surveillance data to identify and prevent HAI outbreaks or transmission in HC settings (e.g., hepatitis B, hepatitis C, multi-drug resistant organisms (MDRO), and other reportable HAIs)	Ongoing

Planning Level	Check Items Underway	Check Items Planned	Items Planned for Implementation (or currently underway)	Target Dates for Implementation
			<p><i>Other activities or descriptions (not required):</i></p> <p>i. All group outbreaks, including outbreaks of HAIs, are reportable conditions in the state of Colorado. The Communicable Disease Program at CDPHE will work with partners including the local chapter of the Association for Professionals in Infection Control (APIC) and providers to promote the reporting of group outbreaks including outbreaks of HAIs. CDPHE will also partner with CSTE and CDC on issues pertaining to HAI outbreaks. A medical epidemiologist with expertise in HAIs has been recently hired within the Communicable Disease Program, and will assume primary responsibility for investigation of HAI outbreaks. The Communicable Disease Program will improve HAI outbreak reporting through the communication with APIC, healthcare facilities, and other partners and will also develop a system for tracking HAI outbreaks.</p> <p>ii. A medical epidemiologist with expertise in HAIs has been recently hired within the Communicable Disease Program, and will assume primary responsibility for establishing protocols and providing training on the investigation of outbreaks or unusual cases of HAIs to department staff and regional epidemiologists as needed.</p> <p>iii. Mechanisms to protect facility, provider, and patient identities during surveillance and investigation of outbreaks are already in place at CDPHE. These same mechanisms will be used for HAI surveillance and investigation of outbreaks. Regulations and Colorado state statues regarding the protection of this information can be found under the Rules and Regulations Pertaining to Epidemic and Communicable Disease Control (6 CCR 1009-1) and Colorado Revised Statutes 25-1-122(4).</p>	

Planning Level	Check Items Underway	Check Items Planned	Items Planned for Implementation (or currently underway)	Target Dates for Implementation
			<p>and Regulations Pertaining to Epidemic and Communicable Disease Control (6 CCR 1009-1) and Colorado Revised Statutes 25-1-122(4).</p> <p>iv. Reportable HAIs in the state of Colorado include hepatitis B, hepatitis C, vancomycin-resistant <i>Staphylococcus aureus</i> (VRSA), methicillin-resistant <i>Staphylococcus aureus</i> (MRSA, Denver metropolitan area), and <i>Clostridium difficile</i> (Denver metropolitan area). Group outbreaks are also reportable in the state of Colorado. The Communicable Disease Program at CDPHE will continue to perform surveillance for VRSA, MRSA, and C. difficile. The Hepatitis Program will continue to perform surveillance for hepatitis B and C. These two programs will collaborate on overlapping surveillance issues, and any HAI outbreaks that occur. A recently hired medical epidemiologist with expertise in HAIs will assume primary responsibility for the investigation of HAI outbreaks.</p>	
	<b>X</b>	<input type="checkbox"/>	2. Enhance laboratory capacity for state and local detection and response to new and emerging HAI issues.	Ongoing
			<p><i>Other activities or descriptions (not required):</i></p> <p>As surveillance needs change and outbreaks occur, the state laboratory will continue to respond to the needs of the state. For example, during the recent surge in influenza testing during the 2009 H1N1 pandemic, the lab added two new polymerase chain reaction (PCR) instruments and one nucleic acid extraction platform allowing for an increase in sample testing.</p>	

Planning Level	Check Items Underway	Check Items Planned	Items Planned for Implementation (or currently underway)	Target Dates for Implementation
Level II	X	<input type="checkbox"/>	3. Improve communication of HAI outbreaks and infection control breaches <ul style="list-style-type: none"> <li>i. Develop standard reporting criteria including, number, size and type of HAI outbreak for health departments and CDC</li> </ul>	Ongoing
	X	<input type="checkbox"/>	<ul style="list-style-type: none"> <li>ii. Establish mechanisms or protocols for exchanging information about outbreaks or breaches among state and local governmental partners (e.g., State Survey agencies, Communicable Disease Control, state licensing boards)</li> </ul>	Ongoing
			<p><i>Other activities or descriptions (not required):</i></p> <ul style="list-style-type: none"> <li>i. Standard reporting criteria are currently in place for reporting long-term care facility influenza outbreaks. The guidelines and these reporting criteria for long-term care facility influenza outbreaks will be updated and revised. The Communicable Disease Program will develop standard reporting criteria for HAI outbreaks, and any HAI outbreak will have a written report that will be distributed to participating facilities and health departments to enhance communication.</li> <li>ii. During an HAI outbreak, the Communicable Disease Program at CDPHE will communicate regularly with facilities involved in the outbreak and local health departments in whose jurisdiction the outbreak is occurring. The Communicable</li> </ul>	

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			Disease Program will also communicate and collaborate with the Health Facilities and Emergency Management Services Division within CDPHE as necessary regarding HAI outbreaks. CDPHE will also communicate with CDC as necessary. Other local, state, and federal agencies will be involved as necessary. HAI outbreaks will have written reports that will be distributed to participating facilities and local health departments to enhance communication.	
	<p style="text-align: center;"><b>X</b></p> <p style="text-align: center;"><input type="checkbox"/></p> <p style="text-align: center;"><input type="checkbox"/></p> <p style="text-align: center;"><input type="checkbox"/></p> <p style="text-align: center;"><b>X</b></p> <p style="text-align: center;"><input type="checkbox"/></p>	<p style="text-align: center;"><input type="checkbox"/></p>	<p>4. Identify at least 2 priority prevention targets for surveillance in support of the HHS HAI Action Plan</p> <ul style="list-style-type: none"> <li>i. Central Line-associated Bloodstream Infections (CLABSI)</li> <li>ii. <i>Clostridium difficile</i> Infections (CDI)</li> <li>iii. Catheter-associated Urinary Tract Infections (CAUTI)</li> <li>iv. Methicillin-resistant Staphylococcus aureus (MRSA) Infections</li> <li>v. Surgical Site Infections (SSI)</li> <li>vi. Ventilator-associated Pneumonia (VAP)</li> </ul>	<p>8/2007</p> <p>8/2007, 10/2008, 8/2009</p>

Planning Level	Check Items Underway	Check Items Planned	Items Planned for Implementation (or currently underway)	Target Dates for Implementation
			<p><i>Other activities or descriptions (not required):</i></p> <p>Certain procedures, as determined by the Colorado HAI legislation and our advisory committee, are required to be reported in NHSN by acute care hospitals, long-term acute care hospitals and ambulatory surgery centers. These procedures include cardiac, orthopedic, abdominal and vaginal operative procedures. Central lines are monitored in the following locations: adult medical/surgical critical care units, adult medical cardiac critical care units, adult surgical cardiothoracic critical care, adult medical critical care, adult surgical critical care, neonate critical care level II/III units, neonate critical care level III unit and long-term acute care units. Acute care hospitals providing any of the procedures listed above or having any of the locations listed above for monitoring central lines, began reporting to NHSN on July 31, 2007. Currently we have 70/78 (90%) of our hospitals providing NHSN procedures and 70/70 (100%) of these hospitals are reporting in NHSN. Long-term acute care hospitals began reporting their central line data to NHSN on July 1, 2008. All nine of the state's long-term acute care hospitals are reporting in NHSN (100%). Ambulatory surgery centers (ASCs) began reporting their measures to NHSN on October 1, 2008. Of the 111 licensed ASCs in the state, 44 provide procedures tracked in NHSN (40%); 44/44 (100%) are currently reporting in NHSN.</p> <p>The patient safety program's existing advisory committee will assist program staff to define the specifics of the HAIs to be addressed in the prevention collaborative. The program will most likely focus on decreasing SSIs and CLABSIs since these metrics are currently reported through NHSN by Colorado facilities. Program staff will enlist the help of the advisory committee to determine the procedures and locations to be targeted for the prevention collaborative. The data validation will continue on an annual basis in order to validate the results of the prevention collaborative.</p>	

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			<p>committee to determine the procedures and locations to be targeted for the prevention collaborative.</p> <p>The program has contracted with the Colorado Hospital Association (CHA) to coordinate the prevention collaborative. The project coordinator at CHA will work closely with the patient safety program coordinator and the advisory committee and attend the committee meetings during the funding period.</p> <p>CHA has developed a survey for all healthcare personnel currently reporting in NHSN to determine which prevention targets they would to see more support for prevention work provided in Colorado. The results from the survey will further guide the committee and the program to focus efforts on specific prevention targets.</p>	
	<p style="text-align: center;"><b>X</b></p> <p style="text-align: center;"><b>X</b></p>	<p style="text-align: center;"><input type="checkbox"/></p> <p style="text-align: center;"><input type="checkbox"/></p>	<p>5. Adopt national standards for data and technology to track HAIs (e.g., NHSN).</p> <ul style="list-style-type: none"> <li>i. Develop metrics to measure progress towards national goals (align with targeted state goals). (See Appendix 1).</li> <li>ii. Establish baseline measurements for prevention targets</li> </ul>	<p style="text-align: center;">1/2010</p> <p style="text-align: center;">1/2010</p>

Planning Level	Check Items Underway	Check Items Planned	Items Planned for Implementation (or currently underway)	Target Dates for Implementation
			<p><i>Other activities or descriptions (not required):</i>            If the committee recommends metrics that are already being reported, patient safety program staff members will establish the baseline measurements from the most recent year of data collected and publicly reported (August 1, 2008 – July 31, 2009). If the committee recommends metrics that are not currently being reported through NHSN, program staff members will seek data at the facility level to use as baseline measurements for the prevention targets.</p>	
	X	<input type="checkbox"/>	<p>6. Develop state surveillance training competencies</p> <p style="padding-left: 40px;">i. Conduct local training for appropriate use of surveillance systems (e.g., NHSN) including facility and group enrollment, data collection, management, and analysis</p>	<p>9/2008, 8/2009, 2/2010 – annually or biannually thereafter depending on needs of reporting facilities in Colorado</p>
			<p><i>Other activities or descriptions (not required):</i>            Colorado Patient Safety Program staff and members of the Colorado Health Facility Acquired Infections Advisory Committee have conducted two live NHSN trainings to date. In September of 2008 advisory committee members and CDC program staff conducted training for Ambulatory Surgery Center reporting personnel. In August of 2009, the patient safety program coordinator and advisory committee members</p>	

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			<p>conducted a training session for LTACH, hospital, and ASC reporting personnel. The training was attended by nearly 60 people and received positive reviews from attendees.</p> <p>The committee and program staff have scheduled two upcoming training sessions in February 2010 for dialysis center reporting personnel. At these sessions, NHSN enrollment, data collection and reporting, and analysis of data will be discussed.</p> <p>Program staff will offer an additional NHSN training sometime in late 2010 for any healthcare staff reporting in NHSN in Colorado. This will be an annual training.</p>	
	<b>X</b>	<input type="checkbox"/>	7. Develop tailored reports of data analyses for state or region prepared by state personnel	Ongoing
			<p><i>Other activities or descriptions (not required):</i></p> <p>Colorado state legislation requires semi-annual bulletins (spring and fall publications) and a report submitted to the state legislature on January 15<sup>th</sup> of each year. The bulletins focus on a particular procedure or device required to be reported in a certain group of our facilities. To date our bulletins have included topics such as Central Line-Associated Bloodstream Infection Rates in Colorado Adult Intensive Care Units, Catheter-Associated Bloodstream Infection Rates in Colorado Neonatal Intensive Care Units, Central Line-Associated Bloodstream Infection Rates in Colorado Long-Term Acute Care Hospitals, and Herniorrhaphy procedures in Colorado Ambulatory Surgical Centers.</p> <p>The annual report publicly reports all data by facility. In</p>	

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			<p>January of 2010, CDPHE will release our second annual report containing data. One of the program goals for the next year will be to improve the layout of the report, formatting it to be easily understandable for the consumer.</p> <p>All of our reports are prepared by patient safety program staff, in conjunction with our statistical expert who we consult with for the analysis of the data.</p>	
<b>Level III</b>	<p><b>X</b></p> <p><b>X</b></p> <p><b>X</b></p> <p><b>X</b></p> <p><input type="checkbox"/></p> <p><b>X</b></p> <p><b>X</b></p>	<p><input type="checkbox"/></p> <p><input type="checkbox"/></p> <p><input type="checkbox"/></p> <p><input type="checkbox"/></p> <p><b>X</b></p> <p><input type="checkbox"/></p> <p><input type="checkbox"/></p>	<p>8. Validate data entered into HAI surveillance (e.g., through healthcare records review, parallel database comparison) to measure accuracy and reliability of HAI data collection</p> <ul style="list-style-type: none"> <li>i. Develop a validation plan</li> <li>ii. Pilot test validation methods in a sample of healthcare facilities</li> <li>iii. Modify validation plan and methods in accordance with findings from pilot project</li> <li>iv. Implement validation plan and methods in all healthcare facilities participating in HAI surveillance</li> <li>v. Analyze and report validation findings</li> <li>vi. Use validation findings to provide operational guidance for healthcare facilities that targets any data shortcomings detected</li> </ul>	<p>2/2010</p> <p>4/2010</p> <p>6/2010</p> <p>2011/2012</p> <p>4/2011</p> <p>5/2011</p>

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			<p><i>Other activities or descriptions (not required):</i></p> <p>The patient safety program plans to model our data validation after states that have had successful validation projects (New York and Connecticut). The protocol will be developed with assistance from the staff hired as a result of this grant, including the statistician. The advisory committee will be consulted and provide input to the protocol, data collection forms and analytic plans.</p> <p>The statistician will perform a power analysis to determine the appropriate number of facilities, procedures and positive blood cultures in NHSN monitored locations to be sampled for data validation. This calculation will ensure the statistical results from validation are accurate and reliable.</p> <p>A combination of medical record review and interviews with infection prevention staff at facilities will be used to assess data validity. One quarter of calendar year data will be selected for review and a randomly selected set of each facility type will be targeted for this project; the number will be based on the power analysis. Record reviewers will be blinded to the infection status of each patient’s record. Reviewed records will be compared with reports in NHSN to determine the accuracy of reported information and completeness of reporting. Interviews with infection prevention (IP) staff will help program staff to assess the IPs understanding of surveillance methods</p> <p>A minimum of two staff members will visit the facilities selected for the project. Both staff members will be trained in infection prevention and will have a thorough understanding of the NHSN surveillance definitions.</p> <p>Each unreported case found during data validation will be analyzed individually to determine why the case went undetected and what action is necessary to correct the problem. CDC will be consulted for any instance where the case definition</p>	

Planning Level	Check Items Underway	Check Items Planned	Items Planned for Implementation (or currently underway)	Target Dates for Implementation
			<p>Each unreported case found during data validation will be analyzed individually to determine why the case went undetected and what action is necessary to correct the problem. CDC will be consulted for any instance where the case definition may be unclear. All data from the project will be analyzed to determine the true infection rate at each facility. The results will be reported to all Colorado healthcare facilities reporting data to NHSN. The patient safety program, in conjunction with the advisory committee, will develop an education program based on the results of the project. If necessary, patient safety program staff will modify surveillance methods with the goal of making NHSN definitions easier to use for Colorado infection prevention staff.</p>	
	<b>X</b>	<input type="checkbox"/>	<p>9. Develop preparedness plans for improved response to HAI</p> <p style="margin-left: 40px;">i. Define processes and tiered response criteria to handle increased reports of serious infection control breaches (e.g., syringe reuse), suspect cases/clusters, and outbreaks</p>	10/2009 - ongoing
			<p><i>Other activities or descriptions (not required):</i>  Under Colorado Revised Statutes 25-1-124(2)(g) Each health care facility licensed pursuant to section 25-3-101 or certified pursuant to section 25-1.5-103(I)(a)(II) shall report to the department the following occurrences: . . . “Any occurrence in which drugs intended for use by patients or residences are diverted to use by other persons.” The Health Facilities division has established a protocol for investigating injectable diverted</p>	

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			drugs with the Disease Control division. The Health facilities division will continue to work with the disease control division to investigate other serious infection control breaches found through surveys, complaints, and NHSN data.	
	X	<input type="checkbox"/>	10. Collaborate with professional licensing organizations to identify and investigate complaints related to provider infection control practice in non-hospital settings, and to set standards for continuing education and training	1/2009
			<p><i>Other activities or descriptions (not required):</i>  As mentioned previously, the patient safety program coordinator has been working with the state surveyors and plans to expand our current work with the group. Currently all surveyors are inquiring about the facility's (hospitals, LTACHs and ASCs) use of NHSN when they survey the facility. The surveyors are reporting back to the patient safety program anytime they recognize a possible infection control breach during a survey. We plan to expand this part of the program to involve our new public health nurse consultant. She will be in charge of contacting the facility for follow-up education and resolution to the infection control issue.</p>	
			11. Adopt integration and interoperability standards for HAI information systems and data sources	

Planning Level	Check Items Underway	Check Items Planned	Items Planned for Implementation (or currently underway)	Target Dates for Implementation
	<input type="checkbox"/>	<input type="checkbox"/>	<ul style="list-style-type: none"> <li>i. Improve overall use of surveillance data to identify and prevent HAI outbreaks or transmission in HC settings (e.g., hepatitis B, hepatitis C, multi-drug resistant organisms (MDRO), and other reportable HAIs) across the spectrum of inpatient and outpatient healthcare settings</li> <li>ii. Promote definitional alignment and data element standardization needed to link HAI data across the nation.</li> </ul>	<p>Ongoing</p> <p>6/2006</p>
	<b>X</b>	<input type="checkbox"/>	<p><i>Other activities or descriptions (not required):</i></p> <p>i. Reportable HAIs in the state of Colorado include hepatitis B, hepatitis C, vancomycin-resistant <i>Staphylococcus aureus</i> (VRSA), methicillin-resistant <i>Staphylococcus aureus</i> (MRSA, Denver metropolitan area), and <i>Clostridium difficile</i> (Denver metropolitan area). Group outbreaks are also reportable in the state of Colorado. The Communicable Disease Program at CDPHE will continue to perform surveillance for VRSA, MRSA, and C. difficile. The Hepatitis Program will continue to perform surveillance for hepatitis B and C. These two programs will collaborate on overlapping surveillance issues, and any HAI outbreaks that occur. A recently hired medical epidemiologist with expertise in HAIs will assume primary responsibility for the investigation of HAI outbreaks. The HAI medical epidemiologist will encourage outbreak reporting of HAIs in all healthcare settings, and will develop mechanisms and standards for HAI outbreak reporting among the different healthcare settings.</p>	

Planning Level	Check Items Underway	Check Items Planned	Items Planned for Implementation (or currently underway)	Target Dates for Implementation
			<p>ii. Our legislation requires the use of NHSN. With the use of NHSN all facilities are required to use NHSN surveillance and reporting definitions. In order to ensure our facilities are applying the surveillance and reporting definitions appropriately, we will conduct data validation beginning in early 2010. Education sessions with all reporting facilities will follow the validation to present the results of the project and clarify surveillance and reporting definitions where we found gaps during the validation project. Using NHSN allows Colorado healthcare facilities to compare themselves to other facilities in Colorado and nationally using NHSN.</p>	
	<b>X</b>	<input type="checkbox"/>	<p>12. Enhance electronic reporting and information technology for healthcare facilities to reduce reporting burden and increase timeliness, efficiency, comprehensiveness, and reliability of the data</p> <p style="padding-left: 40px;">i. Report HAI data to the public</p>	Ongoing
			<p><i>Other activities or descriptions (not required):</i>  As defined by our legislation, facilities must use the NHSN to report their healthcare-associated infections data. In accordance with NHSN policies and procedures, all data is due to NHSN no later than 30 days after the end of the month. The department runs quarterly data checks to ensure facilities have entered data for the quarter. The department uses the data to produce semi-annual bulletins and an annual report. The bulletins target different procedures or facility types. The annual report includes data from all of our healthcare facilities reporting from the</p>	

Planning Level	Check Items Underway	Check Items Planned	Items Planned for Implementation (or currently underway)	Target Dates for Implementation
			beginning of the reporting period. Press releases are issued for each report and all reports are posted on our website.	
	<b>X</b>	<input type="checkbox"/>	13. Make available risk-adjusted HAI data that enables state agencies to make comparisons between hospitals.	Ongoing
			<p><i>Other activities or descriptions (not required):</i>  A requirement of our legislation, mandating public reporting of HAI data, is to produce reports with risk-adjusted data. All of our publicly released reports include risk-adjusted data with an explanation of the comparison between the facility rate and the national comparison or the state comparison.</p>	
	<b>X</b>	<input type="checkbox"/>	14. Enhance surveillance and detection of HAIs in nonhospital settings	10/2008, 3/2010
			<p><i>Other activities or descriptions (not required):</i>  Our ambulatory surgery centers began reporting through NHSN in October 2008. The surgery centers report on herniorrhaphies, knee prosthesis, hip prosthesis, and abdominal and vaginal hysterectomies depending on the procedures they offer in their facilities.</p> <p>Outpatient hemodialysis centers will begin reporting in NHSN in March of 2010. They will report hospitalizations, positive blood cultures and all IV antimicrobial starts. The Patient Safety program has been communicating with dialysis centers about the reporting requirement. Two live NHSN trainings have been scheduled for February of 2010 to assist facilities with the</p>	

<b>Planning Level</b>	<b>Check Items Underway</b>	<b>Check Items Planned</b>	<b>Items Planned for Implementation (or currently underway)</b>	<b>Target Dates for Implementation</b>
			<p>enrollment and reporting process.</p> <p>All reporting personnel from ASCs and outpatient hemodialysis centers will be invited to attend a basic infection prevention course offered before our prevention collaborative begins. The department understands that reporting personnel at these healthcare facilities may not have the infection prevention experience that some of our IPs at hospitals may have. The goal of the session is to ensure all of our reporting personnel have a good understanding of surveillance and infection prevention for reporting laying a baseline for the prevention collaborative.</p>	
<p>Please also describe any additional activities, not listed above, that your state plans to undertake. Please include target dates for any new activities.</p>				

**Table 3: Colorado planning for HAI prevention activities.**

<b>Planning Level</b>	<b>Check Items Underway</b>	<b>Check Items Planned</b>	<b>Items Planned for Implementation (or currently underway)</b>	<b>Target Dates for Implementation</b>
<b>Level I</b>	<b>X</b>	<input type="checkbox"/>	1. Implement HICPAC recommendations. <ul style="list-style-type: none"> <li>i. Develop strategies for implementation of HICPAC recommendations for at least 2 prevention targets specified by the state multidisciplinary group.</li> </ul>	1/2010
			<i>Other activities or descriptions (not required):</i> The Colorado Hospital Association was awarded the contract for the prevention collaborative. Once our advisory committee recommends the measures to be chosen for the prevention collaborative, patient safety program staff will work with the project manager for the prevention collaborative at the Colorado Hospital Association to implement HICPAC recommendations for the prevention metrics chosen for the collaborative.	
	<b>X</b>	<input type="checkbox"/>	2. Establish prevention working group under the state HAI advisory council to coordinate state HAI collaboratives <ul style="list-style-type: none"> <li>i. Assemble expertise to consult, advise, and coach inpatient healthcare facilities involved in HAI prevention collaboratives</li> </ul>	12/2009
			<i>Other activities or descriptions (not required):</i> The Colorado Hospital Association (CHA) was the agency awarded the contract for the prevention collaborative. The project manager named for the collaborative at CHA attends our advisory committee meetings regularly and will continue to attend the meetings throughout the project to update the committee on the progress of	

Planning Level	Check Items Underway	Check Items Planned	Items Planned for Implementation (or currently underway)	Target Dates for Implementation
			<p>the collaborative. The patient safety program’s quality improvement specialist will act as the liaison between CHA, the patient safety program and facilities participating in the collaborative.</p> <p>Two of collaborative consultants named in the CHA contract are key members of our advisory committee and have several years of experience in infection prevention. An infection prevention manager at one of our large metro area hospitals, holding one of the infection preventionists spots on our advisory committee, will develop and conduct infection prevention and epidemiology training for our less experienced reporting personnel at reporting healthcare facilities. Our communicable disease physician on the advisory committee will develop and conduct the meetings for the facilities participating in the collaborative.</p>	
	<p style="text-align: center;"><b>X</b></p> <p style="text-align: center;"><b>X</b></p> <p style="text-align: center;"><b>X</b></p>	<p style="text-align: center;"><input type="checkbox"/></p> <p style="text-align: center;"><input type="checkbox"/></p> <p style="text-align: center;"><input type="checkbox"/></p>	<p>3. Establish HAI collaboratives with at least 10 hospitals (i.e. this may require a multi-state or regional collaborative in low population density regions)</p> <ul style="list-style-type: none"> <li>i. Identify staff trained in project coordination, infection control, and collaborative coordination</li> <li>ii. Develop a communication strategy to facilitate peer-to-peer learning and sharing of best practices</li> <li>iii. Establish and adhere to feedback of a clear and standardized outcome data to track progress</li> </ul>	<p style="text-align: center;">12/2009 – 1/2010</p>

Planning Level	Check Items Underway	Check Items Planned	Items Planned for Implementation (or currently underway)	Target Dates for Implementation
			<p><i>Other activities or descriptions (not required):</i></p> <p>i. CHA has a project coordinator with experience in prevention collaboratives and patient safety. The CDPHE quality improvement specialist (to be hired no later than 1/2010) from the patient safety program will have experience in project coordination. The QI specialist will have excellent communication skills and understand the key components to carrying out a successful prevention collaborative.</p> <p>ii. CHA will conduct monthly teleconferences allowing participating facilities to share best practices and talk through challenges they've encountered in reducing their HAI rates. CHA will develop a secure website for participating facilities to share their data. And, CHA will conduct three webinars for each year of the prevention collaborative. Each webinar will focus in on an area of the project where CHA has identified facilities need assistance.</p> <p>iii. All facilities participating in the prevention collaborative will have access to a secure website created by CHA. This website will be used for sharing data with hospitals during the collaborative. The data will measure each facilities progress toward the goal.</p>	
	<b>X</b>	<input type="checkbox"/>	<p>4. Develop state HAI prevention training competencies</p> <p>i. Consider establishing requirements for education and training of healthcare professionals in HAI prevention (e.g., certification requirements, public education campaigns and targeted provider education) or work with healthcare partners to establish best practices for training and certification</p>	2006 and 4/2009

Planning Level	Check Items Underway	Check Items Planned	Items Planned for Implementation (or currently underway)	Target Dates for Implementation
			<p><i>Other activities or descriptions (not required):</i></p> <p>i. House Bill 1045 states that ‘An individual who collects data on hospital-acquired infection rates shall take the test for the appropriate national certification for infection control and become certified within six months after the individual becomes eligible to take the certification test. Mandatory national certification measures shall not apply to individuals collecting data on hospital-acquired infection in hospitals licensed for 50 beds or less. Qualifications for these individuals may be met through ongoing education, training, experience, or certification’. House Bill 1025 that passed in early 2009 further eliminated the CIC requirement for ASC and dialysis center reporting personnel. In response to House Bill 1025, the advisory committee announced annual education requirements for non-certified reporting personnel. These include: (1) taking the pre-requisite NHSN training courses before enrolling in NHSN; (2) completing ten hours of infection prevention education specific to the facility’s specialty each year; and (3) keeping a log of the education completed to show our state surveyors when they visit the facility for their re-licensure or complaint visits.</p>	
Level II	<input type="checkbox"/>	<input type="checkbox"/>	<p>5. Implement strategies for compliance to promote adherence to HICPAC recommendations</p> <p style="padding-left: 40px;">i. Consider developing statutory or regulatory standards for healthcare infection control and prevention or work with healthcare partners to establish best practices to ensure adherence</p>	

Planning Level	Check Items Underway	Check Items Planned	Items Planned for Implementation (or currently underway)	Target Dates for Implementation
	X	<input type="checkbox"/>	ii. Coordinate/liaise with regulation and oversight activities such as inpatient or outpatient facility licensing/accrediting bodies and professional licensing organizations to prevent HAIs	1/2009 - ongoing
	X	<input type="checkbox"/>	iii. Improve regulatory oversight of hospitals, enhancing surveyor training and tools, and adding sources and uses of infection control data	1/2009 - ongoing
	<input type="checkbox"/>	<input type="checkbox"/>	iv. Consider expanding regulation and oversight activities to currently unregulated settings where healthcare is delivered or work with healthcare partners to establish best practices to ensure adherence	
			<p><i>Other activities or descriptions (not required):</i></p> <p>ii. As mentioned previously, our patient safety program has been working with the state surveyors and plans to expand our current work with the group. Currently all surveyors are inquiring about the facility's (hospitals, LTACHs and ASCs) use of NHSN when they survey the facility. The surveyors are reporting back to the patient safety program anytime they recognize a possible infection control breach during a survey. We plan to expand this part of the program to involve our new public health nurse consultant. She will be in charge of contacting the facility for follow-up education and resolution to the infection control issue. We will begin to implement additional strategies for compliance to promote adherence to HICPAC recommendations in our hospitals and ASCs. Our public health nurse consultant will work with our state surveyors to accomplish this task.</p>	

Planning Level	Check Items Underway	Check Items Planned	Items Planned for Implementation (or currently underway)	Target Dates for Implementation
			<p><i>Other activities or descriptions (not required):</i></p> <p>iii. The state surveyors are scheduled to begin an infection prevention course in the spring of 2010 to refresh their knowledge of surveillance and general infection prevention practices in clinical practice. This will assist the surveyors in evaluating infection prevention practices when conducting surveys and refer any problems or concerns to the patient safety program for follow-up. The state surveyors are also scheduled to conduct a survey using the new infection prevention guidelines established by CMS with Dr. Mark Levine. Dr. Levine has extensive experience in evaluating the infection prevention practices at healthcare facilities.</p>	
	X	<input type="checkbox"/>	6. Enhance prevention infrastructure by increasing joint collaboratives with at least 20 hospitals (i.e. this may require a multi-state or regional collaborative in low population density regions)	3/2010
			<p><i>Other activities or descriptions (not required):</i></p> <p>The Colorado Hospital Association has committed to enrolling a minimum of 20 healthcare facilities in the prevention collaborative. CHA will target infection preventionists, quality improvement and risk management personnel, and facility CEOs to advertise the benefits of being enrolled in the collaborative. CHA has surveyed infection preventionists (IPs) at hospitals, LTACHs and ASCs to determine which prevention targets the IPs are most interested in. This will assist the committee in determining the prevention targets for the collaborative.</p>	

Planning Level	Check Items Underway	Check Items Planned	Items Planned for Implementation (or currently underway)	Target Dates for Implementation
	<b>X</b>	<input type="checkbox"/>	7. Establish collaborative to prevent HAIs in nonhospital settings (e.g., long term care, dialysis)	2010/2011
			<i>Other activities or descriptions (not required):</i> Depending on the metrics chosen by the advisory committee, the collaborative may have the potential to be extended to long-term acute care hospitals or ambulatory surgery centers. The patient safety program will encourage CHA to involve non-hospital facilities if the metrics chosen permit these facilities to be included.	
Please also describe any additional activities, not listed above, that your state plans to undertake. Please include target dates for any new activities.				

**Table 4: Colorado HAI communication and evaluation planning**

Planning Level	Check Items Underway	Check Items Planned	Items Planned for Implementation (or currently underway)	Target Dates for Implementation
Level I	X		1. Conduct needs assessment and/or evaluation of the state HAI program to learn how to increase impact	Ongoing
	X		<ul style="list-style-type: none"> <li>i. Establish evaluation activity to measure progress towards targets and</li> <li>ii. Establish systems for refining approaches based on data gathered</li> </ul>	Late 2010
			<p><i>Other activities or descriptions (not required):</i></p> <ul style="list-style-type: none"> <li>i. Our legislation has tasked our advisory committee with continually evaluating the quality and accuracy of the data our healthcare facilities collect. The advisory committee does this by looking at the data in the semi-annual bulletins and our annual report.</li> </ul> <p>Our validation project will serve as an evaluation of the data collected for the quarter of data we select for the project. This will give the committee and the program an idea of where we need to focus our education efforts for NHSN surveillance and reporting.</p> <ul style="list-style-type: none"> <li>ii. The results of our validation project will allow the program and the committee to focus our education efforts to the areas they are most needed.</li> </ul>	
			2. Develop and implement a communication plan about the state’s HAI program and progress to meet public and private stakeholders needs	

	X	<input type="checkbox"/>	<p>i. Disseminate state priorities for HAI prevention to healthcare organizations, professional provider organizations, governmental agencies, non-profit public health organizations, and the public</p>	Ongoing
			<p><i>Other activities or descriptions (not required):</i></p> <p>Our advisory committee includes a consumers union representative, a consumer representative, an infectious disease physician, a medical statistician, a health insurer, infection preventionists from our public and private hospitals, members of the Association of Professionals in Infection Prevention (APIC) and a Colorado Ambulatory Surgical Center Association (CASCA) member. The advisory committee takes information from our committee back to their respective organizations and boards they sit on to share our HAI plans.</p> <p>All patient safety program staff members are APIC members and attend the meetings monthly. The patient safety program coordinator works in coordination with the Colorado Hospital Association, the Colorado Ambulatory Surgery Center Association, End Stage Renal Disease Network 15 and the Colorado Foundation for Medical Care. The coordinator communicates our HAI plans to these organizations on a regular basis and has been invited to speak with the members and clients of these organizations to speak about different patient safety program activities.</p> <p>Our annual report includes future plans for the patient safety program. This report and all of our meeting minutes are posted on our website.</p>	

<b>Level II</b>	<b>X</b>	<input type="checkbox"/>	3. Provide consumers access to useful healthcare quality measures	Ongoing
	<i>Other activities or descriptions (not required):</i> House Bill 1278 passed in 2006 and requires general hospitals in the state of Colorado to report on clinical and quality measures that allow consumers to compare healthcare services of these facilities using the ‘Colorado Hospital Report Card’. HAI data from CDPHE is one of the measures included. The Colorado Hospital Association (CHA) produces the Report with input from the patient safety program coordinator at CDPHE. CDPHE also serves as the final approval authority on new or modified measures. The Hospital Report Card is mentioned in our annual report and our website includes a link to the report card.			
<b>Level III</b>	<b>X</b>	<input type="checkbox"/>	4. Identify priorities and provide input to partners to help guide patient safety initiatives and research aimed at reducing HAIs	Ongoing
	<i>Other activities or descriptions (not required):</i> As mentioned previously, the patient safety program coordinates with several of the other patient safety organizations in the state (CHA, CFMC, APIC, CASCA, and ESRD Network 15). We have contracted with CHA for the prevention collaborative and will seek out additional patient safety organizations in the state in order to coordinate and focus our efforts and align our priorities.			
Please also describe any additional activities, not listed above, that your state plans to undertake. Please include target dates for any new activities.				

## Appendix A.

The Colorado Health Facility Acquired Infections Advisory Committee will use the table below in the discussion of metrics for the prevention collaborative. These metrics were described in the HHS Action Plan and were developed with the input of HICPAC and CDC.

Metric Number and Label	Original HAI Elimination Metric	HAI Comparison Metric	Measurement System	National Baseline Established (State Baselines Established)	National 5-Year Prevention Target	Coordinator of Measurement System	Is the metric NQF endorsed?
1. CLABSI 1	CLABSIs per 1000 device days by ICU and other locations	CLABSI SIR	CDC NHSN Device-Associated Module	2006-2008  (proposed 2009, in consultation with states)	Reduce the CLABSI SIR by at least 50% from baseline or to zero in ICU and other locations	CDC	Yes <sup>†</sup>
2. CLIP 1 (formerly CLABSI 4)	Central line bundle compliance	CLIP Adherence percentage	CDC NHSN CLIP in Device-Associated Module	2009  (proposed 2009, in consultation with states)	100% adherence with central line bundle	CDC	Yes <sup>†</sup>
3a. C diff 1	Case rate per patient days; administrative/dischARGE data for ICD-9 CM coded <i>Clostridium difficile</i> Infections	Hospitalizations with <i>C. difficile</i> per 1000 patient discharges	Hospital discharge data	2008  (proposed 2008, in consultation with states)	At least 30% reduction in hospitalizations with <i>C. difficile</i> per 1000 patient discharges	AHRQ	No
3b. C diff 2 (new)		<i>C. difficile</i> SIR	CDC NHSN MDRO/CDAD Module LabID <sup>‡</sup>	2009-2010	Reduce the facility-wide healthcare facility-onset <i>C. difficile</i> LabID event SIR by at least 30% from baseline or to zero	CDC	No
4. CAUTI 2	# of symptomatic UTI per 1,000 urinary catheter days	CAUTI SIR	CDC NHSN Device-Associated Module	2009 for ICUs and other locations  2009 for other hospital units	Reduce the CAUTI SIR by at least 25% from baseline or to zero in ICU and other locations	CDC	Yes <sup>†</sup>

Metric Number and Label	Original HAI Elimination Metric	HAI Comparison Metric	Measurement System	National Baseline Established (State Baselines Established)	National 5-Year Prevention Target	Coordinator of Measurement System	Is the metric NQF endorsed?
				(proposed 2009, in consultation with states)			
5a. MRSA 1	Incidence rate (number per 100,000 persons) of invasive MRSA infections	MRSA Incidence rate	CDC EIP/ABCs	2007-2008  (for non-EIP states, MRSA metric to be developed in collaboration with EIP states)	At least a 50% reduction in incidence of healthcare-associated invasive MRSA infections	CDC	No
5b. MRSA 2 (new)		MRSA bacteremia SIR	CDC NHSN MDRO/CDAD Module LabID <sup>‡</sup>	2009-2010	Reduce the facility-wide healthcare facility-onset MRSA bacteremia LabID event SIR by at least 25% from baseline or to zero	CDC	No
6. SSI 1	Deep incision and organ space infection rates using NHSN definitions (SCIP procedures)	SSI SIR	CDC NHSN Procedure-Associated Module	2006-2008  (proposed 2009, in consultation with states)	Reduce the admission and readmission SSI <sup>§</sup> SIR by at least 25% from baseline or to zero	CDC	Yes <sup>¶</sup>
7. SCIP 1 (formerly SSI 2)	Adherence to SCIP/NQF infection process measures	SCIP Adherence percentage	CMS SCIP	To be determined by CMS	At least 95% adherence to process measures to prevent surgical site infections	CMS	Yes

\* NHSN SIR metric is derived from NQF-endorsed metric data

<sup>†</sup> NHSN does not collect information on daily review of line necessity, which is part of the NQF

<sup>‡</sup> LabID, events reported through laboratory detection methods that produce proxy measures for infection surveillance

<sup>§</sup> Inclusion of SSI events detected on admission and readmission reduces potential bias introduced by variability in post-discharge surveillance efforts

<sup>¶</sup> The NQF-endorsed metric includes deep wound and organ space SSIs only which are included the target.