

Healthcare Associated Infections (HAI) Prevention Plan
Georgia Department of Public Health, Acute Disease Epidemiology Unit
Updated May 2013

Introduction

Healthcare associated infections (HAIs) are infections that patients contract while receiving treatment for medical and surgical conditions. The U.S. Centers for Disease Control and Prevention (CDC) estimates that HAIs contracted in U.S. hospitals account for approximately two million infections, 99,000 deaths, and an estimated \$4.5 billion in excess costs annually.¹ Even though rates may be decreasing, it has also been estimated that 5-15% of all hospitalized patients experience an HAI and that these cases are widely underreported.^{1, 2, 3}

This document represents an update to the Georgia HAI Plan. The initial plan was created in December 2009 and included the following goals:

1. Establish a Georgia Healthcare Associated Infection Advisory Committee (GHAIAC).
2. Encourage voluntary reporting of HAI data to the state and to enhance outbreak reporting capabilities for HAIs in the absence of a state mandate for reporting.
3. Coordinate with community partners to establish and conduct collaboratives and trainings for HAI prevention.
4. Establish 5-year targets and evaluate progress toward these goals.

¹ Weinstein RA, Siegel JD, and Brennan PJ. "Infection Control Report Cards – Securing Patient Safety." *NEJM*. 2005: 353 (3), 225-227.

² Smith RL, Bohl JK, McElearney ST, Friel CM, Barclay MM, Sawyer RG, and Foley EF. "Wound infection after elective colorectal resection." *Ann Surg*. 2004: 239 (5), 599-605.

³ Eggimann P and Pittet D. "Infection control in the ICU." *Chest*. 2001: 120 (6), 2059-2093.

Achievements 2009-2011

Based on this plan, the state has made the following achievements:

1. The GHAIAC was established in December 2009 and has met at least quarterly since its establishment. The count of members ranges from 15 to 21, excluding liaison or ad hoc members. The makeup of the committee is summarized below.

Membership of the Georgia HAI Advisory Committee	
~9 members	Members with experience and knowledge of hospital epidemiology, statistical and research methods, infection prevention and control, and patient safety and quality, selected to represent a diversity of healthcare settings (such as urban and rural hospitals, large and small hospitals, North and South Georgia, specialty hospitals such as pediatrics, teaching hospitals, long-term acute care (LTACH) facilities, ambulatory surgical centers, long-term care facilities).*
~9 members	A doctoral-level laboratory specialist, a representative of the Georgia Hospital Association (GHA), a member of the Medical Association of Georgia, a representative from a Georgia local health department, a senior executive from a Georgia healthcare facility, a Georgian who is a patient advocate/consumer, a representative of the Georgia Emerging Infections Program (EIP), a representative from an academic institution in Georgia, and a communications specialist.
Liaison Members	Liaison members as a source communication between the GHAIAC and the respective agency or organization he or she represents. Liaison members from the CDC also participate in the GHAIAC.
*This portion of the membership will also be evaluated to represent membership with professional organizations related to HAIs, such as The Association of Professionals in Infection Control (APIC), the Georgia Infection Prevention Network (GIPN), the Society for Healthcare Epidemiology of America (SHEA), and the Infectious Diseases Society of America (IDSA).	

2. The Georgia Department of Public Health (GDPH) developed a detailed plan to encourage voluntary reporting by hospitals. The preliminary infection targets were central-line associated bloodstream infections (CLABSIs) and selected surgical site infections (SSIs) for knee replacement, hip replacement, and/or hysterectomy procedures. GDPH worked with its committee members to support voluntary reporting, performed trainings on the National Healthcare Safety Network (NHSN), and conducted all tasks to properly support hospitals in reporting. Unfortunately, at that time, providers were reluctant to engage in voluntary reporting. This reluctance was greatly impacted by the role of local media to actively conduct open records requests and the inability of the state to protect reported data from discoverability. Thus, the GDPH, working with the GHAIAC, decided to make significant investments in prevention activities. These activities are summarized under item 3.

3. Between 2009 and 2011, the state has engaged in significant HAI prevention programs and training with its community partners. These activities are summarized below:
- Long-Term Care Infection Prevention Control Training. During 2011 and 2012, the GDPH partnered with the CDC, the Georgia Medical Care Foundation (GMCF, the Georgia Quality Improvement Organization [QIO]), the Georgia Infection Prevention Network (GIPN), the Georgia Health Care Association (GHCA), and the Georgia Department of Community Health, Division of Health, Healthcare Facility Regulation (GHFR) to offer a total of five regional trainings across the state. Each training program spanned two days and the GDPH was responsible for training sessions on the state health department's role in HAI prevention and healthcare-associated outbreaks, as well as standard precautions and infection control policies in long-term care. An infection prevention and control test was administered to attendees at the beginning and conclusion of the training. For the three trainings conducted in 2011, a comparison of the pre- and post-tests indicated that comprehension of infection control and prevention topics increased from 61% (168 surveys) to 74% (169 surveys).
 - Development of State Surveyor Training. In both 2011 and 2012, two-day trainings were conducted for state surveyors to promote standardized use of evidence-based infection prevention and control practices. Presenters included staff from the GDPH on the topics of public health's role in infection prevention, healthcare-associated outbreaks, and standard precautions.
 - Acute Care Prevention Collaboratives with the Georgia Hospital Association (GHA).
 - In 2009, the GHA led a collaborative based on the principles of the Comprehensive Unit-based Safety Program (CUSP) to eliminate CLABSIs, as part of the national CUSP Stop bloodstream infection (BSI) Initiative. This collaborative included 33 Georgia hospitals and included national faculty from the Health Research & Education Trust (HRET), and the research and education affiliate of the American Hospital Association (AHA). These facilities worked with partners at Johns Hopkins and the Michigan Health & Hospital Association Keystone Center to replicate the 2003 Michigan ICU project to reduce CLABSIs. For the 33 hospitals participating, there was an overall reduction in CLABSI rate of approximately 40%.
 - In 2011, the GHA initiated a collaborative to reduce catheter-associated urinary tract infections (CAUTI), with 30 hospitals participating that included the CUSP methodology, as part of the national Stop CAUTI initiative. The CUSP-CAUTI collaborative included the participation of rural hospitals. Preliminary results indicate that collaborative hospitals have achieved a significant reduction in the use of catheters. Infection rates are still being evaluated; it is unclear if the infection rate has decreased in light of decreased use of catheters, as this decrease in the denominator would prevent a decrease in the absolute number of CAUTIs from being reflected in the rate calculation.
 - Currently, the GHA has rolled its HAI collaborative participants into the Georgia Hospital Engagement Network (HEN) as part of the federal Partnership for Patients initiative to reduce preventable readmissions by 20% and

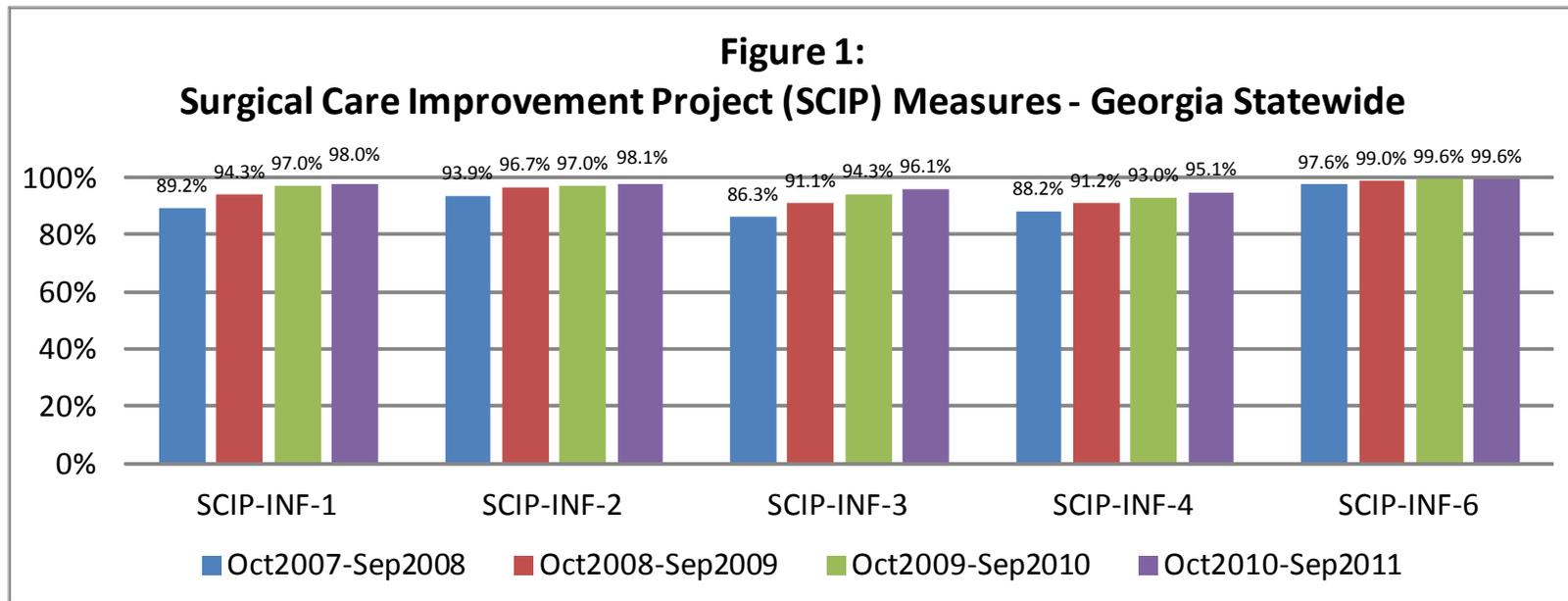
hospital-acquired conditions by 40%. Currently, the GHA has 112 hospitals enrolled in its HEN, and 49 of these hospitals are engaged in addressing HAI targets (i.e., SSIs, ventilator associated pneumonia (VAP), CLABSI, and CAUTI). In all of the GHA collaborative efforts, the GDPH and the GMCF have attended all events and trainings and offered technical assistance.

- Development of a NICU CLABSI Affinity Group. In the CDC's National HAI Standardized Infection Ratio Report⁴, both the GHA and the GDPH noted that the Georgia neonatal intensive care unit (NICU) CLABSI rate was above the national average. Thus, the GDPH and the GHA worked together to develop the NICU CLABSI Affinity Group, which was initiated during the summer of 2012. The collaborative includes 16 Georgia Level III NICUs out of the 25 in the state.
- Prevention Collaboratives led by Georgia Medical Care Foundation (GMCF, the Georgia QIO).
 - In 2009, the GMCF led a *Clostridium difficile* infection (CDI) prevention collaborative that included three acute care facilities, a long-term acute care facility, and 13 long-term care facilities. This community of facilities addressed CDI prevention by using a transfer form, building a community of providers, and discussing differences in infection control and prevention activities in the three care settings.
 - In 2011, the GMCF started its 10th Scope of Work, which includes working with hospitals to address a series of HAI targets: CAUTI, SSIs, and CDI, including antibiotic stewardship. The GMCF has initiated its work with 27 hospitals addressing CAUTI, and is currently recruiting facilities for its CDI collaborative to begin in 2013.
- Focused work with hospitals on improvement of hospital core measures including the Surgical Care Improvement Project (SCIP) infection measures led by Georgia Medical Care Foundation (GMCF, the Georgia QIO)
 - Ongoing statewide support is provided to hospitals related to mandatory reporting of core measures to the Centers for Medicare and Medicaid Services (CMS). QIO personnel provide guidance on abstraction and reporting deadlines as well as tools to assist hospitals to improve performance on measures.
 - From August 2008 through July 2011, twenty-eight (28) hospitals participated in a project to improve SCIP measures including five infection measures. The project included data analysis, education and implementation of interventions to improve measures at a hospital level.

⁴ National Healthcare Associated Infection Standardized Infection Ratio Report: Using Data Reporting to the National Healthcare Safety Network: January – December 2010. Centers for Disease Control and Prevention, Zoonotic and Infectious Diseases, Division of Healthcare Quality Promotion. http://www.cdc.gov/hai/pdfs/SIR/national-SIR-Report_03_29_2012.pdf. Accessed September 17, 2012.

- The five SCIP measures included:
 - SCIP-Inf-1: Prophylactic antibiotic received within one hour prior to surgical incision
 - SCIP-Inf-2: Prophylactic antibiotic selection for surgical patients
 - SCIP-Inf-3: Prophylactic antibiotics discontinued within 24 hours after surgery end time (48 hours for cardiac patients)
 - SCIP-Inf-4: Cardiac surgery patients with controlled 6 a.m. postoperative serum glucose
 - SCIP-Inf-6: Surgical patients with appropriate hair removal

Figure 1 presents results for five SCIP measures over four successive annual periods for all Georgia hospitals participating in the CMS Quality Reporting Program. As of September 2011, all five SCIP measures have an average of 95% or higher adherence rate, meeting the US HHS Action Plan goal.⁵



⁵ US HHS National Action Plan to Prevent Healthcare Associated Infections: Roadmap to Elimination. Phase I: Acute Care Hospitals. HAI Action Plan Target and Metrics. <http://www.hhs.gov/ash/initiatives/hai/nationaltargets/index.html>. Accessed October 22, 2012.

4. The GDPH has evaluated the progress for two HAI metrics through the Georgia Emerging Infections Program (EIP). The GDPH is partnered with collaborators at Emory University and the Atlanta VA Medical Center who conduct active population-based surveillance for invasive Methicillin-resistant *Staphylococcus aureus* (MRSA) and *Clostridium difficile* within the eight counties of GA Health District 3 (i.e., Clayton, Cobb, DeKalb, Douglas, Fulton, Gwinnett, Newton, and Rockdale counties). The Active Bacterial Core (ABC) program of the GA EIP conducts surveillance for invasive MRSA and categorizes cases as healthcare-onset, healthcare-associated community-onset, or community-associated. The EIP conducts surveillance for *C. difficile* for which incident cases are identified, rates are calculated, detailed case-patient information is collected, and specimens from selected cases are collected for bacterial isolation and further molecular characterization. GDPH is a partner in the EIP and GDPH personnel work collaboratively with EIP personnel on HAI projects that span EIP and GDPH interests and participate in joint monthly EIP meetings where surveillance data are presented and analyzed. Two Emory faculty members who are part of HAI activities within the EIP serve on the GHAIAC. Preliminary data from the MRSA and *C. difficile* surveillance programs are shown below. Healthcare-onset MRSA has steadily declined from approximately 10 cases to 5 cases per 100,000 people (Figure 2). Healthcare-associated, community-onset MRSA infections also decreased from approximately 22 cases to 17 cases from 2005-2008 but has leveled off since 2008. The *C. difficile* surveillance program was initiated in 2009, and there appears to be a recent increase in the CDI incidence rate. EIP staff is currently working to stratify the *C. difficile* infection data by types/locations of exposures. Figure 3 shows the increase in *C. difficile* incidence between 2010 and 2011. A number of laboratories in the surveillance area switched to polymerase chain reaction (PCR) diagnostics in 2011, a method that is highly sensitive and specific for the *C. difficile* organism. Thus, the noted increase may be at least partially attributable to the increasing use of more sensitive laboratory methods. EIP and GDPH staff will continue to monitor these data.

Figure 2
Invasive MRSA Incidence Rate -
Preliminary Data
Georgia Emerging Infections Program
Health District 3

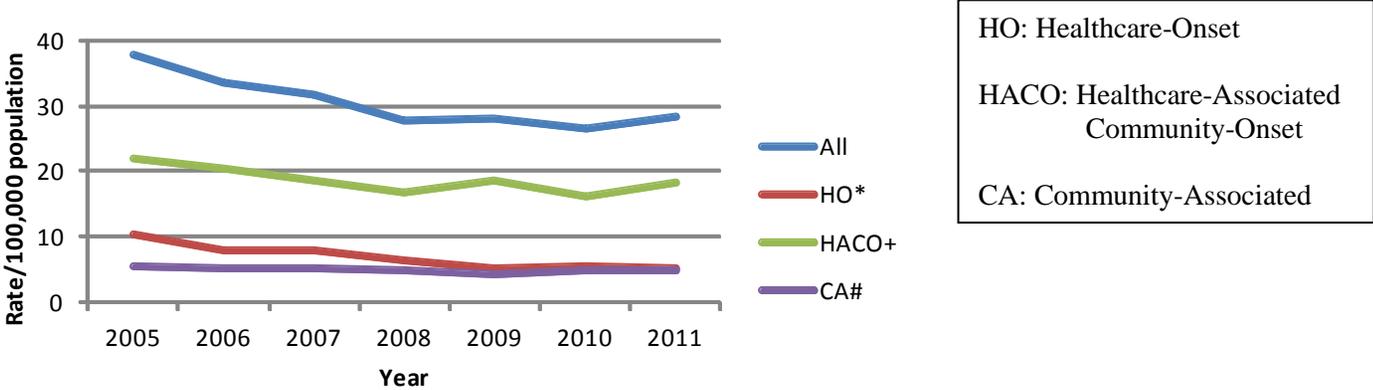
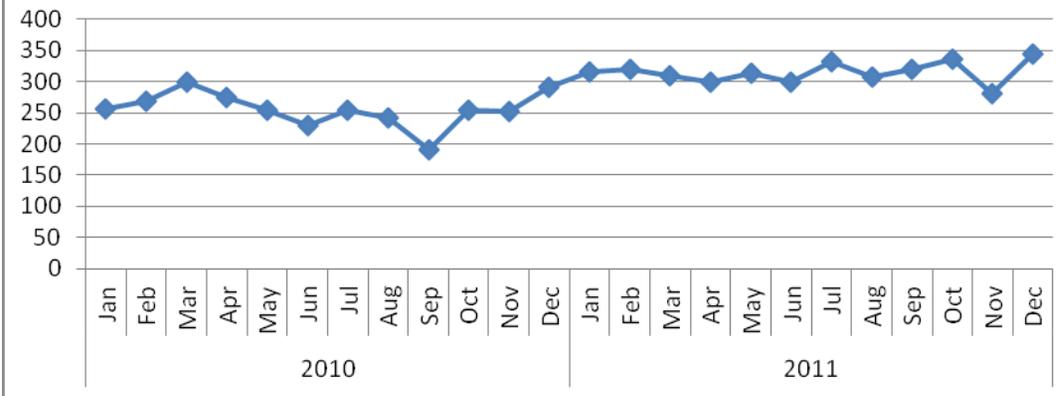


Figure 3
Incident *Clostridium difficile* Infection Cases by Month
Preliminary Data
Georgia Emerging Infections Program
Health District 3



For invasive MRSA and *Clostridium difficile* Infections reported by EIP: all reported cases are residents of the eight counties of Georgia Health District 3: Clayton, Cobb, DeKalb, Douglas, Fulton, Gwinnett, Newton, and Rockdale. For CDI: An index case is defined as a positive *C. difficile* toxin or molecular assay on a stool specimen occurring > 8 weeks after any prior positive specimen.

Enhanced HAI Infrastructure in 2012-2013

In 2012, the GHAIAC continued to evaluate methods to have HAI data reported to the state to improve the infrastructure of the Georgia HAI Program. It was identified that HAIs could be reported to the state under the state notifiable disease list, and through the GDPH General Counsel established that these data could be protected from discoverability in accordance with Georgia law, Code Sections 31-12-2(a) and 31-5-5. The GHAIAC agreed with this approach and that the notifiable disease list would include all measures under the CMS federal reporting requirements. The GDPH commissioner has approved the document, and HAIs will be added to the notifiable disease list beginning January 2013.

Given that HAI data will be reported to the state, the GDPH is currently focused on strengthening its infrastructure as follows:

1. Continue work with the GHAIAC to strengthen its communication structure to provide information to providers and consumers on the topic of state HAIs.
2. Lead training on NHSN enrollment, data collection, protocol, and analyses. Six trainings have been scheduled to be conducted by GDPH staff between August 1 and November 30, 2012.
3. Evaluate methods to support future validation of state data. This work includes piloting a CLABSI validation tool with the goal of offering voluntary validation to the extent current funding allows. It also includes investigating the possibility of being able to link NHSN data to discharge data to assist with future validation of SSI data if resources permit.
4. Develop facility feedback reports to improve data quality and provide Georgia healthcare facilities with benchmarks to gauge performance.

The remainder of this document will summarize the activities initiated at the state and those anticipated in the near future. Appendix A includes a list of acronyms used in this document.

Section 1. Enhancements to Georgia 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 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)) ii. Identify specific HAI prevention targets consistent with HHS priorities.	
	Note: no funding is currently available to host meetings or provide for travel expenses to GHAIAC members		<i>Other activities or descriptions (not required):</i> The two initial targets selected were CLABSIs and SSI. Additional HAI prevention targets are listed in Level II. The GHAIAC held its first meeting in December 2009 and since that time has met at a minimum each quarter. The GHAIAC is an engaged group, and a quorum is always present at meetings. The committee’s vision is to eliminate healthcare associated infections in Georgia.	12/2/2009 (Completed)
	☒	☐	2. Establish an HAI surveillance prevention and control program	
☒	☐	i. Designate a State HAI Prevention Coordinator; 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)		
			<i>Other activities or descriptions (not required):</i>	

Planning Level	Check Items Underway	Check Items Planned	Items Planned for Implementation (or currently underway)	Target Dates for Implementation
			State HAI Prevention Coordinator was hired and began work on March 1, 2010. The position was vacant from 3/2012-7/2012, but has been filled from 8/2012-present. ARRA and Epidemiology and Laboratory Capacity (ELC) grants fund this position. An HAI medical epidemiologist and an HAI epidemiologist are funded by EIP grants. The state HAI program collaborates with the Georgia Emerging Infections Program and benefits from the expertise of and research conducted by its staff.	3/1/2010 - ongoing
	<input type="checkbox"/>	<input type="checkbox"/>	<ol style="list-style-type: none"> 1. Integrate laboratory activities with HAI surveillance, prevention and control efforts <ol style="list-style-type: none"> i. Improve laboratory capacity to confirm emerging resistance in HAI pathogens and perform typing where appropriate (e.g., outbreak investigation support, HL7 messaging of laboratory results) 	
			<p><i>Other activities or descriptions (not required):</i> Resources are not currently available to support enhanced capacity at state-based laboratories for Multi-drug resistant organisms (MDRO) antimicrobial-susceptibility testing, HAI bacterial strain typing, environmental testing in healthcare settings, or HL7 messaging for HAI pathogens. Plans are to request assistance from CDC laboratories for such activities when needed, unless a need for services increases.</p>	
Level II	<input checked="" type="checkbox"/>	<input type="checkbox"/>	<ol style="list-style-type: none"> 2. Improve coordination among government agencies or organizations that share responsibility for assuring or overseeing HAI surveillance, prevention and control (e.g., State Survey agencies, Communicable Disease Control, state licensing boards) 	
			<p><i>Other activities or descriptions (not required):</i> GDPH and the Department of Community Health Healthcare Facility Regulation (GHFR) Division (the state survey agency and licensing board for hospitals, ambulatory surgical centers and long-term care</p>	Surveyor trainings completed 1/2012

Planning Level	Check Items Underway	Check Items Planned	Items Planned for Implementation (or currently underway)	Target Dates for Implementation
			<p>facilities) communicate frequently and work closely together in investigating outbreaks in healthcare settings. GDPH has also worked with GHFR along with representation from CDC, the QIO, and the GIPN to provide training to GHFR surveyors as well as to provide training for infection preventionists in long-term care facilities.</p>	<p>LTCF training completed 5/2012</p>
	<input type="checkbox"/>	<input checked="" type="checkbox"/>	<p>3. Facilitate use of standards-based formats (e.g., Clinical Document Architecture, electronic messages) by healthcare facilities for purposes of electronic reporting of HAI data</p> <p>4. Providing technical assistance or other incentives for implementation of standards-based reporting can help develop capacity for HAI surveillance and other types of public health surveillance, such as for conditions deemed reportable to state and local health agencies using electronic laboratory reporting (ELR). Facilitating use of standards-based solutions for external reporting also can strengthen relationships between healthcare facilities and regional nodes of healthcare information, such as Regional Health Information Organizations. (RHIOs) and Health Information Exchanges (HIEs). These relationships, in turn, can yield broader benefits for public health by consolidating electronic reporting through regional nodes.</p>	
			<p><i>Other activities or descriptions (not required):</i> As we build an NHSN users' group, when encouraging facilities to enroll in NHSN and begin reporting, the availability of newly developed electronic interfaces between multiple software vendors and NHSN will be highlighted.</p> <p>The Coordinator for the EIP MDR gram negative bacilli surveillance has successfully implemented electronic alerts into the automated testing instruments in many labs that participate in EIP surveillance. These</p>	<p>7/2013-ongoing</p> <p>We will continue to evaluate and</p>

Planning Level	Check Items Underway	Check Items Planned	Items Planned for Implementation (or currently underway)	Target Dates for Implementation
			<p>alerts notify the lab technician in real time to save specific isolates to be forwarded to the EIP. GDPH is developing capacity to receive electronic notification of many diseases which are reportable to the state directly from clinical laboratories into the State Electronic Notifiable Disease Surveillance System (SENDSS). The HAI medical epidemiologist has participated in meetings with Health Information Services on this topic. GDPH does not currently have resources to provide technical assistance or incentives for software implementation for electronic reporting of HAIs.</p>	<p>seek funding for this work.</p>

Planning Level	Check Items Underway	Check Items Planned	Items Planned for Implementation (or currently underway)	Target Dates for Implementation
			<p>Presenters included staff from the GDPH on the topics of infection prevention, outbreak protocol, and standard precautions.</p> <p>All data obtained during outbreak investigations that includes facility/provider/patient indentifying information is password protection and all handling of documents related to investigations complies with HIPAA.</p> <p>A few specific HAIs are notifiable in Georgia, and limited surveillance data restricts the ability to identify and prevent HAI transmission in healthcare settings. <i>S. aureus</i> infection with reduced susceptibility to vancomycin (VISA/VRSA) is the only MDRO that is currently notifiable, and it is rare. Acute hepatitis A, B, or C and legionellosis present other potential scenarios for HAI recognition under current notifiable disease rules. Other infections, such as Group A Streptococcal (GAS) infections (which are notifiable to the state), include questions in the SENDSS interface on healthcare exposures such as whether a case is a resident of a long-term care facility or recently had surgery or delivered a baby. This has led to the detection of multiple outbreaks. Also, clusters of disease or outbreaks are reportable to GDPH even for infections not on the reportable disease list. GDPH has detected healthcare-associated MDROs through this mechanism. GDPH has moved to enhance its surveillance data to identify and prevent outbreaks by adding select HAIs to the notifiable disease list as of January 2013.</p>	<p>2009-ongoing</p> <p>January 2013 (Completed)</p>
	<input type="checkbox"/>	<input type="checkbox"/>	2. Enhance laboratory capacity for state and local detection and response to new and emerging HAI issues	

Planning Level	Check Items Underway	Check Items Planned	Items Planned for Implementation (or currently underway)	Target Dates for Implementation
			<p><i>Other activities or descriptions (not required):</i> Resources are not currently available to support enhanced capacity at state-based laboratories for antimicrobial-susceptibility testing, strain typing, or environmental testing. Existing plans are to request assistance from CDC laboratories for such activities when needed.</p>	
Level II	☒	☐	3. Improve communication of HAI outbreaks and infection control breaches <ul style="list-style-type: none"> i. Develop standard reporting criteria including number, size and type of HAI outbreak for health departments and CDC 	
	☒	☐	<ul style="list-style-type: none"> 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) 	
			<p><i>Other activities or descriptions (not required):</i> All outbreaks in Georgia are catalogued and data is managed in the State Electronic Notifiable Disease Surveillance System (SENDSS), Outbreak Management System (OMS). This secure, web-based system is accessible to all of our District Epidemiologists and captures all outbreak data, including line lists of cases, contacts, laboratory testing results (including molecular testing), exposures, relationships and other parameters. Only public health personnel can enter data into OMS, so this system requires facilities to report outbreaks to public health. OMS requires standardized reporting criteria, and includes methods for including survey tools, questionnaires, graphics, reports, and references. With new and dedicated personnel</p>	Existing as of 12/2/2009 (Completed)

Planning Level	Check Items Underway	Check Items Planned	Items Planned for Implementation (or currently underway)	Target Dates for Implementation
			<p>resources focused on HAIs, OMS may be organized to specifically address HAI outbreak issues.</p> <p>Notification of facility-based outbreaks is routine between HFR and GDPH Epidemiology staff. Depending on the situation/outbreak, GHFR and GDPH Epidemiology conduct either independent or concurrent investigation with one agency in the lead.</p>	<p>2009-Existing (Completed)</p> <p>2009-Existing (Completed)</p>
	<input checked="" type="checkbox"/>	<input type="checkbox"/>	<p>4. Identify at least 2 priority prevention targets for surveillance in support of the HHS HAI Action Plan</p> <ul style="list-style-type: none"> i. EIP MRSA (GA Health District 3: 31 acute care and long-term acute hospitals in 8-county metro area) ii. EIP <i>C. difficile</i> (GA Health District 3: 31 acute care and long-term acute hospitals in 8-county metro area) iii. CLABSI (acute care hospitals: adult, pediatric, and neonatal ICUs) iv. SSIs: colon surgery and abdominal hysterectomy (acute care hospitals) v. Intravenous antimicrobial start (dialysis facilities) vi. Positive blood culture (dialysis facilities) vii. Signs of vascular access infection (dialysis facilities) viii. CLABSI (long-term acute hospitals) ix. CAUTI (long-term acute hospitals) x. CAUTI (inpatient rehabilitation facilities) xi. MRSA Bacteremia (acute care hospitals) xii. CDI Lab ID event (acute care hospitals) xiii. Healthcare Worker Influenza Vaccination (acute care hospitals) xiv. Healthcare Worker Influenza Vaccination (ambulatory 	<p>2007</p> <p>2009</p> <p>January 2013</p> <p>October 2014</p>

Planning Level	Check Items Underway	Check Items Planned	Items Planned for Implementation (or currently underway)	Target Dates for Implementation
			<p>QIO to offer a series of trainings on NHSN to prepare for CMS reporting.</p> <p>With the start of reporting of HAI data to GDPH in January 2013, the HAI coordinator will take a lead role in ensuring that all facilities are appropriately enrolled, complete data is submitted, and conducting or coordinating training for NHSN data collection, protocol, and analyses. The HAI coordinator has performed webinar training on CDI reporting through the QIO, and the medical epidemiologist and HAI coordinator have provided training on healthcare worker influenza vaccine reporting through GHA.</p>	8/2012-ongoing
	<input type="checkbox"/>	<input checked="" type="checkbox"/>	7. Develop tailored reports of data analyses for state or region prepared by state personnel	
			<p><i>Other activities or descriptions (not required):</i></p> <p>Starting in 2013, the HAI Epidemiologist will be responsible for designing reports analyzing state HAI data that will assist facilities in assessing their performance and progress for self-improvement. The reports will include comparison of facility-specific performance versus a state and national benchmark. The HAI Epidemiologist may also provide technical assistance to our prevention partners, the GHA and GMCF, to assess the impact of their prevention programs as requested.</p>	2013-ongoing
Level III	<input type="checkbox"/> <input type="checkbox"/> <input type="checkbox"/>	<input checked="" type="checkbox"/> <input checked="" type="checkbox"/> <input checked="" type="checkbox"/>	<p>8. Validate data entered into HAI surveillance (e.g., through healthcare records review, parallel database comparison) to measure accuracy and reliability of HAI data collection</p> <ul style="list-style-type: none"> i. Develop a validation plan ii. Pilot test validation methods in a sample of healthcare facilities iii. Modify validation plan and methods in accordance 	

Planning Level	Check Items Underway	Check Items Planned	Items Planned for Implementation (or currently underway)	Target Dates for Implementation
	<input type="checkbox"/>	<input checked="" type="checkbox"/>	<p>with findings from pilot project</p> <p>iv. Implement validation plan and methods in all healthcare facilities participating in HAI surveillance</p> <p>v. Analyze and report validation findings</p> <p>vi. Use validation findings to provide operational guidance for healthcare facilities that targets any data shortcomings detected</p>	2012-ongoing
	<input type="checkbox"/>	<input checked="" type="checkbox"/>	<p><i>Other activities or descriptions (not required):</i></p> <p>GDPH will assist Georgia facilities to improve their data quality by training facilities to use self-validation tools. In 2012, GDPH piloted an external CLABSI validation tool, and in 2013, GDPH initiated a limited 2012 CLABSI validation study in 10 hospitals. The possibility of linking NHSN data to discharge data is also being explored to assist with future validation of SSI data if resources permit. As GDPH moves forward, we hope to obtain more resources for validation.</p>	
	<input type="checkbox"/>	<input type="checkbox"/>	<p>9. Develop preparedness plans for improved response to HAI</p> <p>i. Define processes and tiered response criteria to handle increased reports of serious infection control breaches (e.g., syringe reuse), suspect cases/clusters, and outbreaks</p>	
			<p><i>Other activities or descriptions (not required):</i></p> <p>Closer collaboration between GDPH Acute Disease Epidemiology Section staff and GHFR Division Staff may make this feasible given additional resources. However, this is not an immediate priority given current staffing levels. Serious infection control breaches reported to public health, such as syringe reuse, are already reported to regulatory agencies.</p>	
	<input type="checkbox"/>	<input type="checkbox"/>	<p>10. Collaborate with professional licensing organizations to identify and investigate complaints related to provider</p>	

Planning Level	Check Items Underway	Check Items Planned	Items Planned for Implementation (or currently underway)	Target Dates for Implementation
			<p>surveillance data to detect HAI outbreaks. GDPH has developed a system to track invasive GAS infections associated with long-term care facilities as well as post-partum and post-surgical cases. Facilities are notified of any case with a formal letter and guidelines are provided. Any additional cases in a 3 month period will trigger an epidemiological investigation.</p> <p>Promoting use of NHSN and NHSN definitions will improve definitional alignment and data element standardization needed to link HAI data across the nation.</p>	<p>2012-ongoing</p> <p>2010-ongoing</p>
	<input checked="" type="checkbox"/>	<input type="checkbox"/>	<p>12. Enhance electronic reporting and information technology for healthcare facilities to reduce reporting burden and increase timeliness, efficiency, comprehensiveness, and reliability of the data.</p> <p>i. Report HAI data to the public</p>	
	Neither resources nor technical support to facilitate electronic reporting from healthcare facilities to NHSN is available in Georgia.		<p><i>Other activities or descriptions (not required):</i> GDPH does not currently have funding to provide technical support for electronic reporting of data. GDPH designated that the HAIs notifiable to the state would be in conjunction with CMS requirements to minimize the reporting burden on infection preventionists (IPs). NHSN trainings provided to IPs will help to ensure the timeliness, efficiency, comprehensiveness, and reliability of the HAI data reported to NHSN.</p>	8/2012-ongoing
	<input checked="" type="checkbox"/>	<input type="checkbox"/>	13. Make available risk-adjusted HAI data that enables state agencies to make comparisons between hospitals.	
			<p><i>Other activities or descriptions (not required):</i> NHSN reporting will allow risk adjustment of HAI data and comparison of SIRs. These data will be analyzed and used to identify facilities that need to be targeted for improvement</p>	7/2013

Planning Level	Check Items Underway	Check Items Planned	Items Planned for Implementation (or currently underway)	Target Dates for Implementation
			efforts. As there is no mandate, the state will not release data for public comparison between hospitals.	
	<input checked="" type="checkbox"/>	<input type="checkbox"/>	14. Enhance surveillance and detection of HAIs in nonhospital settings	
			<p><i>Other activities or descriptions (not required):</i> As of January 1, 2013, HAI which are required to be reported to CMS will also be required to be reported to GDPH in accordance with NHSN rules and according to the CMS required reporting schedule. Thus, dialysis centers, long-term acute care hospitals, and inpatient rehabilitation facilities will be required to report to GDPH. We will also evaluate partnering with the End Stage Renal Disease Network, Region 6, to enhance reporting for dialysis centers in Georgia.</p>	1/2013

Section 3. Georgia Planning for HAI Prevention Activities

Planning Level	Check Items Underway	Check Items Planned	Items Planned for Implementation (or currently underway)	Target Dates for Implementation
Level I	<input checked="" type="checkbox"/>	<input type="checkbox"/>	1. Implement HICPAC recommendations. i. Develop strategies for implementation of HICPAC recommendations for at least 2 prevention targets specified by the state multidisciplinary group.	
			<i>Other activities or descriptions (not required):</i> As noted in the Introduction to the State Plan, the state has engaged in a number of prevention projects that have referred to HICPAC guidelines. The CUSP-CLABSI, CUSP-CAUTI, and SSI collaboratives have implemented HICPAC guidelines for these infection targets. The long-term care and surveyor trainings presented principles provided in HICPAC guidelines for disinfection and sterilization, isolation precautions, environmental infection control, and hand hygiene.	12/2/2009 (Completed)
	<input checked="" type="checkbox"/>	<input type="checkbox"/>	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	
			<i>Other activities or descriptions (not required):</i> We have identified Denise Flook of the GHA as the leader of this working group. She has successfully coordinated the prevention activities for CUSP-CLABSI, CUSP-CAUTI, NICU Affinity Group, and HEN. Ms. Flook works with the QIO and GDPH to collaborate and align projects and resources.	12/2/2009 (Completed)
			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)	2009-ongoing

Planning Level	Check Items Underway	Check Items Planned	Items Planned for Implementation (or currently underway)	Target Dates for Implementation
	<input checked="" type="checkbox"/> <input checked="" type="checkbox"/> <input checked="" type="checkbox"/>	<input type="checkbox"/> <input type="checkbox"/> <input type="checkbox"/>	<ul style="list-style-type: none"> 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 clear and standardized outcome data to track progress 	
			<p><i>Other activities or descriptions (not required):</i> As noted in the introduction, six HAI prevention collaboratives have been conducted or initiated in the state since 2009; these collaborative have been lead by the GHA and GMCF, which have appropriately trained staff, integrated communication to support peer-to-peer learning, and feedback of process and outcome data. As we identify more needs in the state, we will work with our partners to provide programs if funding allows.</p>	2009-ongoing
	<input type="checkbox"/>	<input checked="" type="checkbox"/>	<p>4. Develop state HAI prevention training competencies</p> <ul style="list-style-type: none"> i. Consider establishing requirements for education and training of healthcare professionals in HAI prevention (e.g., certification requirements, public education campaigns and targeted provider education) or work with healthcare partners to establish best practices for training and certification 	
			<p><i>Other activities or descriptions (not required):</i> This is a valuable idea that deserves consideration if time and resources are available.</p>	
Level II	<input type="checkbox"/>	<input type="checkbox"/>	<p>5. Implement strategies for compliance to promote adherence to HICPAC recommendations</p> <ul style="list-style-type: none"> i. Consider developing statutory or regulatory standards for healthcare infection control and prevention or work with healthcare partners to 	

Planning Level	Check Items Underway	Check Items Planned	Items Planned for Implementation (or currently underway)	Target Dates for Implementation
	<input type="checkbox"/> <input type="checkbox"/> <input type="checkbox"/>	<input type="checkbox"/> <input type="checkbox"/> <input type="checkbox"/>	<p>establish best practices to ensure adherence</p> <p>ii. Coordinate/liaise with regulation and oversight activities such as inpatient or outpatient facility licensing/accrediting bodies and professional licensing organizations to prevent HAIs</p> <p>iii. Improve regulatory oversight of hospitals, enhancing surveyor training and tools, and adding sources and uses of infection control data</p> <p>iv. Consider expanding regulation and oversight activities to currently unregulated settings where healthcare is delivered or work with healthcare partners to establish best practices to ensure adherence</p>	
			<p><i>Other activities or descriptions (not required):</i> DPH communicates and works with GHFR during healthcare-associated outbreaks to best coordinate efforts. As described above, GDPH and GHFR have worked together to provide HAI training to state surveyors as well as infection prevention staff in long-term care facilities. Significant resources would be needed to add capacity for surveyors in the GHFR, Survey/Certification Unit, as this unit is currently understaffed.</p>	
	<input checked="" type="checkbox"/>	<input type="checkbox"/>	<p>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)</p>	
			<p><i>Other activities or descriptions (not required):</i> As noted previously, six HAI prevention collaboratives have been conducted or initiated in the state since 2009. Of these programs, four have had over 20 participating hospitals each. Of the</p>	2009-ongoing

Planning Level	Check Items Underway	Check Items Planned	Items Planned for Implementation (or currently underway)	Target Dates for Implementation
			<p>remaining programs: one was targeted at NICU facilities, and 16 of the 25 state NICUs joined this collaborative; a second activity was targeted to include a community of providers to address <i>Clostridium difficile</i> and included a cluster of 4 hospitals and 13 long-term care communities. Thus, the state has been successful in attracting a large percentage of participation in prevention collaborative, and we will seek to identify additional strategic opportunities to further reduce HAIs through collaboratives.</p>	
	<input checked="" type="checkbox"/>	<input type="checkbox"/>	<p>7. Establish collaborative to prevent HAIs in nonhospital settings (e.g., long-term care, dialysis)</p>	
			<p><i>Other activities or descriptions (not required):</i> In 2009, GMCF led a CDI prevention collaborative that included three acute care facilities, one long-term acute care facility, and thirteen long-term care facilities. GDPH is interested in conducting more collaboratives outside acute care, and we will move forward with this interest if funding allows.</p>	<p>2009 (QIO CDI initiative completed in 9th SOW)</p>

Section 4. Evaluation and Communications

Planning Level	Check Items Underway	Check Items Planned	Items Planned for Implementation (or currently underway)	Target Dates for Implementation
Level I	<input type="checkbox"/>	<input checked="" type="checkbox"/>	1. Conduct needs assessment and/or evaluation of the state HAI program to learn how to increase impact <ul style="list-style-type: none"> i. Establish evaluation activity to measure progress towards targets and ii. Establish systems for refining approaches based on data gathered 	
	<input type="checkbox"/>	<input checked="" type="checkbox"/>		
			<i>Other activities or descriptions (not required):</i> GDPH will communicate state targets for HAI reduction and evaluate progress toward those goals. In addition, GDPH will collaborative with partners, such as APIC, GIPN, GHA, and ESRD to assess needs in the state. A recent example of needs assessment is an evaluation of long-term care training conducted in 2010 and 2011, which provided a report detailing gaps in education and recommendations for future trainings.	10/2012-ongoing
	<input checked="" type="checkbox"/>	<input checked="" type="checkbox"/>	2. Develop and implement a communication plan about the state’s HAI program and progress to meet public and private stakeholders needs. <ul style="list-style-type: none"> i. Disseminate state priorities for HAI prevention to healthcare organizations, professional provider organizations, governmental agencies, non-profit public health organizations, and the public 	2010-ongoing 2010-ongoing
			<i>Other activities or descriptions (not required):</i> Currently, the GDPH’s Communications Director is a member of the GHAIAC. GDPH staff will work with the DPH Office of Communications to develop an appropriate communications strategy.	
Level II	<input type="checkbox"/>	<input checked="" type="checkbox"/>	3. Provide consumers access to useful healthcare quality	

			measures	
			<i>Other activities or descriptions (not required):</i> State-level data can be provided on the GDPH website. SIRs are available to the public for eligible facilities and conditions on the CMS Hospital Compare website at hospitalcompare.org. As there is no public reporting mandate in Georgia, facility-level HAI data will not be publicly shared.	2013-ongoing
Level III	<input checked="" type="checkbox"/>	<input type="checkbox"/>	4. Identify priorities and provide input to partners to help guide patient safety initiatives and research aimed at reducing HAIs	
			<i>Other activities or descriptions (not required):</i> As described above, GDPH is partnered with the EIP HAI program at Emory University. Monthly meetings are held with one meeting per quarter focused exclusively on HAIs at which GDPH participates.	2009-ongoing
Please also describe any additional activities, not listed above, that your state plans to undertake. Please include target dates for any new activities.				

APPENDIX A

List of Acronyms Used

ABC	Active Bacterial Core
ACA	Affordable Care Act
ARRA	American Recovery and Reinvestment Act of 2009
CAUTI	Catheter associated urinary tract infections
CDC	Centers for Disease Control and Prevention
CDI	<i>Clostridium difficile</i> Infection
CLABSI	Central-line associated bloodstream infections
CMS	Centers for Medicare and Medicaid
CUSP	Comprehensive United-Based Safety Program
EIP	Emerging Infections Program
ELC	Epidemiology and Laboratory Capacity for Infectious Diseases
GDPH	Georgia Department of Public Health
GHA	Georgia Hospital Association
GHAIAC	Georgia Healthcare Associated Infection Advisory Committee
GHFR	Georgia Department of Community Health, Division of Healthcare Facility Regulation
GIPN	Georgia Infection Prevention Network
GMCF	Georgia Medical Care Foundation
HAI	Healthcare Associated Infections
HEN	Health Engagement Network
HRET	Health Research Education and Trust
IP	Infection Preventionist
LTACH	Long-Term Acute Care Hospital
MDRO	Multi-drug resistant organism
MRSA	Methicillin-resistant <i>Staphylococcus aureus</i>
NHSN	National Healthcare Safety Network
NICU	Neonatal intensive care unit
QIO	Quality Improvement Organization
SENDSS/OMS	State Electronic Notifiable Disease Surveillance System, Outbreak Management System
SSI	Surgical Site Infections
VISA/VRSA	Vancomycin Intermediate/Resistant <i>Staphylococcus aureus</i>