

Georgia Healthcare Associated Infections (HAI) Prevention Plan

Georgia Department of Public Health, Acute Disease Epidemiology Unit

Updated October 2015

Introduction

Healthcare associated infections (HAIs) are infections that people contract while receiving treatment for medical and surgical conditions. HAIs are acquired in a variety of healthcare settings such as hospitals, outpatient settings, community based settings, and long term care facilities. Hospitals have been the focus for the reduction of HAIs, but since people move frequently between different healthcare settings a comprehensive and collaborative approach to reduce HAIs across the continuum of care is warranted.

The Centers Disease Control and Prevention HAI prevalence study estimated that approximately 1 in 25 hospital patients have at least one healthcare-associated infection. There were an estimated 722,000 HAIs in U.S. acute care hospitals in 2011. About 75,000 hospital patients with HAIs died during hospitalization. More than half of all HAIs occurred outside of the intensive care units. Data gathered from National Healthcare Safety Network (NHSN) demonstrates states progress in reducing HAI.

Magill SS, Edwards JR, Bamberg W, et al. [Multistate Point-Prevalence Survey of Health Care-Associated Infections](#). *N Engl J Med* 2014;370:1198-208.

Current Status of HAIs in Georgia

As of January 2013, select HAIs became reportable to the Georgia Department of Public Health (DPH) via its notifiable disease list. These select HAIs were reported through the National Health and Safety Network (NHSN) and reporting requirements aligned with the Centers for Medicare and Medicaid (CMS) Inpatient Quality Report requirements.

Table 1 present baseline data for Georgia hospitals for 2013 reported using NHSN. It includes HAI data for seven HAIs, including Central-line associated bloodstream infections (CLABSIs) in adult and pediatric ICUs (AP ICU) and neonatal ICUs (NICU), catheter-associated urinary infections (CAUTI) in AP ICUs, surgical site infections (SSIs) for colon and abdominal hysterectomy surgeries, Laboratory-identified (LAB ID) methicillin-resistant *Staphylococcus aureus* (MRSA) and *Clostridium difficile* infection (CDI). In alignment with the CDC's NHSN, we report using the Standardized Infection Ratio (SIR), a risk-adjusted metric to report HAIs, and we also calculated the number of infections needed to prevent to reach 2013 HHS reduction targets.

**Table 1:
Comparison of Select Healthcare Associated Infections**

Georgia Hospitals, 2013 (Baseline)							
	CLABSI AP ICU	CLABSI NICU	CAUTI AP ICU	SSI Colon	SSI Hysterectomy	MRSA	CDI
State SIR	0.68	0.84	1.40	0.89	1.00	1.05	0.82
HHS Target SIR	0.50	0.50	0.75	0.75	0.75	0.75	0.70
Total Infections	372	81	967	261	113	333	2530
Number of Infections to Prevent to Reach HHS Goal	97	33	447	42	28	95	372
Facility Count	94	29	94	99	98	108	108
Device Days	285,538	37,961	356,603				
Procedures Performed				8,917	11,692		
Patient Days						4,579,602	4,167,557
Georgia Hospitals, 2014							
	CLABSI AP ICU	CLABSI NICU	CAUTI AP ICU	SSI Colon	SSI Hysterectomy	MRSA	CDI
State SIR	0.53	0.73	1.32	0.82	0.90	1.05	0.92
HHS Target SIR	0.50	0.50	0.75	0.75	0.75	0.75	0.70
Total Infections	278	71	872	234	99	324	2772
Number of Infections to Prevent to Reach HHS Goal	14	22	375	21	16	92	661
Facility Count	94	29	94	97	97	107	108
Device Days	275,785	38,305	341,529				
Procedures Performed				8,717	11,428		
Patient Days						4,598,268	4,180,389
Comparison of 2013 vs. 2014							
	CLABSI AP ICU	CLABSI NICU	CAUTI AP ICU	SSI Colon	SSI Hysterectomy	MRSA	CDI
SIR Difference	-15%	-11%	-8%	-7%	-10%	0%	10%
Infection Count Change	-94	-10	-95	-27	-14	-9	+242
Significance							
Source: National Healthcare Safety Network, data retrieved 8/28/2015.							

Table 1 indicates that Georgia has achieved some reductions in HAIs, but work still remains to be done, particularly with CAUTI and CDI.

Georgia Emerging Infections Program - HAIs Surveillance

The Georgia Emerging Infections Program (GAEIP) conducts population-based laboratory surveillance for several pathogens that commonly cause HAIs. GAEIP surveillance for HAIs is currently conducted in Georgia Health District 3 (HD3) which is comprised of Clayton, Cobb, DeKalb, Douglas, Fulton, Gwinnett, Newton, and Rockdale counties. The surveillance projects that are currently active include: invasive methicillin-resistant *Staphylococcus aureus* (iMRSA), *Candida sp.* bloodstream infections (Candidemia), *Clostridium difficile* infections (CDI), and multi-drug resistant gram negative rod surveillance initiative (MuGSI).

iMRSA - defined as culture-confirmed isolation from a normally sterile site (blood, bone, joint, cerebrospinal fluid, etc.) taken from a resident of Georgia HD3 30 or more days after any previous invasive culture-confirmed isolation. Surveillance has been ongoing since 2005. Incidence has decreased from 33.7/100,000 in 2006 to 22.6/100,000 in 2014.

Candidemia – defined as culture-confirmed isolation from blood from a resident of Georgia HD3 30 or more days after any previous candidemia blood culture. Surveillance has been ongoing since 2008. Incidence has decreased from 14.2/100,000 in 2008 to 8.7/100,000 in 2014.

CDI – an index case is defined as a positive *C. difficile* toxin or molecular assay on a stool specimen taken from a resident of Georgia HD3 ≥ 1 year-old occurring > 8 weeks after any prior index case. Surveillance has been ongoing since 2010. Incidence has increased from 85/100,000 in 2010 to 112/100,000 in 2014.

MuGSI – defined as the first isolation of *A. baumannii* or a cephalosporin-resistant Enterobacteriaceae (*Escherichia coli*, *Klebsiella pneumoniae*, *Klebsiella oxytoca*, *Enterobacter cloacae*, *Enterobacter aerogenes*) that are also nonsusceptible to doripenem, imipenem or meropenem and obtained from a normally sterile site or urine taken from a resident of Georgia HD3 30 or more days after any previous incident case. Surveillance has been ongoing since 2011. Overall incidence has increased from 3.8/100,000 in 2011 to 6.0/100,000 in 2014.

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"/>	ii. Develop dedicated, trained HAI staff with at least one FTE (or contracted equivalent) to oversee HAI activities areas (Integration, Collaboration, and Capacity Building; Reporting, Detection, Response, and Surveillance; Prevention; Evaluation, Oversight, Communication, and Infection Control)	March 2010
		<i>Other activities or descriptions:</i> A State HAI Prevention Coordinator has been in place since March 2010. As of July 2015, the position has turned over once. The PPHF EIP grant funds one part-time HAI epidemiologists and with the 3-year Ebola supplemental funding (starting 4/1/2015), we plan to hire additional infection prevention and epidemiologist staff.	
<input type="checkbox"/>	<input checked="" type="checkbox"/>	3. Integrate laboratory activities with HAI surveillance, prevention, and control efforts. i. Improve laboratory capacity to confirm emerging resistance in HAI pathogens and perform typing where appropriate (e.g., outbreak investigation support, HL7 messaging of laboratory results)	
		<i>Other activities or descriptions:</i> Use existing state LRN sentinel laboratory network resources to determine current statewide laboratory capacity for detecting emerging resistance (This may be addressed in another section but how do we improve capacity without knowing what current capacity is?). Implementation of enhanced laboratory capacity is dependent upon additional funding to support this activity.	
<input checked="" type="checkbox"/>	<input checked="" type="checkbox"/>	4. Improve coordination among government agencies or organizations that share responsibility for assuring or overseeing HAI surveillance, prevention, and control (e.g., State Survey agencies, Communicable Disease Control, state licensing boards)	December 2009
		<i>Other activities or descriptions:</i> When outbreaks occur, particularly in long-term care settings, DPH informs the Department of Community Health, Healthcare Facility Regulation (HCFR) Division (the state survey agency and licensing board for hospitals, ambulatory surgical centers, and long-term care facilities). We plan to improve communication between HCFR and DPH regarding outbreaks and audit results, to include HCFR representation on the GHAIAC, and include HCFR staff in infection prevention assessments and trainings (see Sections 5.2, 6.1 and 6.2).	
<input type="checkbox"/>	<input checked="" type="checkbox"/>	5. Facilitate use of standards-based formats (e.g., Clinical Document Architecture, electronic messages) by healthcare facilities for purposes of electronic reporting of HAI data. Providing	2017 - 2018

Check Items Underway	Check Items Planned	Items Planned for Implementation (or currently underway)	Target Dates for Implementation
		<p>technical assistance or other incentives for implementations of standards-based reporting can help develop capacity for HAI surveillance and other types of public health surveillance, such as for conditions deemed reportable to state and local health agencies using electronic laboratory reporting (ELR). Facilitating use of standards-based solutions for external reporting also can strengthen relationships between healthcare facilities and regional nodes of healthcare information, such as Regional Health Information Organizations. (RHIOs) and Health Information Exchanges (HIEs). These relationships, in turn, can yield broader benefits for public health by consolidating electronic reporting through regional nodes.</p>	
		<p><i>Other activities or descriptions: Work toward developing condition specific registry within Georgia's existing integrated surveillance systems to enable reporting and analysis of data to support timely intervention and response. Registry would enable direct entry as well assimilate standards based electronic reports.</i></p>	

SECTION 2: SURVEILLANCE, DETECTION, REPORTING, AND RESPONSE

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 checked="" type="checkbox"/>	<input type="checkbox"/> <input type="checkbox"/> <input type="checkbox"/> <input type="checkbox"/>	<p>1. Improve HAI outbreak detection and investigation</p> <ul style="list-style-type: none"> i. Work with partners including CSTE, CDC, state legislatures, and providers across the healthcare continuum to improve outbreak reporting to state health departments ii. Establish protocols and provide training for health department staff to investigate outbreaks, clusters, or unusual cases of HAIs. iii. Develop mechanisms to protect facility/provider/patient identity when investigating incidents and potential outbreaks during the initial evaluation phase, where possible, to promote reporting of outbreaks iv. Improve overall use of surveillance data to identify and prevent HAI outbreaks or transmission in HC settings (e.g., hepatitis B, hepatitis C, multi-drug resistant organisms (MDRO), and other reportable HAIs) 	<p>October 2015</p> <p>April 2016</p> <p>December 2009</p> <p>September 2016</p>
		<p><i>Other activities or descriptions: DPH plans to enhance outbreak reporting and detection by conducting a survey of outbreak reporting in the state and analyzing our current HAI outbreak reporting data from our Outbreak Management System (OMS). Data from these activities will be used to prioritize the development of standard operating procedures for outbreak response and training standards for state and local health departments (See Sections 5.4 and 6.3).</i></p> <p><i>All data obtained during outbreak investigations that include facility/provider/patient identifying information is password protected and all handling of documents related to investigations complies with HIPAA.</i></p> <p><i>As of January 2013, select HAIs have been added to the notifiable disease list, using the National Healthcare Safety Network (NHSN). The reportable HAIs align with CMS Inpatient Quality Reporting requirements. These HAI data have been evaluated for outbreak detection, but this evaluation has not been effective. Our State Electronic Notifiable Disease Surveillance System (SENDSS) includes select pathogens, which can present in healthcare setting: S. aureus infection with reduced susceptibility to vancomycin (VISA/VRSA), acute hepatitis A, B, or C, legionellosis and Group A Streptococcal (GAS) infections. The SENDSS case report form for GAS infections include questions on healthcare exposures, which has led to the detection of several outbreaks in long-</i></p>	

Check Items Underway	Check Items Planned	Items Planned for Implementation (or currently underway)	Target Dates for Implementation
		term care settings. Also, clusters of disease or outbreaks are reportable to DPH even for infections not on the reportable disease list.	
<input type="checkbox"/>	<input type="checkbox"/>	2. Enhance laboratory capacity for state and local detection and response to new and emerging HAI issues.	
		<p><i>Other activities or descriptions:</i> <i>Enhance communication and educational efforts with hospital laboratories statewide to address emerging HAI issues.</i> <i>Enhancing laboratory capacity at the state level is dependent upon additional funding to support this activity.</i></p>	
<input type="checkbox"/> <input type="checkbox"/>	<input checked="" type="checkbox"/> <input checked="" type="checkbox"/>	<p>3. Improve communication of HAI outbreaks and infection control breaches</p> <ul style="list-style-type: none"> i. Develop standard reporting criteria including, number, size, and type of HAI outbreak for health departments and CDC ii. Establish mechanisms or protocols for exchanging information about outbreaks or breaches among state and local governmental partners (e.g., State Survey agencies, Communicable Disease Control, state licensing boards) 	April 2016
		<p><i>Other activities or descriptions: All reported outbreaks in Georgia are catalogued in the SENDSS Outbreak Management System (OMS). This secure, web-based system can be accessed by state and local health departments and includes line lists of cases, contacts, exposures, relationships, laboratory test results (including molecular testing) and other parameters. It also supports the creation and inclusion of surveys. Only public health staff can enter data into OMS, so facilities are required to report outbreaks to DPH and/or local health departments.</i></p> <p><i>DPH is currently analyzing its outbreak data in its OMS system and plans to conduct a survey of HAI outbreak reporting in the state to identify gaps and develop prioritized, standardized operating procedures to report HAI outbreaks and outbreak response plans (see Sections 2.1, 5.4, and 6.2).</i></p>	
<input checked="" type="checkbox"/> <input checked="" type="checkbox"/> <input checked="" type="checkbox"/> <input checked="" type="checkbox"/>	<input type="checkbox"/> <input type="checkbox"/> <input 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. Central Line-associated Bloodstream Infections (CLABSI) ii. <i>Clostridium difficile</i> Infections (CDI) iii. Catheter-associated Urinary Tract Infections (CAUTI) iv. Methicillin-resistant Staphylococcus aureus (MRSA) Infections 	March 2014

Check Items Underway	Check Items Planned	Items Planned for Implementation (or currently underway)	Target Dates for Implementation
<input checked="" type="checkbox"/> <input type="checkbox"/>	<input type="checkbox"/> <input type="checkbox"/>	v. Surgical Site Infections (SSI) vi. Ventilator-associated Pneumonia (VAP)	
		<p><i>Other activities or descriptions:</i> <i>Priority targets by settings are as follows:</i></p> <p><u>Hospitals:</u> <i>CAUTI (Using NHSN and EIP data)</i> <i>CDI (Using NHSN and EIP data)</i></p> <p><u>Dialysis Centers:</u> <i>Positive blood cultures (using NHSN data)</i></p> <p><i>Data collected using NHSN will continue to be monitored to identify priorities for the state (see Table 1). Additional data include that from our EIP: MRSA and CDI (GA Health District 3 [31 acute care and long-term acute care facilities in 8-county metro area]). The NHSN HAI data include: CLABSI, (acute, long-term acute care, inpatient rehabilitation); surgical site infections following colon and abdominal hysterectomy (acute hospitals); and healthcare worker influenza vaccination (acute care hospitals, ambulatory surgical centers). Additionally, the state has access to dialysis NHSN data, which includes positive blood cultures, I.V. antimicrobial start, and signs of vascular access infection.</i></p>	
<input checked="" type="checkbox"/> <input checked="" type="checkbox"/>	<input type="checkbox"/> <input type="checkbox"/>	5. Adopt national standards for data and technology to track HAIs (e.g., NHSN). <ol style="list-style-type: none"> i. Develop metrics to measure progress towards national goals (align with targeted state goals). (See Appendix 1). ii. Establish baseline measurements for prevention targets 	January 2013
		<p><i>Other activities or descriptions: DPH and the Georgia EIP use standard NHSN and CDC-developed EIP population-based surveillance definitions for healthcare associated infections. Baseline measurements for NHSN prevention targets were set using 2013 data (Table 1), and EIP baselines were set based upon the surveillance start date for each HAI pathogen.</i></p>	March 2015
<input type="checkbox"/>	<input type="checkbox"/>	6. Develop state surveillance training competencies <ol style="list-style-type: none"> i. Conduct local training for appropriate use of surveillance systems (e.g., NHSN) including facility and group enrollment, data collection, management, and analysis 	

Check Items Underway	Check Items Planned	Items Planned for Implementation (or currently underway)	Target Dates for Implementation
		<p><i>Other activities or descriptions:</i> Currently, the CDC provides a web site with a variety of materials to support NHSN reporting, including detailed protocol, on-line training applications, and monthly newsletters. CDC also provides an annual, recorded NHSN training. Given these resources, state-based NHSN training has not been identified as a state priority at this time.</p>	
<input checked="" type="checkbox"/>	<input type="checkbox"/>	7. Develop tailored reports of data analyses for state or region prepared by state personnel	
		<p><i>Other activities or descriptions:</i> <i>Georgia EIP provides annual reports for hospitals in its catchment area; these reports include comparative statistics and graphs. DPH is issuing hospital-based TAP reports as of 10/2015; these reports include comparative state and national benchmarks for HAI and facility-specific improvement targets. As noted in Section 6.3, DPH will explore providing TAP reports and/or creation of HAI heat maps for distribution to district health departments.</i></p>	EIP – Ongoing NHSN - October 2015
<input type="checkbox"/> <input type="checkbox"/> <input type="checkbox"/> <input type="checkbox"/> <input type="checkbox"/> <input type="checkbox"/> <input type="checkbox"/>	<input checked="" type="checkbox"/> <input checked="" type="checkbox"/> <input checked="" type="checkbox"/> <input checked="" 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 with findings from pilot project iv. Implement validation plan and methods in all healthcare facilities participating in HAI surveillance v. Analyze and report validation findings vi. Use validation findings to provide operational guidance for healthcare facilities that targets any data shortcomings detected 	
		<p><i>Other activities or descriptions:</i> <i>In 2013, DPH conducted a CLABSI validation of 10 voluntary hospital participants. DPH and participants found the experience valuable. It was also noted that validation is resource intensive. In the future, validation will be conducted as resources allow, and if validation is conducted, it will follow CDC developed protocol.</i></p>	
<input checked="" type="checkbox"/>	<input type="checkbox"/>	<p>9. Develop preparedness plans for improved response to HAI</p> <ul style="list-style-type: none"> 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 	March 2015

Check Items Underway	Check Items Planned	Items Planned for Implementation (or currently underway)	Target Dates for Implementation
		<i>Other activities or descriptions: The Hospital Preparedness Program (HPP) has developed a tiered approach to address Ebola infections and other high-risk infectious diseases, such as Middle East Respiratory Syndrome and Avian Influenza. The program includes designation of Ebola Treatment and Assessment Hospitals, coordination of Emergency Management and Laboratory Services, and Communication and Response Protocol that apply to frontline hospitals and all healthcare providers in the state. The Emergency Response team is developing standard operating procedures for all ports of entry in the state, and DPH will be developing standard operating outbreak response procedures as noted in Section 6.3.</i>	
<input type="checkbox"/>	<input checked="" type="checkbox"/>	10. Collaborate with professional licensing organizations to identify and investigate complaints related to provider infection control practice in non-hospital settings and set standards for continuing education and training.	March 2016
		<i>Other activities or descriptions: As noted in Sections 1.4 and 5.2, we plan to enhance our relationship with HCFR; this will include improved communication protocols between DPH and HCFR on outbreaks and collaboration on outbreak investigation. We also plan to collaborate with HCFR on developing and implementing infection prevention and outbreak investigation trainings and will include HCFR staff to lead and attend trainings as well.</i>	
<input type="checkbox"/> <input type="checkbox"/>	<input checked="" type="checkbox"/> <input type="checkbox"/>	11. Adopt integration and interoperability standards for HAI information systems and data sources i. Improve overall use of surveillance data to identify and prevent HAI outbreaks or transmission in HC settings (e.g., hepatitis B, hepatitis C, multi-drug resistant organisms (MDRO), and other reportable HAIs) across the spectrum of inpatient and outpatient healthcare settings ii. Promote definitional alignment and data element standardization needed to link HAI data across the nation.	October 2016
		<i>Other activities or descriptions: We plan to develop geographical heat maps using our NHSN and EIP HAI data to illustrate the distribution of HAIs on the state. These maps will be available to state and local health departments to direct prevention efforts. In 2016, EIP will use standardized provider codes across surveillance programs for interoperability and tracking transmission paths in HC settings that can be used to identify targets for prevention.</i>	

Check Items Underway	Check Items Planned	Items Planned for Implementation (or currently underway)	Target Dates for Implementation
<input type="checkbox"/>	<input checked="" type="checkbox"/>	12. Enhance electronic reporting and information technology for healthcare facilities to reduce reporting burden and increase timeliness, efficiency, comprehensiveness, and reliability of the data i. Report HAI data to the public	October 2015
		<i>Other activities or descriptions:</i> <i>We are planning to issue a report of Georgia HAI data to be posted on our website in the fall of 2015. Under Georgia law (O.C.G.A Sections 32-2-12 and 31-5-5), data submitted to DPH through NHSN remain confidential. Therefore, the state report will not include facility HAI rate and will include state summary level data.</i>	
<input checked="" type="checkbox"/>	<input type="checkbox"/>	13. Make available risk-adjusted HAI data that enable state agencies to make comparisons between hospitals.	October 2015
		<i>Other activities or descriptions: The TAP reports discussed in Section 2.7 include risk adjusted HAI data using the Standardized Infection Ratio (SIR). Facility SIR rates are ranked and analyzed by DPH staff.</i>	
<input checked="" type="checkbox"/>	<input type="checkbox"/>	14. Enhance surveillance and detection of HAIs in nonhospital settings	
		<i>Other activities or descriptions: Current DPH HAI NHSN surveillance includes dialysis centers. We plan to improve our analysis of these data in 2016 and to develop data quality and TAP reports for dialysis facilities. EIP HAI population-based HAI surveillance is based on laboratory data and includes HAIs in nonhospital settings.</i>	July 2014

SECTION 3: PREVENTION

Check Items Underway	Check Items Planned	Items Planned for Implementation (or currently underway)	Target Dates for Implementation
☒	☐	1. Implement HICPAC recommendations <ul style="list-style-type: none"> i. Develop strategies for implementation of HICPAC recommendations for at least 2 prevention targets specified by the state multidisciplinary group. 	2010
		<i>Other activities or descriptions:</i> HICPAC guidelines have been incorporated into several collaboratives offered in the state, including CUSP-CLABSI, CUSP-CAUTI, CDI and SSI collaboratives conducted between 2010 and 2015 in Georgia. HICPAC guidelines have also been included in long-term care training (as noted in Section 2.4) and will be included in infection prevention standards trainings (see Section 6.2).	
☒	☐	2. Establish prevention working group under the state HAI advisory council to coordinate state HAI collaboratives <ul style="list-style-type: none"> i. Assemble expertise to consult, advise, and coach inpatient healthcare facilities involved in HAI prevention collaboratives 	
		<i>Other activities or descriptions:</i> Collaborative activities are coordinated by monthly calls with DPH, GHA, and the QIN. In addition, each GHAIAC meeting includes a report of HAI prevention collaborative progress (see Section 1.1).	2013
☒ ☒ ☒	☐ ☐ ☐	3. Establish HAI collaboratives with at least 10 hospitals (this may require a multi-state or regional collaborative in low population density regions) <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 from standardized outcome data to track progress 	2009
		<i>Other activities or descriptions:</i> Since 2009 several HAI prevention collaboratives have been implemented in the state. In 2009, GHA conducted a CUSP-BSI collaborative (33 hospitals); 2011, a CUSP-CAUTI collaborative (30 hospitals), and 2013, a Health Engagement Network (HEN) addressing SSIs, VAP, CLABSI and CAUTI (49 hospitals in HEN addressed selected HAI targets). In 2013, the QIN led a CDI	

Check Items Underway	Check Items Planned	Items Planned for Implementation (or currently underway)	Target Dates for Implementation
		collaborative (15 hospitals). These collaboratives have been led by qualified staff, included peer-to-peer learning, and included effective use of feedback data to facilities.	
<input type="checkbox"/>	<input checked="" type="checkbox"/>	4. Develop state HAI prevention training competencies <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 	April 2016
		<i>Other activities or descriptions:</i> As noted in Section 6.2, DPH is planning to work with GHA, QIN, GIPN, HCFR, and local APIC chapters to develop and conduct infection prevention training competencies for hospitals, long-term care, dialysis and ambulatory surgical centers. For 2010-2014, DPH worked with HCFR, QIN, and GIPN to offer 2-day infection prevention trainings for long-term care facilities; this training included outbreak detection and response. These training materials will be used as a basis for the proposed long-term care infection prevention competency training.	
<input type="checkbox"/> <input type="checkbox"/> <input type="checkbox"/> <input type="checkbox"/>	<input checked="" type="checkbox"/> <input checked="" type="checkbox"/> <input checked="" type="checkbox"/> <input type="checkbox"/>	5. Implement strategies for compliance to promote adherence to HICPAC recommendations <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 establish best practices to ensure adherence ii. Coordinate/liaise with regulation and oversight activities such as inpatient or outpatient facility licensing/accrediting bodies and professional licensing organizations to prevent HAIs iii. Improve regulatory oversight of hospitals, enhance surveyor training and tools, and add sources and uses of infection control data iv. Consider expanding regulation and oversight activities to currently unregulated settings where healthcare is delivered and work with healthcare partners to establish best practices to ensure adherence 	April 2017
		<i>Other activities or descriptions:</i> As noted in Section 1.4, DPH plans to enhance our relationship with HCFR to improve infection prevention standards and to develop HAI prevention standards. As noted in Section 5.2, DPH plans to collect more information on state-based regulations that influence HAI prevention and to consider any needs/capabilities for further regulation. As noted in Sections 1.4 and 6.2, we	

Check Items Underway	Check Items Planned	Items Planned for Implementation (or currently underway)	Target Dates for Implementation
		plan to include HCFR in our infection prevention competency training, and when conducted assessments we will coordinate with HCFR to evaluate the value and capability of including unregulated healthcare settings.	
<input checked="" type="checkbox"/>	<input type="checkbox"/>	6. Enhance prevention infrastructure by increasing joint collaboratives with at least 20 hospitals (i.e. this may require a multi-state or regional collaborative in low population density regions)	2009
		<i>Other activities or descriptions: Several HAI prevention collaboratives have been held with greater than 20 hospitals (see Section 3.3).</i>	
<input checked="" type="checkbox"/>	<input type="checkbox"/>	7. Establish collaborative(s) to prevent HAIs in nonhospital settings (e.g., long term care, dialysis)	2013-2015
		<i>Other activities or descriptions: In 2009, Alliant Quality (Georgia Quality Improvement Network) lead a CDI prevention collaborative with 3 acute care, 1 long-term acute care, and 13 long-term care facilities). Between 8/2013 and 7/2015, DPH led a Carbapenem-Resistance Enterobacteriaceae (CRE) collaborative that included Atlanta area hospitals, long-term acute care hospitals, long-term care providers, and non-emergency EMS providers. Lessons learned from this activity will be applied to HAI training offered to healthcare coalitions.</i>	

SECTION 4: EVALUATION AND COMMUNICATION

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 type="checkbox"/> <input type="checkbox"/>	<p>1. Conduct needs assessment and/or evaluation of the state HAI program to learn how to increase impact</p> <ul style="list-style-type: none"> i. Establish evaluation activity to measure progress toward targets and ii. Establish systems for refining approaches based on data gathered 	2015
		<p><i>Other activities or descriptions (not required): DPH has published baseline HAI data (Table 1) and will continue activities to evaluate state progress toward federal HAI reduction targets. DPH has also developed a plan to address antimicrobial resistance that includes measurement for short-, mid-, and long-term goals.</i></p>	
<input type="checkbox"/>	<input type="checkbox"/>	<p>2. Develop and implement a communication plan about the state’s HAI program and about progress to meet public and private stakeholders needs</p> <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. 	
		<p><i>Other activities or descriptions:</i></p>	
<input type="checkbox"/>	<input checked="" type="checkbox"/>	<p>3. Provide consumers access to useful healthcare quality measures Disseminate HAI data to the public</p>	October 2015
		<p><i>Other activities or descriptions: As noted in Section 2.12, we are planning to issue a report of Georgia HAI data to be posted on our website in the fall of 2015. The state report will include state summary level data and progress toward prevention targets.</i></p>	

<input checked="" type="checkbox"/>	<input type="checkbox"/>	4. Guide patient safety initiatives i. Identify priorities and provide input to partners to help guide patient safety initiatives and research aimed at reducing HAIs	2013
		<i>Other activities or descriptions:</i> As noted in Sections 1.1 and 3.1, collaborative prevention activities are coordinated by monthly calls with DPH, GHA, and the QIN. These monthly calls include reviewing state HAI data. In addition, each GHAIAC meeting includes a report of HAI prevention collaborative progress.	

SECTION 5: INFECTION CONTROL ASSESSMENT AND RESPONSE

Check Items Underway	Check Items Planned	Items Planned for Implementation (or currently underway)	Target Dates for Implementation
<input checked="" type="checkbox"/>	<input type="checkbox"/>	1. Create an inventory of all healthcare settings in state. List must include at least one infection control point of contact at the facility	October 2015
<input type="checkbox"/>	<input checked="" type="checkbox"/>	2. Identify current regulatory/licensing oversight authorities for each healthcare facility and explore ways to expand oversight	April 2016
		<i>Other activities or descriptions:</i> As of 9/1/2015, DPH has created an Access database that includes acute care, critical access and long-term acute care hospitals. We are issuing a Memorandum of Understanding with the Georgia Healthcare Facility Regulation to provide updated registries of state long-term care, dialysis, and ambulatory surgical centers starting in 2016. The HAI Coordinator will investigate regulatory and licensing oversight for different healthcare settings starting in April 2016.	
<input type="checkbox"/> <input type="checkbox"/> <input type="checkbox"/>	<input checked="" type="checkbox"/> <input checked="" type="checkbox"/> <input checked="" type="checkbox"/>	3. Assess readiness of Ebola-designated facilities within the state i. Use CDC readiness assessment tool and determine gaps in infection control ii. Address gaps (mitigate gaps) iii. Conduct follow-up assessments	October 2015

		<i>Other activities or descriptions: As of October 1, 2015, the Georgia Hospital Preparedness Program (HHP) has identified Ebola treatment and assessment hospitals and conducted initial assessments. Georgia HHP and DPH will collaborate to conduct reassessments of these hospitals.</i>	
<input type="checkbox"/> <input type="checkbox"/> <input type="checkbox"/>	<input checked="" type="checkbox"/> <input checked="" type="checkbox"/> <input checked="" type="checkbox"/>	4. Assess outbreak reporting and response in healthcare facilities i. Use standard assessment tool and determine gaps in outbreak reporting and response ii. Address gaps (mitigate gaps) iii. Track HAI outbreak response and outcome	October 2015
		<i>Other activities or descriptions: We plan to hire a medical epidemiologist to supervise an analysis of HAI outbreak report in the state and to identify and address reporting gaps identified.</i>	

SECTION 6: TARGETED HEALTHCARE INFECTION PREVENTION PROGRAMS

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 checked="" type="checkbox"/> <input checked="" type="checkbox"/> <input checked="" type="checkbox"/>	1. Expand infection control assessments i. Expand assessments to other additional facilities and other healthcare settings and determine gaps in infection control ii. Address gaps (mitigate gaps) iii. Conduct follow-up assessments	October 2015
		<i>Other activities or descriptions: Our plan is to hire two infection preventionists to conduct assessments in acute care, long-term care, dialysis and ambulatory surgical centers using CDC-defined tools. We plan to include local health district and HCFR staff on these assessment teams as their schedule allows.</i>	
<input type="checkbox"/>	<input checked="" type="checkbox"/>	2. Increase infection control competency and practice in all healthcare settings through training i. Incorporate general infection control knowledge and practice assessments of competency into state licensing board requirements, credentialing, and continuing	April 2016

<input type="checkbox"/>	<input checked="" type="checkbox"/>	<p>education requirements for clinical care providers (e.g., medical license, admitting privileges) and/or licensing/accreditation requirements for healthcare facilities.</p> <p>ii. Develop a sustainable training program based on CDC guidance and technical assistance to perform training, prioritizing on-site train-the-trainer programs in key domains of infection control, including the incorporation of hands on evaluations and competency assessments of best practices and a system to monitor ongoing compliance and competency.</p>	
		<p><i>Other activities or descriptions: We have issued a Memorandum of Understanding with the Georgia Hospital Association to support infection prevention program competency training for acute care, long-term care, dialysis, and ambulatory surgical centers. The training will occur over a 3-year period (from 4/2016-3/2018). Content matter experts will be Georgia Infection Preventionists; we will incorporate content into the existing framework of Georgia APIC Chapters and the Georgia Infection Prevention Network. We will also engage HCFR in our training as presenters and attendees.</i></p>	
<input type="checkbox"/> <input type="checkbox"/> <input type="checkbox"/> <input type="checkbox"/>	<input checked="" type="checkbox"/> <input checked="" type="checkbox"/> <input checked="" type="checkbox"/> <input checked="" type="checkbox"/>	<p>3. Enhance surveillance capacity to improve situational awareness, describe emerging threats, and target onsite assessments to implement prevention programs</p> <p>i. Build capacity to analyze data reported by facilities in a defined region to allow for a comprehensive assessment of potential healthcare-associated infection threats, and communicate results with healthcare facilities.</p> <p>ii. Work with CDC to guide analytic direction and identify facilities for prioritized assessments/response</p> <p>iii. Improve outbreak reporting capacity by developing an infrastructure that includes clear definitions of infectious threats of epidemiologic importance that are communicated to facilities</p> <p>iv. Implement a response plan to address potential emerging threats identified by using enhanced surveillance</p>	<p>July 2015</p> <p>October 2015</p> <p>April 2016</p> <p>April 2017</p>
		<p><i>Other activities or descriptions: During 10/2015, DPH plans to issue facility-specific Targeted Assessment for Prevention (TAP) reports to all Georgia hospitals reporting in NHSN to the state. EIP analyzes surveillance data regularly to monitor HAI trends and provides feedback to facilities annually. During 2016 and 2017, DPH will evaluate HAI outbreak reporting in the state, analyze current outbreak reporting data, and develop standard operating protocol for prioritized HAI pathogens.</i></p>	

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
QIN	Quality Improvement Network
SENDSS/OMS	State Electronic Notifiable Disease Surveillance System, Outbreak Management System
SSI	Surgical Site Infections
VISA/VRSA	Vancomycin Intermediate/Resistant <i>Staphylococcus aureus</i>