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South Carolina Department of Health and Environmental Control

South Carolina Healthcare Associated Infections (HAI) Prevention Plan
HAI Recovery Act

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Approved by: C. Earl Hunter, Commissioner
South Carolina Department of Health and Environmental Control (DHEC)

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South Carolina Healthcare Associate Infections (HAI) Prevention Action Plan

Introduction:

Background: In May 2006, the South Carolina Legislature passed the Hospital Infections Disclosure Act (**HIDA**), SC Code of Laws, Chapter 7 Article 20, requiring inpatient acute care hospitals to report to the South Carolina Department of Health and Environmental Control (**DHEC**) selected hospital acquired infections and selected infection prevention processes. Reporting began in July 2007 and in June 2008, HIDA was amended to allow reporting requirements to be phased in. DHEC and the HIDA Advisory Committee selected the Centers for Disease Control and Prevention (CDC) National Healthcare Safety Network **(NHSN)** as the HAI data reporting system. Over 65 hospitals were trained and enrolled in NHSN in March 2007 and began submitting reports on selected surgical site infections and central line associated bloodstream infections in critical care units on July 1, 2007. Since then, inpatient rehabilitation and long term acute care (LTAC) facilities have been added to the reporting system. Hospitals must submit reports every six months and DHEC must make these reports available to the public (www.dhec.sc.gov/hai).

DHEC has been awarded $201,000 by U.S. Department of Health and Human Services, Centers for Disease Control and Prevention **(CDC**), American Recovery and Reinvestment Act, Epidemiology and Laboratory Capacity for Infectious Diseases (ELC), Healthcare-Associated Infections - Building and Sustaining State Programs to Prevent Healthcare-associated Infections grant. Beginning in October 2009, and extending through 2011, these funds will be used to:

- fund a 0.50 FTE HAI Prevention Planning Coordinator (combined 0.25 FTE from Activity A -Planning and 0.25 FTE from Activity C – Collaboration)
- support training for public health staff to develop HAI prevention capacity (Surveillance, Collaboratives, Outbreak Investigations, Data – Outcome measures)
- support training for healthcare workers regarding best practices for surveillance and prevention through contracts for Activity B-Surveillance and Activity C-Collaboratives and hospital site visit support for new NHSN users.
- establish "contracted equivalent" support from the SCHA and ORS to support the HAI Planning Coordinator with logistical and operational support for planning and for the central line associated bloodstream infections (**CLABSI**) prevention collaborative.
- expand data for reports and outcome measures to include administrative claims data from the Office of Research and Statistics (**ORS**).

The following summary of assets provide the basic foundation for South Carolina's public health infrastructure for HAI Prevention:
1) **HAI Surveillance Data**: The HIDA NHSN HAI Reports(www.dhec.sc.gov/hai) provide most of the data needed to measure the selected outcomes and prevention targets identified in the National HAI Prevention Action Plan. DHEC ensures the accuracy and completeness of the data through a defined validation program. Hospitals may also use these data for internal quality measures and to share with other facilities enrolled in prevention collaboratives. Additional data are available from ORS (e.g. *C. difficile*).

2) **HAI Core Public Health Staff for Surveillance and Public Reporting:** The Department of Health and Environmental Control (DHEC) has 2.5 state funded FTEs in the Bureau of Disease Control to implement HIDA. (One Epidemiologist, one Infection Preventionist, and ½ hourly position Program Manager.) Travel funds for hospital validation site visits are also budgeted. These resources are focused on surveillance and validation activities necessary to comply with HIDA. The DHEC Bureau of Health Regulations and the Legal Office staff are also participating in the planning process.

3) **Partnership Organization and Advisory Committee - South Carolina Alliance for Infection Prevention (SCHAIP):** During the process of working with the DHEC HIDA Advisory Committee, there were many discussions about the need to prevent infections, not just count them. Out of these discussions, the SC Hospital Association took the lead to form the South Carolina Alliance for Infection Prevention (**SCHAIP**) and, along with DHEC and APIC, brought the state partners together for the purpose of implementing a coordinated, effective approach to infection prevention initiatives in SC. This partnership serves as the multi-disciplinary advisory taskforce required for the HAI Prevention Plan. SCHAIP partners include SCHA, DHEC, APIC, HAI subject area experts, associations representing the continuum of care, state and federal agencies, and consumers. SCHAIP provides the statewide organizational foundation to coordinate, facilitate, and support the implementation of the HAI Prevention Plan in SC. Members also include representatives from Health Sciences South Carolina **(HSSC).** http://www.healthsciencessc.org/about/HSSCStratPlan10-15.pdf . *"Health Sciences South Carolina is a dynamic statewide collaborative of South Carolina universities and hospitals that seeks to improve the health and economic wellbeing of the state through advances in research, education and clinical care."* One of the HSSC projects is the establishment of the Healthcare Quality Trust (**HQT**) to focus on HAIs surveillance, laboratory capacity and outbreak detection and response, and prevention. HSSC members include the state's two Medical Schools, three research universities, and the four largest medical centers in the state.

While individual SCHAIP partners will be responsible to their funding sources for performance and outcomes, each will also work with SCHAIP to ensure collaboration, communication, and implementation of the state HAI Prevention Plan with the resources available.

4) SC has a community of highly knowledgeable, skilled, and committed healthcare professionals (physicians, nurses, laboratorians, etc.) working in infection prevention and epidemiology to provide the expertise needed to achieve the targeted reductions in HAIs.

The following summary of barriers and limitations may prevent planning and implementation:

1) Funding is severely limited by the recurring state budget reductions as revenues decline; SC received minimal funding from the ELC ARRA grant to expand to prevention.
2) Infection Prevention staffing shortages and high turnover
3) Lack of a structured, coordinated, and funded Infection Prevention Training Program to set priorities, target audiences, etc.

Planning Processes and Assumptions:

- The South Carolina HAI Plan action items are numbered in each of the four CDC Category Tables beginning with the number (1) one. (e.g. in Table # 1, Action Item 1.; In Table # 2. Action Item 1, Action Item 2., etc.)
- Plans were developed with input received from the South Carolina Healthcare Alliance for Infection Prevention (SCHAIP) HAI Planning Taskforce and with input from public health professionals within DHEC.
- The "Infrastructure" needed to establish an effective public health HAI prevention program includes:
  - public health staff and resources
  - strong partnerships and effective collaboratives
- The SCHAIP partners, committees, and workgroups will participate in identifying and prioritizing needs and resources and in implementing the plans.
- The HAI Plan describes a broad assessment and planning process in order for the SCHAIP partners to be ready to pursue and justify funding opportunities if they arise.
- Accountability will be defined in the planning process.
- Plan implementation and timelines are contingent upon maintaining existing resources and obtaining additional resources from state, federal, and /or private grant funds.
  - Implementation plans are designated as 1) implemented or planned with existing resources, or 2) planned - contingent upon new resources.
- DHEC Health Licensing has assessed the health facility regulations and has prioritized the hospital regulations as the first in line for revision. DHEC will obtain advice from the SCHAIP Laws and Regulations Committee subject area experts on HAI prevention best practices. Proposed regulations will be developed by DHEC with the final regulations contingent upon the established legislative process.
- Plans will also include proposed incentives, training, and workforce development for hospitals and, as resources develop, to expand across the continuum of care.
- DHEC will seek funds for public health resources through potential CDC grants and work with appropriate SCHAIP partners to seek funding through other available state, federal, and private grant resources.

South Carolina HAI Plan Template

1. Develop or Enhance HAI program infrastructure

Successful HAI prevention requires close integration and collaboration with state and local infection prevention activities and systems. Consistency and compatibility of HAI data collected across facilities will allow for greater success in reaching state and national goals. Please select areas for development or enhancement of state HAI surveillance, prevention and control efforts.

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

Planning Level	Check Items Underway	Check Items Planned	Items Planned for Implementation (or currently underway) Table 1. Develop or enhance HAI program Infrastructure.	Target Dates for Implementation
Level I			Establish statewide HAI prevention leadership through the formation of multidisciplinary group or state HAI advisory council 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)	

Planning Level	Check Items Underway	Check Items Planned	Items Planned for Implementation (or currently underway) Table 1. Develop or enhance HAI program Infrastructure.	Target Dates for Implementation
	☒		**Action 1. Established the SC Healthcare Alliance for Infection Prevention (SCHAIP),** a formal SC HAI infrastructure organization and partnership to facilitate planning, development, and implementation of HAI prevention initiatives in SC. (Lead agencies and organizations are the SC Hospital Association (**SCHA**), SC Department of Health and Environmental Control **(DHEC**), the Association of Professionals in Infection Control and Epidemiology – Palmetto Chapter **(APIC-Palmetto**), and Health Sciences South Carolina's **(HSSC**) Healthcare Quality Trust **(HQT**). The SCHAIP steering committee agreed that SCHAIP would include the role of the HAI Prevention Plan Advisory Committee in its mission. Additional members / stakeholders were recruited to provide advice and to include representatives across the continuum of care, consumers, and relevant disciplines. **SCHAIP Goals include:** • Ensure coordination and communication between SCHAIP partners, including public health, to facilitate planning and implementation, define roles and identify resources, and prevent gaps and duplication of efforts and track projects and timelines. • Coordinate initiatives and facilitate consensus on issues related to infection prevention throughout the state. • Promote healthcare facility leadership support for infection prevention efforts and resources • Facilitate integration of infection prevention into education and training for all healthcare disciplines across the state. • Promote and develop a standardized statewide education program for IPs, and identify basic infection prevention educational	1. Re-organized to include HAI Plan Advisory Committee on 09-29-09 Convened first meeting on 10-21-09 and activities are ongoing.

Planning Level	Check Items Underway	Check Items Planned	Items Planned for Implementation (or currently underway) Table 1. Develop or enhance HAI program Infrastructure.	Target Dates for Implementation
			resources for all healthcare workers. • Develop a mentoring program for Infection Preventionists. • Establish formal Implementation Committees or temporary Workgroups, as appropriate, to develop a plan, implement, and evaluate selected initiatives. Identify lead organization responsible for chairing the committees (e.g. APIC – Palmetto, Chairs the Training Committee). Define accountability. Existing committees: HAI Plan Taskforce, CLABSI Prevention Collaborative, Clean Hands Save Lives Collaborative, Training Committee. Planned committees: Laboratory Capacity, Laws / Regulations, Antimicrobial Stewardship) Convened HAI Planning meetings and developed the SC HAI Prevention Plan for submission to DHHS by 1-1-2010.	Ongoing and Committees to Report to the SCHAIP Meeting every other month on plans and progress .
			ii. Identify specific HAI prevention targets consistent with HHS priorities.	
	☒		**Action 2. Selected HAI Prevention Targets based upon SCHAIP input and existing data bases**: **a.** CLABSI 1 - Central Line Associated Bloodstream Infections - Reduce the CLABSI SIR by at least 50% from baseline or to zero in ICU and other locations. (CDC) Support for this selection is based upon the fact that hospitals are mandated to report CLABSIs to DHEC via the National Healthcare Safety Network (**NHSN**) and data are available beginning July 2007. HIDA reporting	2. a. CLABSI Target Selected with ongoing monitoring. (Implemented First Prevention Collaborative with face to face

Planning Level	Check Items Underway	Check Items Planned	Items Planned for Implementation (or currently underway) Table 1. Develop or enhance HAI program Infrastructure.	Target Dates for Implementation
		☒	requirements have been expanded beyond critical care to all locations. Also, a CLABSI Prevention Collaborative with 22 hospitals has been established by the SCHA funded by the Duke Endowment and with the participation from DHEC funded by ELC ARRA. (SC NHSN CLABSI Reports www.dhec.sc.gov/hai)	meeting / and training for facilities – organized and hosted by SCHA on 10-21-09)
		☒	**b. C diff 1.** *Clostridium difficile* – At least 30% reduction in hospitalizations with C. difficile per 1000 patient discharges. (AHRQ). Support for this selection is based upon the data availability from the Office of Research and Statistics. Future reporting of C.diff into NHSN is possible if prevention collaboratives select this method for outcome measures in addition to the administrative claims data, or if it is mandated for public reports in the future. Prevention collaboratives are being planned **contingent upon resources** for staff, travel, and training**.** South Carolina has developed an Antibiotic Resistance Strategic Plan and has many healthcare professional participants in the Carolinas Antimicrobial Stewardship Effort (CASE) who are interested in implementing prevention collaboratives if funding can be obtained for staff (ID physician and pharmacy consultants.)	---------- 2. b. C. diff. selected. (Prevention Collaborative Implementation contingent upon obtaining resources.)
		☒	**c. SSI 1.** Reduce the admission and readmission SSI SIR by at least 25% from baseline or to zero. Selection of this target is based upon the availability of SSI data for coronary artery bypass and hip and knee replacement surgeries as reported into NHSN since 2007 as mandated by the SC HIDA law. Also, reporting can be expanded to	---------- 2. c. SSI – selected (Implementation of an SSI Prevention Collaborative is

Planning Level	Check Items Underway	Check Items Planned	Items Planned for Implementation (or currently underway) **Table 1. Develop or enhance HAI program Infrastructure.**	Target Dates for Implementation
			provide outcome measures for prevention collaboratives for other facilities across the continuum of care. SSI Prevention collaboratives are planned, **contingent upon receiving resources** for staff, travel, and training. SC NHSN SSI Reports www.dhec.sc.gov/hai	contingent upon obtaining resources.)
	☒		Establish an HAI surveillance, prevention and control program i. Designate a State HAI Prevention Coordinator **Action 3. Designated HAI Plan Coordinator (D.Roberts)**– 0.5 FTE funded from ELC ARRA. This was a full time state funded hourly position until state budget cuts reduced the funds for this position to 0.5. The duties included program management, facilitating the HIDA Advisory Committee, and implementing the mandatory HAI reporting law to include NHSN surveillance and public reporting. With the time limited ELC ARRA funds, the position was increased back to 1.0 with the new 0.5 FTE to be dedicated to the HAI Plan and participation with SCHA in the CLABSI prevention collaborative.	3. Implemented: 10-01-09
			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)	
	☒		**Action 4. Maintain existing state funded Public Health Staff** Existing DHEC HAI staff includes 2.5 state funded FTEs (1.0 epidemiologist for 1 Infection Preventionist, 0.5 program manager) are assigned to HAI surveillance, NHSN data reports and public reporting,	4. State funds established in 2007 – with ongoing efforts

Planning Level	Check Items Underway	Check Items Planned	Items Planned for Implementation (or currently underway) Table 1. Develop or enhance HAI program Infrastructure.	Target Dates for Implementation
			and validation of HIDA mandated reporting requirements. Contracted services from the SCHA and Office of Research and Statistics provide for "contracted equivalents" to support the 0.5 FTE Planning Coordinator. **>Another state budget cut has been announced for early 2010 and the impact on this program is unknown at this time.**	to sustain funding; Expanding capacity for prevention and oversight are contingent upon additional resources.
		☒	**Action Planned 5. Identified additional public health staff needed to create a sustainable program and expand the HAI program to include new responsibilities for prevention, collaborations, outbreak investigations, etc.** Other public health staff were requested, but not funded, in the ELC ARRA grant to sustain and expand the HAI program to meet the needs identified in this HAI Planning Template and to expand prevention initiatives across the continuum of care. Staff is needed to manage the program including grant writing, budgets, supervise staff, and to participate in developing and maintaining state level partnerships. Knowledgeable staff is needed to implement prevention collaboratives, improve public health capacity to detect and investigate outbreaks, participate in HAI training, provide data analysis, interpretation, and dissemination for prevention quality measures; and to develop and provide HAI prevention subject area expertise for prevention collaboratives and activities. The following additional positions and resources are needed for public health to expand prevention beyond the current public reporting responsibilities and areas where other existing resources are designated in the plan: **a. HAI Program Manager -1.0 FTE**	---------- **5.** Expansion of HAI Program to include Prevention – Contingent upon new funding.

Planning Level	Check Items Underway	Check Items Planned	Items Planned for Implementation (or currently underway) Table 1. Develop or enhance HAI program Infrastructure.	Target Dates for Implementation
			b. HAI Program Assistant- 1.0 FTE **c. HAI Epidemiologist– 1.0 FTE** **d. HAI Infection Preventionist -1.0 FTE.** **e. Travel, training, equipment and supplies.**	
			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)	
		☒	**Action 6. Develop HAI Prevention infrastructure / partnership described in Action 1.1 to facilitate and support the development of Laboratory capacity to support HAI Prevention, to confirm outbreaks and confirm emerging resistance.** The SCHAIP HAI Planning Taskforce identified a "desperate" need for laboratory capacity to support HAI prevention.	**6.** Planned contingent upon resources for lab capacity.
	☒		**Action 7. Identified current capacity and gaps from HSSC lab capacity survey.**	---------- 7. Completed ----------
		☒	**Action Planned 8. – Establish HAI Lab Capacity SCHAIP Workgroup to identify gaps, needs, and seek grant resources to provide for lab staff, equipment and supplies and address issues of scale, cost, contracts, and public health lab capacity.** Potential	**8.** Implement in 1st quarter of 2010 with Lab Workgroup

Planning Level	Check Items Underway	Check Items Planned	Items Planned for Implementation (or currently underway) **Table 1. Develop or enhance HAI program Infrastructure.**	Target Dates for Implementation
			laboratory support will be established through the state Public Health Laboratory and/ or through one or more of the state's large Medical Center laboratories. It is recognized that to accomplish this goal, the SCHAIP partnership will work to create access to subject area experts from the large hospitals and academic medical centers. These will include hospital epidemiologists, infectious disease specialists, pharmacists, and laboratorians. The SCHAIP infrastructure will be developed to evaluate the proposals and to facilitate the process of obtaining resources and fully developing and integrating lab capacity into HAI surveillance, prevention, and control.	activities to be on going until resources identified and Lab Capacity established. ----------

		☒	**Action Plan 9. Develop and implement the SC HAI Lab Response Network to provide ongoing HAI lab capacity in SC. Work with SCHAIP partners including HSSC to develop.**
			Activities will include:
			• Establish and fund lab network with staff, equipment, supplies and data base (**contingent upon new resources**)
			  • Typing
			  – Pulse field gel electrophoresis (capability)
			  – Multi locus sequence typing (Mercedes)
			  – Multiple-locus-variable number tandem repeat analysis (MLVA)
			  • Sequencing
			  – bacteria/viruses (mycobacteria)
			  • Fill gaps in capacity:
			  • No lab is culturing C. difficile
			  • No lab is doing 16sRNA testing
			  • No phage typing at DHEC (CDC)
				9. Lab Network Implementation as soon as possible - contingent upon new resources
				---------- 	

Planning Level	Check Items Underway	Check Items Planned	Items Planned for Implementation (or currently underway) Table 1. Develop or enhance HAI program Infrastructure.	Target Dates for Implementation
			• No antibiotic susceptibility in DHEC lab except mycobacteria	
Level II	☒		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) **Action 10. Ensure state government agencies participation on HAI Planning Taskforce**	10. Established in the 4th quarter 2009 – to be ongoing.
		☒	**Action 11. Improve interagency and healthcare workers' understanding of state agencies HAI policies, procedures, and expectations.** • DHEC to develop and make available a short "one page" outline for health care facilities describing the role of each (Licensing, Certification, Disease Control) and how to contact and what to report to each. • Establish DHEC intra -agency procedures to ensure coordination for HAI surveillance, prevention, and control and appropriate sharing of information to detect, prevent, and control HAIs.	11. Implement in 3rd quarter 2010
	☒		**Action 12. Establish SCHAIP Laws and Regulations Committee with responsibility to:** • Review current HAI related licensing requirements for facilities • Review HAI related requirements for professional licensure.	12. Implement review in 1st quarter 2010 by HAI Laws /

Planning Level	Check Items Underway	Check Items Planned	Items Planned for Implementation (or currently underway) **Table 1. Develop or enhance HAI program Infrastructure.**	Target Dates for Implementation
			• Include categories identified in the HAI National Action Plan and the CDC Planning Template. • DHEC Health Licensing created reference tables for existing laws and regulations for the purpose of discussion in the HAI Planning meetings.) • Identify infection prevention and other subject area experts to work with DHEC on the committee. • Identify pros and cons for the recommendations submitted to the HAI Planning Taskforce and others identified in the review process (e.g. mandatory infection control training and continuing education for professional licensure and mandatory infection prevention staffing standards for healthcare facilities). • Identify barriers to HAI Prevention (e.g. fire marshal's restrictions on location of Hand sanitizer) and plan for eliminating barriers. • DHEC will facilitate discussions with other state agencies responsible for professional licensure and certifications. • Present findings and proposals to the SCHAIP Committee.	Regulation Committee with activities to be on going. (Based upon legislative process and timeline, the <u>earliest</u> date to implement new Regulations will be June 2011 if there are no delays in the process.)
	Planned ☒		*Other:* **Action 13. Identify strategies, methods, and partners to provide incentives and support for healthcare facilities and health professionals to implement best practices and obtain training in infection surveillance, prevention and control. SCHAIP Planning Committee will:** • Identify pay for performance opportunities (e.g. Blue Cross/ Blue Shield) and develop plan to facilitate implementation. • Establish low cost, accessible training resources and disseminate information to Healthcare workers. <u>(Assigned to SCHAIP Training Committee)</u>	13. SCHAIP will develop Incentives strategies during 3rd Quarter 2010 with implementation contingent upon resources.

Planning Level	Check Items Underway	Check Items Planned	Items Planned for Implementation (or currently underway) Table 1. Develop or enhance HAI program Infrastructure.	Target Dates for Implementation
			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.	
		☒	**Action 14. Identify technical support needs and resources and define process to ensure coordination of information and opportunities.** Utilize SCHAIP Infrastructure and current Health Sciences South Carolina (HSSC) plans to improve IT resources for HAI surveillance and data sharing to coordinate needs assessment and to: • Identify and disseminate ways to promote electronic reporting standards – (e.g. HL-7 messages) • Identify working group or existing resource for information and coordination to support surveillance and data reporting IT needs. • Promote use of vendors to provide technical support for facilities that are NHSN users (e.g. to transfer lab data directly into NHSN) and to coordinate with other public health disease reporting systems. • Identify other agencies interested in this effort (e.g. Medicaid/	Action 14. 3rd Quarter 2010.

Planning Level	Check Items Underway	Check Items Planned	Items Planned for Implementation (or currently underway) Table 1. Develop or enhance HAI program Infrastructure.	Target Dates for Implementation
			Medicare) to participate in Planning (participating in SCHAIP). • Define and train staff to use own data to identify clusters / outbreaks. (Include topic in Training Plan) • DHEC to improve ability to identify trends in routine reportable electronic (ELR) reporting of disease surveillance data system for pathogens potentially responsible for inpatient and outpatient HAIs. **Action 15**. Identify incentives to enable healthcare facilities to implement electronic reporting standards, to include lab and surgical data transmitted into NHSN. (e.g. funding for facilities to pay IT costs to program existing data systems to transmit data for surveillance and reporting.)	Action 15 Implementation Contingent upon finding resources to fund IT initiatives.
Please also describe any additional activities, not listed above, that your state plans to undertake. Please include target dates for any new activities.				

2. Surveillance, Detection, Reporting, and Response

Timely and accurate monitoring remains necessary to gauge progress towards HAI elimination. Public health surveillance has been defined as the ongoing, systematic collection, analysis, and interpretation of data essential to the planning, implementation, and evaluation of public health practice, and timely dissemination to those responsible for prevention and control.[1] Increased participation in systems such as the National Healthcare Safety Network (NHSN) has been demonstrated to promote HAI reduction. This, combined with improvements to simplify and enhance data collection, and improve dissemination of results to healthcare providers and the public are essential steps toward increasing HAI prevention capacity.

The HHS Action Plan identifies targets and metrics for five categories of HAIs and identified Ventilator-associated Pneumonia as an HAI under development for metrics and targets (Appendix 1):

- Central Line-associated Blood Stream 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)

Work is ongoing to identify optimal metrics and targets for VAP infection. However, detection and measurement with existing tools and methods can be combined with recognized prevention practices in states where an opportunity exists to pursue prevention activities on that topic.

State capacity for investigating and responding to outbreaks and emerging infections among patients and healthcare providers is central to HAI prevention. Investigation of outbreaks helps identify preventable causes of infections including issues with the improper use or handling of medical devices; contamination of medical products; and unsafe clinical practices. Please choose items to include in your plan at the planning levels desired.

[1] Thacker SB, Berkelman RL. Public health surveillance in the United States. Epidemiol Rev 1988;10:164-90.

Table 2: State planning for surveillance, detection, reporting, and response for HAIs

Planning Level	Check Items Underway	Check Items Planned	Items Planned for Implementation (or currently underway) **Table 2. Planning for Surveillance, Detection, Reporting and Response for HAIs.**	Target Dates for Implementation
Level I			Improve HAI outbreak detection and investigation	
			iv. Work with partners including CSTE, CDC, state legislatures, and providers across the healthcare continuum to improve outbreak reporting to state health departments	
		☒	**Action 1.. Develop and disseminate clear reporting guidelines and definitions for HAI outbreaks.** (DHEC will lead process with existing staff and input from relevant SCHAIP members (e.g. APIC, ID Physicians).	1. 3rd Quarter 2010
			v. Establish protocols and provide training for health department staff to investigate outbreaks, clusters or unusual cases of HAIs.	
		☒	**Action 2. Identify HAI outbreak training goals and opportunities for DHEC staff.** DHEC has been funded by ELC ARRA for public health staff training.	2. Plan in 1st Quarter 2010 and ongoing as long as funding is available.
		☒	**Action 3. Define public health staff competencies, knowledge skills, and abilities needed to investigate HAI outbreaks.**	3. In 1st Quarter 2010.
			vi. Develop mechanisms to protect facility/provider/patient identity when	

Planning Level	Check Items Underway	Check Items Planned	Items Planned for Implementation (or currently underway) **Table 2. Planning for Surveillance, Detection, Reporting and Response for HAIs.**	Target Dates for Implementation
			investigating incidents and potential outbreaks during the initial evaluation phase where possible to promote reporting of outbreaks	
		☒	**Action 3 Define policies and procedures for reporting and consulting on HAI outbreaks between relevant state agencies. (DHEC - with existing staff.)**	3. 3rd Quarter 2010
			Action 4. Define policies and procedures for public release of information during initial phase of outbreak investigations. (DHEC - with existing staff.)	4. 3rd Quarter 2010
			vii. 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)	
		☒	**Action 5. Train facility and healthcare staff to use own data to identify clusters / outbreaks. (Responsible: DHEC Infection Preventionist (IP) during hospital Validation site visits and SCHAIP Training Committee to include in the Training Plan.)**	**5. 1st Quarter 2011**
		☒	**Action 6. DHEC to develop routine automated surveillance data reports from the existing data base to identify trends in reportable disease surveillance system for pathogens potentially responsible for inpatient and outpatient HAIs.**	**6. 1st Quarter 2011**

Planning Level	Check Items Underway	Check Items Planned	Items Planned for Implementation (or currently underway) **Table 2. Planning for Surveillance, Detection, Reporting and Response for HAIs.**	Target Dates for Implementation
			Enhance laboratory capacity for state and local detection and response to new and emerging HAI issues.	
		☒	**Action 7. Identify plan to submit and communicate lab data from existing resources**. **Define Lab capacity plan based on gaps and resources identified in the planning process (see Infrastructure Category).**	**7.** 1st Quarter 2010
		☒	**Action 8. Develop and implement the SC HAI Lab Response Network to provide ongoing HAI lab capacity in SC for HAI Outbreak detection and tracking.** Activities will include: • Establish and fund lab network with staff, equipment, supplies and data base to fill in the gaps in capacity (contingent upon new resources).	---------- 8**.** Contingent upon resources to establish HAI Lab Network.
Level II			Improve communication of HAI outbreaks and infection control breaches i. Develop standard reporting criteria including, number, size and type of HAI outbreak for health departments and CDC	
		☒	**Action 9. DHEC will develop HAI Outbreak policies and procedures to include:** • Communicate Outbreak prevention information rapidly	**9.** 1st Quarter 2011 (additional staff

Planning Level	Check Items Underway	Check Items Planned	Items Planned for Implementation (or currently underway) **Table 2. Planning for Surveillance, Detection, Reporting and Response for HAIs.**	Target Dates for Implementation
			to facilities and, providers (including Infectious Disease physicians) via Health Advisories / Alerts. • Describe outbreak reporting and communication process • Disseminate targeted early warning data about unusual clusters via "be on the lookout" alerts and e-mails to facilities and providers. 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)	will be needed to respond to increased expectations)
		☒	**Action 10**. **Define process for communicating information during outbreaks and breaches of practice standards between state partner agencies** (also responsibility for local implementation).	10. 1st Quarter 2011
	☒		Identify at least 2 priority prevention targets for surveillance in support of the HHS HAI Action Plan **Action 11**. **Priority Prevention surveillance: Central Line-associated Bloodstream Infections (CLABSI 1) - per 1000 device days by ICU and other locations**. • Stop BSI Collaborative – 22 hospitals enrolled at this time; 1st training provided 10-30-09 • Selection supported by the availability of active surveillance data reported into NHSN from medical – surgical ICUs since 2007 and the addition of reporting	11. Implemented data base in 2007. Selected targets 10-21-09.

Planning Level	Check Items Underway	Check Items Planned	Items Planned for Implementation (or currently underway) **Table 2. Planning for Surveillance, Detection, Reporting and Response for HAIs.**	Target Dates for Implementation
			requirements for all acute care locations in 2009.	
	☒		**Action 12**. **Priority Prevention surveillance: *Clostridium difficile* Infections (CDI)** – case rate per patient days from administrative /discharge data for ICD-9 CM coded C.diff infections. • CDI data available and selected for prevention target	12. Established SC baseline C. difficile administrative claims data report in 4th Quarter 2009.
	☐ ☒		**Action 13. Priority Prevention surveillance: Methicillin-resistant Staphylococcus aureus (MRSA) Infections** • Proposed - MRSA BSI lab data with match with hospital discharge data to assess if POA. (method being developed by DHEC – not in DHHS metric)	13. Proposed Pending validation of current method or new resources.
	☒		**Action 14**. **Priority Prevention surveillance: Surgical Site Infections (SSI)** • Deep incision and organ space infection rates using NHSN definitions. • Active SSI surveillance data reporting required in NHSN for all acute care hospitals for selected procedures in all hospitals where these procedures are performed (except where designated only for hospitals ≤ 200 beds). o Coronary Artery Bypass Graft (CBGB) (both chest and donor site incisions) o Coronary Artery Bypass Graft (CBGC) (with chest incision only) o Hysterectomy (abdominal - HYST) o Hip – prosthesis- (HPRO)	14. Established baseline data July 2007, Selected Targets 9-21-2009

Planning Level	Check Items Underway	Check Items Planned	Items Planned for Implementation (or currently underway) **Table 2. Planning for Surveillance, Detection, Reporting and Response for HAIs.**	Target Dates for Implementation
	☐	☐	o Knee – prosthesis – (KPRO) o Colon (COLO) - (only report from hospitals of 200 beds or less)	
	☒ ☒		Adopt national standards for data and technology to track HAIs (e.g., NHSN). i. Develop metrics to measure progress towards national goals (align with targeted state goals). **Action 15. Adopted NHSN for mandatory HAI reporting in 2006. .** ii. Establish baseline measurements for prevention targets **Action 16. Baseline data for CLABSI and SSIs established and in NHSN.** Standardized Infection Rations (SIRs) will be used to measure trends over time. Administrative claims data report has been established for *C. difficile* baseline from data beginning 2008.	15. Implemented data collection 2007 and ongoing 16. Implemented and ongoing
			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	

Planning Level	Check Items Underway	Check Items Planned	Items Planned for Implementation (or currently underway) Table 2. Planning for Surveillance, Detection, Reporting and Response for HAIs.	Target Dates for Implementation
		☒	**Action 17. Surveillance training: Establish and implement a training session for NHSN Users in new facilities and newly hired IP and support staff in existing facilities using NHSN.** (Assigned to SCHAIP Training Committee for planning, with activities to be supported by partnership members as resources are identified. ELC ARRA Training funds will be available for Activity B and C through Contracts with the SCHA.) Training to include: • NHSN Enrollment • NHSN Training - Patient Safety Protocols • Case studies to ensure accurate application of surveillance case definitions. All inpatient acute care hospitals are using NHSN and staff were initially trained via two separate state wide trainings in February 2007 and April 2008 and conducted by the partnership with SCHA, APIC Palmetto, and DHEC. Ongoing training is needed to prepare new users as a result of high staff turnover in facilities.	17. Implement: 4th Quarter 2010
	☒		**Action 18. Establish the "Jump Start" Site Visits for facilities for new NHSN Users where no other NHSN users are on staff to provide mentoring and orientation.** DHEC IP visits new staff and APIC Palmetto developed references and resource notebooks for new IPs. (ELC ARRA funds are available for this project.)	18. Implemented 10-2009 and ongoing.

Planning Level	Check Items Underway	Check Items Planned	Items Planned for Implementation (or currently underway) **Table 2. Planning for Surveillance, Detection, Reporting and Response for HAIs.**	Target Dates for Implementation
	☒ Planned		**Action 19. Develop a plan to establish and combine resources for a formal HAI Training program in SC to ensure HAI surveillance, prevention, and control competencies in the healthcare workforce**. **SCHAIP will coordinate the planning process.** A lead organization will be identified and funding will be pursued through state, federal, and private grants. Limited ELC ARRA training funds are available for surveillance and the CLABSI prevention collaborative. a. The HAI Training program will: o Base the curriculum upon nationally (e.g. APIC) defined core competencies and content for: ▪ Infection Preventionists ▪ Basic HAI knowledge and skills needed by all healthcare professionals/ workers. ▪ Advanced HAI knowledge and skills needed by selected categories of healthcare professionals/ workers o identify competencies and rapidly ensure access to training for emerging infections. o establish recommendations for minimum standards for training and licensure o facilitate access to existing training resources to include access to low cost web based training o ensure access to high quality, advanced training	**19.** Planning to begin 1st Quarter 2010 with full implementation contingent upon resources.

Planning Level	Check Items Underway	Check Items Planned	Items Planned for Implementation (or currently underway) **Table 2. Planning for Surveillance, Detection, Reporting and Response for HAIs.**	Target Dates for Implementation
			and mentoring opportunities and case studies. o facilitate access to infectious disease and infection prevention professionals for consultation, training, and policy development. b. Identify state, federal, and private grant resources to establish the program from a partnership (SCHA, DHEC, AHEC, HSSC, APIC, etc…) c. Coordination assigned to the SCHAIP Training Committee with additional consultation from state and national professional groups.)	
	☒		**Action 20. Develop tailored reports of data analyses for state or region prepared by state personnel.** • Current HIDA reports are on DHEC website prepared by HIDA staff (www.scdhec.gov/hai) include CLABSI and SSI rates and SIRs. • Specific reports to measure the progress toward national targets will be developed from the data in the SC HIDA NHSN data base. • Evaluate data reports and develop additional reports as HAI Prevention initiatives are program funded.	20. Implemented: 2-8-08 and process of developing and evaluating reports is ongoing.
Level III	☒		**Action 21. Validate data entered into HAI surveillance (e.g., through healthcare records review, parallel database comparison) to measure accuracy and reliability of HAI data collection** • DHEC Infection Preventionist – began pilot validation protocol in March 2008. Revised protocol in March 2009.	21. Implemented March 2008 and process is ongoing.

Planning Level	Check Items Underway	Check Items Planned	Items Planned for Implementation (or currently underway) **Table 2. Planning for Surveillance, Detection, Reporting and Response for HAIs.**	Target Dates for Implementation
	☒ ☒ ☒ ☒ ☒		• Validation findings reported to HIDA Advisory Committee and presented to APIC Palmetto conference. • Developed a validation plan • Pilot test validation methods in a sample of healthcare facilities • Modify validation plan and methods in accordance with findings from pilot project • Implement validation plan and methods in all healthcare facilities participating in HAI surveillance • Analyze and report validation findings • Use validation findings to provide operational guidance for healthcare facilities that targets any data shortcomings detected	Completed Completed Completed Completed and ongoing. Completed and ongoing - annually. Process ongoing:
		☒	Develop preparedness plans for improved response to serious breaches in HAI prevention and control. 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 **Action 22. Develop and include response procedures in DHEC HAI Outbreak protocols to include surveillance, detection, response, and reporting.** Additional DHEC resources defined in **Table 1.**	22. Develop procedures 2nd Quarter 2010.

Planning Level	Check Items Underway	Check Items Planned	Items Planned for Implementation (or currently underway) Table 2. Planning for Surveillance, Detection, Reporting and Response for HAIs.	Target Dates for Implementation
			Infrastructure - Action Plan are needed to expand activities for outbreak investigations in HC facilities.	Additional staff needed to implement.
		☒	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. **Action 23. Facilitate a meeting with health professional licensing organizations to discuss:** • Developing formal protocols for complaint investigation • Establishing minimum standards or guidelines for training and licensure • Including all healthcare workers, plus those in non-hospital settings in the Training competencies and needs.	23. By 3rd Quarter 2010.
			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	

Planning Level	Check Items Underway	Check Items Planned	Items Planned for Implementation (or currently underway) **Table 2. Planning for Surveillance, Detection, Reporting and Response for HAIs.**	Target Dates for Implementation
	☒		**Action 24. DHEC uses CDC NBS system for Public Health Surveillance and has implemented Electronic Lab Reporting (ELR) from clinical labs.** • DHEC has encouraged hospitals to use standardized HL-7 messaging and electronic download of lab and surgical data into NHSN to reduce the burden of reporting. Future activities will depend upon technical guidance from CDC and incentives for healthcare facilities and vendors. ii. Promote definitional alignment and data element standardization needed to link HAI data across the nation.	24. Implemented and ongoing; additional guidance is needed if public health is to facilitate intra hospital IT standards.
	☒		**Action 25. SC DHEC selected NHSN with standardized definitions for the mandatory reporting data base.** To the extent knowledge and resources are available, we will continue to promote this effort.	25. Ongoing
	☒		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 **Action 26. SSI and CLABSI reporting into NHSN began in July 2007 with the first public report posted in February 2008 and every 6 months after.**	26. Completed and ongoing.

Planning Level	Check Items Underway	Check Items Planned	Items Planned for Implementation (or currently underway) **Table 2. Planning for Surveillance, Detection, Reporting and Response for HAIs.**	Target Dates for Implementation
	☒		Make available risk-adjusted HAI data that enables state agencies to make comparisons between hospitals. **Action 27. DHEC reported the first Hospital Compare report using Standardized Infection Ratios (SIRs) in February 2009**.	27. Completed and ongoing – annually since Feb. 2008.
		☒	Enhance surveillance and detection of HAIs in nonhospital settings **Action 28. Develop automated reports as described in the Table 2 Surveillance template and validate reports**. Routine reporting of outbreaks and specified notifiable conditions is required by DHEC from all hospitals, labs, and physicians. However, HAI outbreaks are not readily apparent from the facility type in the routine case reporting data base and trend data from labs may not be analyzed by ordering practice.	3rd Quarter 2011. ---------- 28. Contingent upon resources are to develop the data reports.
		☒	**Action 29. The following actions will be promoted by DHEC for outbreak detection and education**: • Continue annual notification of Non-hospital settings to promote reporting of potential HAIs that are on the list of reportable conditions (e.g. Hepatitis B and C) • Encourage healthcare workers from non-hospital settings to participate in HAI educational opportunities. (Include these non-hospital workers in the Training Plan. • Implement reporting and response protocols for	29. Planned contingent upon resources.

Planning Level	Check Items Underway	Check Items Planned	Items Planned for Implementation (or currently underway) Table 2. Planning for Surveillance, Detection, Reporting and Response for HAIs.	Target Dates for Implementation
			outbreaks • Promote SSI – post discharge surveillance reporting • Identify options to link professional credentials and re-licensure to education and training for the Training and Laws and Regulations Committee.	

3. Prevention

State implementation of HHS Healthcare Infection Control Practices Advisory Committee (HICPAC) recommendations is a critical step towards the elimination of HAIs. CDC with HICPAC has developed evidence-based HAI prevention guidelines cited in the HHS Action Plan for implementation. These guidelines are translated into practice and implemented by multiple groups in hospital settings for the prevention of HAIs. CDC guidelines have also served as the basis the Centers for Medicare and Medicaid Services (CMS) Surgical Care Improvement Project. These evidence-based recommendations have also been incorporated into Joint Commission standards for accreditation of U.S. hospitals and have been endorsed by the National Quality Forum. Please select areas for development or enhancement of state HAI prevention efforts.

Table 3: State planning for HAI prevention activities

Planning Level	Check Items Underway	Check Items Planned	Items Planned for Implementation (or currently underway) Table 3: Prevention	Target Dates for Implementation
Level I			Implement HICPAC recommendations. i. Develop strategies for implementation of HICPAC recommendations for at least 2 prevention targets specified by the state multidisciplinary group.	

Planning Level	Check Items Underway	Check Items Planned	Items Planned for Implementation (or currently underway) Table 3: Prevention	Target Dates for Implementation
		☒	**Action 1. Prevention Target – reduce hospitalizations with C. difficile:** a. Reconvene the SC APIC / DHEC Antibiotic Resistance Workgroup and additional partners (e.g. Health Licensing, Infectious disease physicians) under the new SCHAIP Infrastructure to: • Update the 2007 SC Antibiotic Resistant Organisms Strategic Plan • Revise 1998 "SC Guidelines for Prevention and Control of Antibiotic Resistant Organisms in Healthcare Settings" to include guidance from the HICPAC MDRO Guidelines in Healthcare Settings, 2006. • Include HICPAC and other nationally accepted HAI Prevention guidance for discussion during the planned revisions of the HAI related Health Regulations. b. Identify opportunities to fund and implement at least one Antimicrobial Stewardship Prevention Collaborative. c. Include topics on Antibiotic Resistance in HC Settings and HICPAC Guidelines in the HAI training plan.	1. Continue Planning with Implementation contingent upon resources. Target: 4th Quarter 2010.
		☒	**Action 2. Prevention Target: SSI 1 – Reduce the admission and readmission SSI SIR by at least 25% from baseline or to zero.** a. Include HICPAC Recommendations and other Safe Surgery recommendations for SSI Prevention in the HAI Training Plan. b. Identify opportunities to fund and implement an SSI Prevention collaborative.	**2**. Implement SSI training based on Training Plan and resources - Prevention Collaborative contingent upon resources.

Planning Level	Check Items Underway	Check Items Planned	Items Planned for Implementation (or currently underway) Table 3: Prevention	Target Dates for Implementation
	☒ Planned		*Other:* **Action 3. Define SCHAIP process for a timely review of all future new or revised HICPAC Guidelines and develop an implementation plans.** a. For each new or revised HICPAC guideline, establish a SCHAIP workgroup and implementation plan to include alerting Healthcare Facilities of the new guidelines, identifying training needs, performance indicators, and policy implications.	3. 2nd Quarter 2011.
	☒		Establish a 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 **Action 4. The SC Healthcare Alliance for Infection Prevention (SCHAIP) will identify a specific Collaborative Workgroup for each collaborative to include subject area experts.** Experts are accessible, however each collaborative will need funding to support staff time. A **STOP BSI Collaborative Workgroup is functioning now for the CLABSI Prevention Collaborative.**	**Action 4.** STOP BSI workgroup was established in 2009 and a Workgroup will be established, for each collaborative when resources are available. Access to subject area experts contingent upon resources.

Planning Level	Check Items Underway	Check Items Planned	Items Planned for Implementation (or currently underway) Table 3: Prevention	Target Dates for Implementation
	☒		Establish HAI collaboratives with at least 10 hospitals (i.e. this may require a multi-state or regional collaborative in low population density regions) **Action 5. a. CLABSI – "STOP BSI" Prevention established with 22 hospitals.** The STOP BSI working group is in place to consult, advise and coach the facilities currently enrolled in the CLABSI Prevention Collaborative, funded by the Duke Endowment and limited DHEC participation funded by ELC ARRA. The first face to face training was held on 10-30-09.	5. a. Implemented 2009 and ongoing.
		☒	**Action 5.b**. **Establish a prevention working group for C.diff and / or SSIs if resources are obtained to implement the prevention collaborative.**	5. b. Expanding Collaboratives - contingent upon resources.
	☒		i. Identify staff trained in project coordination, infection control, and collaborative coordination	Implemented CLABSI - 2009 and ongoing.
	☒		ii. Develop a communication strategy to facilitate peer-to-peer learning and sharing of best practices	Implemented CLABSI - 2009 and ongoing.
	☒		iii. Establish and adhere to feedback of a clear and standardized outcome data to track progress	Implemented CLABSI - 2009 and ongoing.

Planning Level	Check Items Underway	Check Items Planned	Items Planned for Implementation (or currently underway) Table 3: Prevention	Target Dates for Implementation
			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	
		☒	**Action 6**. **DHEC and SCHAIP Training Committee will facilitate discussion to establish training competencies / requirements and identify incentives and best practices for training and certification for HAI prevention** to include many partners in the process (DHEC, SCHA - Duke Endowment, AHEC, Professional Licensing Boards, Academic Medical Centers, DHHS, Colleges of Nursing and Medicine, Rural Health)	6. 1st Quarter 2011
Level II			Implement strategies for compliance to promote adherence to HICPAC recommendations 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	
		☒	**Action 7. Identify regulatory strategies to ensure best practices in Laws/ Regulations Committee established by SCHAIP to provide consultation to Health Licensing during the Hospital Regulations Review planned for 1st Quarter 2010**.	7. Discussions to begin 1st Quarter 2010 and ongoing.

Planning Level	Check Items Underway	Check Items Planned	Items Planned for Implementation (or currently underway) Table 3: Prevention	Target Dates for Implementation
		☒	**Action 8. Include incentives and educational strategies to promote adherence to HICPAC standards and other best practices**.	8. Discussions to begin 1st Quarter 2010 and ongoing.
			ii. Coordinate/liaise with regulation and oversight activities such as inpatient or outpatient facility licensing/accrediting bodies and professional licensing organizations to prevent HAIs	
		☒	**Action 9. SCHAIP Legal/ Regulations Committee to identify and address barriers to implementing standards and guidelines**. (e.g. hand hygiene dispensers – fire; infectious wastes). (reference guidelines)	**9.** Discussions to begin 1st Quarter 2010 and ongoing until barriers resolved..
		☒	**Action 10. Review of laws and regulations and incentives to include facilitated discussion of recommendations submitted during the SCHAIP Taskforce meetings.** • Consider including establishing minimum requirements for: a) hospitals to have a minimum # of Infection Preventionist FTEs / 100 beds in healthcare facilities, b) include other IP responsibilities such as additional outpatient practices, long term care, and environmental in the minimum FTE calculation, c) consider other measurements (e.g. adjusted pt. volume), d) consider available IP work force	**10**. Begin review of Hospital Regulations 1st Quarter 2010 with existing resources.

Planning Level	Check Items Underway	Check Items Planned	Items Planned for Implementation (or currently underway) Table 3: Prevention	Target Dates for Implementation
			• Consider establishing statewide guidelines or recommendations instead of "requirements" as a minimum (e.g. identify incentives such as HIDA recognition for high level of performance (set of minimum performance measures to include staffing +)	Begin review of Incentives with SCHAIP Taskforce.
			iii. Improve regulatory oversight of hospitals, enhancing surveyor training and tools, and adding sources and uses of infection control data	
		☒	**Action 11. DHEC will work with SCHAIP committee to identify "basic infection control 101" training needs for facility surveyors to be able to identify breeches in infection control.**	11. Include in training plan and contingent upon resources
			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 for expanding oversight to unregulated settings is not feasible at this time. There is no legal authority and current staffing for the regulated facilities is very limited and more budget cuts have been announced.)	Contingent upon resources
			Other	
		☒	**Action 12. HAI Prevention Best Practices will be encouraged for all healthcare workers/ providers through educational efforts promoted by SCHAIP**. Information on low cost web based courses and other training opportunities will be promoted by SCHAIP to appropriate audiences.	12. Include in training plan.

Planning Level	Check Items Underway	Check Items Planned	Items Planned for Implementation (or currently underway) Table 3: Prevention	Target Dates for Implementation
		☐	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) **See proposed prevention collaboratives for C.diff and SSI - Pending additional resources**.	**Pending additional resources**.
		☐	Establish collaborative to prevent HAIs in nonhospital settings (e.g., long term care, dialysis)	**Pending additional resources**.
Please also describe any additional activities, not listed above, that your state plans to undertake. Please include target dates for any new activities.				

4. Evaluation and Communications

Program evaluation is an essential organizational practice in public health. Continuous evaluation and communication of practice findings integrates science as a basis for decision-making and action for the prevention of HAIs. Evaluation and communication allows for learning and ongoing improvement to occur. Routine, practical evaluations can inform strategies for the prevention and control of HAIs. Please select areas for development or enhancement of state HAI prevention efforts.

Table 4: State HAI communication and evaluation planning

Planning Level	Check Items Underway	Check Items Planned	Items Planned for Implementation (or currently underway) Table 4. Evaluation and Communications	Target Dates for Implementation
Level I			Conduct needs assessment and/or evaluation of the state HAI program to learn how to increase impact i. Establish evaluation activity to measure progress towards targets and	
		☒	**Action 1. Establish DHEC Tracking Table to identify responsibilities of Divisions and timelines**.	1. 1st Quarter 2010
		☒	**Action 2. Establish SCHAIP Organizational Chart and Tracking Table to identify plans, responsibilities, time lines and document progress toward goals and targets.**	2. 1st Quarter 2010
			ii. Establish systems for refining approaches based on data gathered	3. 1st Quarter 2010
		☒	**Action 3. Tracking system will include outcome measures and data documenting progress toward targets**. Committees to report progress to SCHAIP meeting every other month, or as otherwise designated, and include evaluation and revised plans and strategies as needed. .	
		☒	**Action 4. Develop and implement a SCHAIP communication plan** for the state's HAI program to meet public and stakeholder's needs. Include state priorities for HAI prevention to healthcare	4. 2nd Quarter 2010

	☐	☐	organizations, professional provider organizations, governmental agencies, non-profit public health organizations, and the public.	
Level II	☒		Provide consumers access to useful healthcare quality measures **Action 5**. **Continue public reporting of selected HAIs** • Develop Healthcare Quality Reports to include Prevention Initiatives. • Develop Objectively measured recognition program – consistent with guidelines. (contingent upon receiving additional public health resources for subject area expertise)	5. 2nd Quarter 2011 (expanding beyond mandatory reporting is contingent upon receiving additional resources)
Level III	☒		Identify priorities and provide input to partners to help guide patient safety initiatives and research aimed at reducing HAIs **Action 6. Establish SCHAIP priorities for initiatives and research.** SCHAIP Infrastructure partners and committees are keys to establishing effective communications and feedback between partners to accomplish this goal. DHEC has an established HAI surveillance, validation, and public reporting program using NHSN standards. HSSC is the lead in HAI research, SCHA has a strong patient safety and quality program, APIC Palmetto has a long history of providing infection prevention education and mentoring for IPs. • SCHAIP process to recommend priorities and propose prevention initiatives and research.	6. By 3rd Quarter 2010, complete formal plan