Healthcare Associated Infections Plan
Minnesota Department of Health
Healthcare Associated Infections Program

Introduction
In response to the increasing concerns about the public health impact of healthcare-associated infections (HAIs), the US Department of Health and Human Services (HHS) has developed an Action Plan to Prevent Healthcare-Associated Infections (HHS Action Plan). The HHS Action Plan includes recommendations for surveillance, research, communication and metrics for measuring progress towards national goals. Three overarching priorities have been identified:

- Progress towards 5-year national prevention targets (e.g., 50-70% reduction in bloodstream infections);
- Improved use and quality of the metrics and supporting systems needed to assess progress towards meeting the targets; and
- Prioritization and broad implementation of current evidence-based prevention recommendations.

The Minnesota (MN) HAI prevention plan, based on the Centers for Disease Control and Prevention (CDC) template, identifies activities that will ensure Minnesota's progress towards national prevention targets as outlined in the HHS Action Plan. The HHS Action Plan recommends initial emphasis on HAI prevention in inpatient acute care settings, yet the need for prevention activities for outpatient settings is recognized. The MN HAI plan incorporates a public health, population-based perspective to promote HAI prevention in all healthcare settings.

Support for HAI prevention has been enhanced nationally through the American Recovery and Reinvestment Act (ARRA), which provides funding to state health departments through CDC.

The Minnesota Department of Health (MDH) was awarded ARRA funding through two sources: 1) Epidemiology and Laboratory Capacity for Infectious Diseases (ELC), Healthcare-Associated Infections – Building and Sustaining State Programs to Prevent Healthcare-associated Infections; and 2) Emerging Infections Programs (EIP) HAI Program – Innovations in the Surveillance of Multidrug-resistant Organisms (MDRO). Using these funds, commencing January 2010, the MDH will conduct the following HAI prevention activities:

ELC
Develop a multidisciplinary advisory group to provide input into the development and implementation of the MN HAI prevention plan and identify metrics to measure progress toward HAI prevention in MN.
Develop and implement at least two collaborative infection prevention initiatives, based on evidence-based practices, that target HAI prevention priorities identified by the HAI advisory group.

EIP
Conduct a HAI point prevalence survey in identified acute care hospitals in accordance with a multi-site protocol developed by the EIP network.
Promote enrollment in National Healthcare Safety Network (NHSN) and the use of specific NHSN modules (including the MDRO and *Clostridium difficile* [*C. difficile*] module).

Table 1: Develop or Enhance HAI program infrastructure

Planning Level	Check Items Underway	Check Items Planned	Items Planned for Implementation (or currently underway)	Target Dates for Implementation
Level I	☒	☐	1. Establish statewide HAI prevention leadership through the formation of a multidisciplinary group or state HAI advisory council. i. Collaborate with local and regional partners.	Ongoing
	☒	☐	ii. Identify specific HAI prevention targets consistent with HHS priorities.	

Planning Level	Check Items Underway	Check Items Planned	Items Planned for Implementation (or currently underway)	Target Dates for Implementation
			Other activities or descriptions (not required): MN HAI Advisory Group includes: Association for Professionals in Infection Prevention and Control – Minnesota Chapter (APIC-MN) Representatives from consumer organizations Institute for Clinical Systems Improvement (ICSI) Minnesota Hospital Association (MHA) Minnesota Medical Association (MMA) North Central Chapter – Infectious Diseases Society of America (NCCIDSA) Stratis Health (Minnesota Quality Improvement Organization) Minnesota Department of Health (MDH) – Division of Health Policy MDH – Division of Compliance and Monitoring MDH – Division of Infectious Disease Epidemiology Prevention and Control (IDEPC) Minnesota Antimicrobial Resistance Collaborative (MARC) The HAI Advisory Group will choose two or more HHS HAI Prevention Targets (e.g., CLABSI, SSI, CAUTI, VAP, MRSA or other MDRO, *C. difficile)* to be targeted for prevention initiatives. The initiatives will include specific prevention goals (e.g., HHS HAI prevention targets). The HAI Advisory Group will monitor the effectiveness of the prevention initiatives and evaluate the time and resources required for full implementation of the prevention initiative activities.	
	☒	☐	2. Establish an HAI surveillance prevention and control program. i. Designate a State HAI Prevention Coordinator.	Quarter 4, 2009 and ongoing

Planning Level	Check Items Underway	Check Items Planned	Items Planned for Implementation (or currently underway)	Target Dates for Implementation
	☒	☐	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).	
			Other activities or descriptions (not required): A 1.0 FTE HAI Coordinator has been hired to oversee the four major HAI prevention areas. MDH will integrate and coordinate Emerging Infections Program (EIP) HAI activities with Epidemiology and Laboratory capacity (ELC)-funded and state-funded HAI prevention activities. National Healthcare Safety Network (NHSN) definitions will be used for surveillance when implementing the identified prevention initiatives.	
	☐	☒	3. Integrate laboratory activities with HAI surveillance, prevention and control efforts. 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).	Existing efforts ongoing

Planning Level	Check Items Underway	Check Items Planned	Items Planned for Implementation (or currently underway)	Target Dates for Implementation
			Other activities or descriptions (not required): MDH – Public Health Laboratory (MDH-PHL) and MN HAI staff will communicate with MN clinical laboratories through the Laboratory Response Network (LRN) regarding identification of emerging pathogens, including antimicrobial-resistant organisms. Enhanced lab capacity, including surveillance for highly-resistant Gram-negative organisms (e.g., Carbapenem-resistant *Enterobacteriaceae*), is contingent on additional funding. MDH has been an EIP site since 1995, conducting surveillance for MDROs including methicillin-resistant *Staphylococcus aureus* (MRSA) and *C. difficile* infection (CDI). As an EIP site, MDH is collaborating with the MDH-PHL and CDC in a feasibility study re: surveillance for multidrug-resistant Gram-negative bacilli. MDH will continue to publish an annual statewide antibiogram.	
Level II	☒	☐	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).	Ongoing
			Other activities or descriptions (not required): Relationships and communication among staff in the MDH Divisions of Compliance Monitoring (state surveyors), Health Policy, PHL, and IDEPC and local public health are long-standing and will be strengthened through participation on this project. Collaboration with MHA (responsible for publicly reporting HAI data) and Stratis Health will be enhanced. All of these organizations are represented on the HAI Advisory Group.	

Planning Level	Check Items Underway	Check Items Planned	Items Planned for Implementation (or currently underway)	Target Dates for Implementation
	☒	☐	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.	Quarter 1, 2010
			Other activities or descriptions (not required): MDH will facilitate and coordinate a state NHSN User Group and will communicate with hospitals on CDC's progress toward data uploading capacity within NHSN. MDH is enhancing electronic disease reporting statewide through implementation of the Minnesota Electronic Disease Surveillance System (MEDSS), MN e-Health Initiative (health information technology to improve healthcare quality and patient safety), and promotion of NHSN.	

Table 2: Surveillance, Detection, Reporting, and Response

Planning Level	Check Items Underway	Check Items Planned	Items Planned for Implementation (or currently underway)	Target Dates for Implementation
Level I			1. Improve HAI outbreak detection and investigation	Ongoing
	☒	☐	i. Work with partners including CSTE, CDC, state legislatures, and providers across the healthcare continuum, including inpatient and outpatient settings, to improve outbreak reporting to state health departments.	
	☒	☐	ii. Establish protocols and provide training for health department staff and APIC-MN to investigate outbreaks, clusters or unusual cases of HAIs.	
	☒	☐	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.	
	☒	☐	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).	
			Other activities or descriptions (not required): MDH will continue to provide training to long-term care facility (LTCF) surveyors and providers, and APIC-MN members (general APIC-MN membership as well as ambulatory care and long-term care committees) regarding MN Communicable Disease Reporting Rule, outbreak investigation, disease reporting, and promote the use of facility-specific surveillance data. MDH is expanding the Infection Prevention and Antibiotic Resistance Unit to increase the focus on HAI prevention.	
	☐	☒	2. Enhance laboratory capacity for state and local detection and response to new and emerging HAI issues.	Existing efforts ongoing

Planning Level	Check Items Underway	Check Items Planned	Items Planned for Implementation (or currently underway)	Target Dates for Implementation
			Other activities or descriptions (not required): MDH-PHL and MN HAI staff will communicate with MN clinical laboratories through the Laboratory Response Network (LRN) regarding emerging pathogens, including antimicrobial-resistant organisms such as highly-resistant Gram-negative organisms (e.g., Carbapenem-resistant *Enterobacteriaceae*). Enhanced lab capacity is contingent on additional funding.	
Level II			3. Improve communication of HAI outbreaks and infection control breaches	Ongoing
	☒	☐	i. Develop standard reporting criteria including, number, size and type of HAI outbreak for health departments and CDC	
	☒	☐	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)	
			Other activities or descriptions (not required): MDH will continue to collaborate with the MDH-PHL, infection preventionists, MDH Compliance Monitoring, and CDC – Division of Healthcare Quality Promotion (DHQP) to identify and respond to outbreaks, clusters or unusual pathogens. MDH will work to provide timely communication with clinical and laboratory stakeholders via MN Health Alert Network. Promote the implementation of outbreak investigation protocols in healthcare settings, including notification of persons potentially at risk as a result of an infection control breach. Outbreak investigations will be presented at local and national IDSA / CDC / APIC meetings, or other appropriate venues.	

	☒	☐	4. Identify at least 2 priority prevention targets for surveillance in support of the HHS HAI Action Plan i. Central Line-associated Bloodstream Infections (CLABSI)	Quarter 3, 2010

4. Identify at least 2 priority prevention targets for surveillance in support of the HHS HAI Action Plan — Quarter 3, 2010

Col 1	Col 2	Item
☒	☐	i. Central Line-associated Bloodstream Infections (CLABSI)
☐	☐	ii. *Clostridium difficile* Infections (CDI)
☐	☐	iii. Catheter-associated Urinary Tract Infections (CAUTI)
☐	☐	iv. Methicillin-resistant Staphylococcus aureus (MRSA) Infections
☒	☐	v. Surgical Site Infections (SSI)
☐	☐	*vi.* Ventilator-associated Pneumonia (VAP)

Other activities or descriptions (not required):
The MN HAI Advisory Group has identified SSI (total knee and vaginal hysterectomy) and CLABSI (adherence to CLABSI prevention bundle) as the two priority prevention targets for surveillance in support of the HHS HAI Action Plan.

5. Adopt national standards for data and technology to track HAIs (e.g., NHSN). — Quarter 2, 2010

Col 1	Col 2	Item
☒	☐	i. Develop metrics to measure progress towards national goals (align with targeted state goals). (See Appendix 1).
☒	☐	ii. Establish baseline measurements for prevention targets.

Other activities or descriptions (not required):
Minnesota HAI legislation requires the use of National Quality Forum (NQF) measures for hospital reporting to MHA and Stratis Health.

National standards, including NQF and Surgical Care Improvement Project (SCIP) measures and HHS HAI prevention metrics, will be considered for infection prevention initiatives using NHSN.

Stratis Health is working with nine MN hospitals to promote the improvement of nine SCIP/HF measures, an additional 13 hospitals to prevent pressure ulcers, and two hospitals to promote MRSA prevention using the NHSN MDRO/*C. diff* module.

	☒	☐	6. Develop state surveillance training competencies i. Conduct local training for appropriate use of surveillance systems (e.g., NHSN) including facility and group enrollment, data collection, management, and analysis	Quarter 1, 2010
			Other activities or descriptions: MDH will form a State NHSN User Group for interested MN NHSN participants. MDH HAI staff will attend CDC NHSN trainings. Provide NHSN training in collaboration with Stratis Health to healthcare facilities choosing to enroll and participate in NHSN.	
	☒	☐	7. Develop tailored reports of data analyses for state or region prepared by state personnel	Quarter 4, 2010
			Other activities or descriptions (not required): State HAI reports are currently prepared by MHA per MN legislation. Following implementation of HAI prevention initiatives that utilize NHSN, state personnel will develop tailored reports using NHSN data.	

Level III	☐
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			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
			
			    i. Develop a validation plan
			
			    ii. Pilot test validation methods in a sample of healthcare facilities
			
			    iii. Modify validation plan and methods in accordance with findings from pilot project
			
			    iv. Implement validation plan and methods in all healthcare facilities participating in HAI surveillance
			
			    v. Analyze and report validation findings
			
			    vi. Use validation findings to provide operational guidance for healthcare facilities that targets any data shortcomings detected
				Pending further guidance in collaboration with CDC – EIP

		Other activities or descriptions (not required): MDH will participate in the CDC Emerging Infections Program (EIP) NHSN validation project and participate on the protocol development workgroup. Promote healthcare facility participation in NHSN validation projects.	
☒	☐	9. Develop preparedness plans for improved response to HAI 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.	Ongoing
		Other activities or descriptions (not required): Continue to collaborate with MDH programs (e.g., Emerging Infections Program, vaccine-preventable diseases, HIV/AIDS), Compliance Monitoring (state surveyors), and PHL in the identification and investigation of outbreaks or clusters that result from potential infection control breaches. Consider interventions that lead to practice improvement and policy review for hospitals, that experience severe infection control breaches.	
☐	☒	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.	Quarter 2, 2010
		Other activities or descriptions (not required): Collaborate with state surveyors in promoting infection prevention and control practices among non-hospital staff.	
☒	☐	11. Adopt integration and interoperability standards for HAI information systems and data sources 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.	Ongoing
☒	☐	ii. Promote definitional alignment and data element standardization needed to link HAI data across the nation.	

			Other activities or descriptions (not required): Improve the use of surveillance data through Minnesota Electronic Disease Surveillance System (MEDSS), MN e-Health Initiative (health information technology to improve health care quality and patient safety), and promotion of NHSN. Promote definitional alignment and data element standardization through use of NQF measures and NHSN.	
	☒	☐	12. Enhance electronic reporting and information technology for healthcare facilities to reduce reporting burden and increase timeliness, efficiency, comprehensiveness, and reliability of the data i. Report HAI data to the public	Ongoing
			Other activities or descriptions (not required): See Table 2, Item 11 (above).	
	☐	☒	13. Make available risk-adjusted HAI data that enables state agencies to make comparisons between hospitals.	Quarter 1, 2011
			Other activities or descriptions (not required): Currently, SSI data reported on the MHA (www.mnhospitalquality.org) and Stratis Health (http://www.stratishealth.org/index.html) websites are risk-adjusted. Promote the use of risk-adjusted HAI prevention measures.	
	☒	☐	14. Enhance surveillance and detection of HAIs in nonhospital settings	Quarter 2, 2010
			Other activities or descriptions (not required): Continue to collaborate with MDH Compliance Monitoring in the evaluation of LTCF and provision of infection prevention and control training for surveyors and LTCF providers. Expand HAI prevention activities, including infection prevention and control training and HAI surveillance in ambulatory surgical centers, dialysis centers and other non-acute care settings.	

Table 3: Prevention

Planning Level	Check Items Underway	Check Items Planned	Items Planned for Implementation (or currently underway)	Target Dates for Implementation
Level I	☒	☐	1. Implement HICPAC recommendations. i. Develop strategies for implementation of HICPAC recommendations for at least 2 prevention targets specified by the state multidisciplinary group.	Quarter 2, 2010
			Other activities or descriptions (not required): The MHA Call-to-Action framework will be used as an intervention tool by HAI prevention collaboratives and will incorporate HICPAC Recommendations. The MDH Recommendations for the Prevention and Control of MRSA in Acute Care Facilities, based on HICPAC recommendations, is reviewed annually by the MDH – MRSA Task Force (http://www.health.state.mn.us/divs/idepc/diseases/mrsa/rec/index.html). Develop methods of communication to share evidence-based interventions and best practices among hospitals participating in specified prevention collaboratives.	
	☒	☐	2. Establish prevention working group under the state HAI advisory council to coordinate state HAI collaboratives i. Assemble expertise to consult, advise, and coach inpatient healthcare facilities involved in HAI prevention collaboratives	Quarter 1, 2010

Planning Level	Check Items Underway	Check Items Planned	Items Planned for Implementation (or currently underway)	Target Dates for Implementation
			Other activities or descriptions (not required): The MN HAI Advisory Group will create two HAI Prevention Collaboratives that address identified HHS HAI Prevention Targets. Prevention Collaboratives will be led by the MN HAI Coordinator in collaboration with experienced infection preventionists and members of the MN HAI Advisory Group.	
			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)	Quarter 1, 2010
	☒	☐	i. Identify staff trained in project coordination, infection control, and collaborative coordination	
	☒	☐	ii. Develop a communication strategy to facilitate peer-to-peer learning and sharing of best practices	
	☒	☐	iii. Establish and adhere to feedback of a clear and standardized outcome data to track progress	
			Other activities or descriptions (not required):	
	☐	☒	4. Develop state HAI prevention training competencies 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.	Quarter 1, 2011

Planning Level	Check Items Underway	Check Items Planned	Items Planned for Implementation (or currently underway)	Target Dates for Implementation
			Other activities or descriptions (not required): Collaborate with APIC-MN, Stratis Health, and CDC to assist hospitals and dialysis centers with HAI prevention. Work with APIC-MN to promote Certification in Infection Control (CIC) among infection preventionists. Collaborate with consumers to promote public HAI education. Promote infection prevention and control training in all clinical training programs – contingent on additional funding.	
Level II			5. Implement strategies for compliance to promote adherence to HICPAC recommendations	Ongoing
	☒	☐	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	
	☒	☐	ii. Coordinate/liaise with regulation and oversight activities such as inpatient or outpatient facility licensing/accrediting bodies and professional licensing organizations to prevent HAIs	
	☒	☐	iii. Improve regulatory oversight of hospitals, enhancing surveyor training and tools, and adding sources and uses of infection control data	
	☒	☐	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	

Planning Level	Check Items Underway	Check Items Planned	Items Planned for Implementation (or currently underway)	Target Dates for Implementation
			Other activities or descriptions (not required): MN HAI legislation requires acute care facilities to report NQF measures to the MHA (www.mnhospitalquality.org) and Stratis Health (http://www.stratishealth.org/index.html) websites. Enhance infection prevention and control training, and evidence-based intervention strategies and evaluation tools that are based on HICPAC recommendations. Collaborate with surveyors, accreditation and certification bodies to promote accountability in complying with HICPAC recommendations. Educational sessions related to MRSA prevention and improvement of the SCIP/HF measures, coordinated by Stratis Health, are available online to all MN hospitals.	
	☒	☐	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)	Quarter 4, 2011
			Other activities or descriptions (not required): The HAI prevention initiatives, piloted by the Prevention Collaboratives, will be evaluated, revised as indicated and launched statewide. HAI prevention initiatives will be promoted among key stakeholders including hospital CEOs and quality directors.	
	☐	☒	7. Establish collaborative to prevent HAIs in nonhospital settings (e.g., long term care, dialysis)	
			Other activities or descriptions (not required): MDH is working with other EIP sites to assess HAI burden in dialysis facilities. HAI prevention efforts may include collaboration with MDH Compliance Monitoring (state surveyors) and may include the use of NHSN. Contingent on additional funding.	

Table 4: Evaluation and Communication

Planning Level	Check Items Underway	Check Items Planned	Items Planned for Implementation (or currently underway)	Target Dates for Implementation
Level I			1. Conduct needs assessment and/or evaluation of the state HAI program to learn how to increase impact	Quarter 1, 2010
	☒	☐	i. Establish evaluation activity to measure progress towards targets and	
	☒	☐	ii. Establish systems for refining approaches based on data gathered	
			Other activities or descriptions (not required): MDH will conduct a statewide survey of infection preventionists to obtain input regarding priority HAI prevention targets. HAI prevention initiatives will include an evaluation component. MN HAI Advisory Group will collaborate with MHA HAI workgroups to evaluate the display of reported HAI metrics and methods of data reporting.	
	☐	☒	2. Develop and implement a communication plan about the state's HAI program and progress to meet public and private stakeholders needs i. Disseminate state priorities for HAI prevention to healthcare organizations, professional provider organizations, governmental agencies, non-profit public health organizations, and the public.	Quarter 1, 2010

Planning Level	Check Items Underway	Check Items Planned	Items Planned for Implementation (or currently underway)	Target Dates for Implementation
			Other activities or descriptions (not required): Establish a MN HAI Communications Workgroup. MDH will develop and maintain a MN HAI prevention website. Disseminate state HAI prevention priorities to healthcare organizations, professional provider organizations, governmental agencies, public health organizations, and the public. In addition to the MN HAI Advisory Group, key stakeholders include but are not limited to, Nurse Executive, Quality Professional and Risk Management Associations, and MN House of Representatives Health and Human Services Oversight Committee.	
Level II	☒	☐	3. Provide consumers access to useful healthcare quality measures	Ongoing
			Other activities or descriptions (not required): MHA Infection Control Advisory Committee, which advises display of publicly reported HAI data (www.mnhospitalquality.org), includes consumer representatives. Consult with consumer organizations (including those represented on the HAI Advisory Group) to identify mechanisms to educate and inform the public on the use of healthcare quality measures and HAI prevention efforts. Promote websites that provide the public with HAI-related data and information.	
Level III	☐	☒	4. Identify priorities and provide input to partners to help guide patient safety initiatives and research aimed at reducing HAIs	
			Other activities or descriptions (not required):	

Appendix 1.

The HHS Action plan identifies metrics and 5-year national prevention targets. These metrics and prevention targets were developed by representatives from various federal agencies, the Healthcare Infection Control Practices Advisory Committee (HICPAC), professional and scientific organizations, researchers, and other stakeholders. The group of experts was charged with identifying potential targets and metrics for six categories of healthcare-associated infections:

- Central Line-associated Bloodstream Infections (CLABSI)
- Clostridium difficile Infections (CDI)
- Catheter-associated Urinary Tract Infections (CAUTI)
- Methicillin-resistant Staphylococcus aureus (MRSA) Infections
- Surgical Site Infections (SSI)
- Ventilator-associated Pneumonia (VAP)

Table of metrics described in the HHS Action plan.

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[*]
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[†]
3a. C diff 1	Case rate per patient days; administrative/discharge data for ICD-9 CM coded *Clostridium difficile* Infections	Hospitalizations with *C. difficile* per 1000 patient discharges	Hospital discharge data	2008 (proposed 2008, in consultation with states)	At least 30% reduction in hospitalizations with *C. difficile* per 1000 patient discharges	AHRQ	No
3b. C diff 2 (new)		*C. difficile* SIR	CDC NHSN MDRO/CDAD Module LabID[‡]	2009-2010	Reduce the facility-wide healthcare facility-onset *C. difficile* LabID event SIR by at least 30% from baseline or to zero	CDC	No

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?
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 (proposed 2009, in consultation with states)	Reduce the CAUTI SIR by at least 25% from baseline or to zero in ICU and other locations	CDC	Yes[*]
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[‡]	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[§] SIR by at least 25% from baseline or to zero	CDC	Yes[¶]

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?
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

[†] NHSN does not collect information on daily review of line necessity, which is part of the NQF

[‡] LabID, events reported through laboratory detection methods that produce proxy measures for infection surveillance

[§] Inclusion of SSI events detected on admission and readmission reduces potential bias introduced by variability in post-discharge surveillance efforts

[¶] The NQF-endorsed metric includes deep wound and organ space SSIs only which are included the target.