

# Commonwealth of Pennsylvania Healthcare Associated Infections Plan -2010

## Introduction

The Commonwealth of Pennsylvania established their commitment to Healthcare-Associated Infection (HAI) prevention in 2004 when the Pennsylvania Cost Care Containment Council (PHC4) began collecting HAI data from all acute care facilities (ACFs) in the state and publicly reporting minimally-risk adjusted facility-specific information. The program was re-evaluated and expanded in 2007 with the passing of the Health Care-Associated Infection Prevention and Control Act (Act 52). This legislation replaced the PHC4 data collection approach with a requirement that all PA ACFs use CDC's National Healthcare Safety Network (NHSN) for the reporting of all HAI within their facilities. This nationally recognized standardized reporting methodology is currently utilized by 100% of ACFs and the state is anticipating the publication of the first comprehensive HAI report utilizing the 2009 NHSN data in the year 2010.

The Pennsylvania Department of Health (PADOH), Bureau of Epidemiology (BOE), PHC4, and the Patient Safety Authority (PSA) coordinate all HAI prevention activities throughout the State. A well-established multidisciplinary advisory group comprised of experts in infection prevention from around the state provides valuable expertise to the agencies to help guide the HAI prevention efforts.

The AARA funding has provided the State of Pennsylvania with the opportunity to create a comprehensive HAI Prevention plan. This plan clarifies, organizes, and communicates the many HAI prevention efforts that are currently underway as well as those activities that have been prioritized for the near future. These activities with their corresponding timelines are aligned with the US Department of Health and Human Service (HHS) priorities. The HHS developed a template plan to assist states in achieving national goals consisting of 5-year national prevention targets, improved quality and standardization of metrics, and prioritization and implementation of evidence-based prevention methods. The four components of the HAI Prevention plan include:

1. Developing HAI program infrastructure
2. Surveillance, detection, reporting and response
3. Prevention
4. Evaluation, oversight and communication

The state of Pennsylvania's HAI Prevention plan is organized using the HHS template. Each component delineates the collective efforts of state agencies, healthcare organizations, and healthcare providers, identifying the evidence-based infection prevention strategies being successfully implemented by institutions throughout PA in the ongoing effort to provide safe quality healthcare to our patients. The plan also provides a roadmap to assist healthcare facilities (ACFs, LTCFs, and ambulatory surgical centers) to meet the statutory requirements of Act 52 to reduce the incidence of HAIs.

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

Planning Level	Check Items Underway	Check Items Planned	Items Planned for Implementation (or currently underway)	Target Dates for Implementation
Level I	<input checked="" type="checkbox"/>	<input type="checkbox"/>	<p>1. Establish statewide HAI prevention leadership through the formation of multidisciplinary group or state HAI advisory council</p> <p>i. Collaborate with local and regional partners HAI prevention leadership has been established through the coordination of the Pennsylvania Department of Health (PADOH), the Patient Safety Authority (PSA), and the Pennsylvania Health Care Cost Containment Council (PHC4) in accordance with Act 52 of 2007. Within the PADOH, the Bureau of Epidemiology (BOE) and the Office of Quality Assurance, (OQA) are jointly implementing HAI activities. There are state funded positions within these departments dedicated to the support of these activities.</p> <p>A statewide advisory group composed of infection control experts from around the state was developed to enhance regional and local understanding of HAI prevention activities. Participants include the PSA and representatives from major academic centers, long term care facilities, the Pittsburgh Prevention Coalition, the Hospital and Health System Association of PA (HAP), PA members of CDC’s Healthcare Infection Control Practices Advisory Committee (HICPAC), SHEA, and APIC.</p>	Completed/ Ongoing
	<input checked="" type="checkbox"/>	<input type="checkbox"/>	<p>ii. Identify specific HAI prevention targets consistent with HHS priorities PADOH has selected the following as the initial set of indicator</p>	Completed/ Ongoing



Planning Level	Check Items Underway	Check Items Planned	Items Planned for Implementation (or currently underway)	Target Dates for Implementation
			<p>mandate since December of 2007. The BOE created under the Division of Infectious Disease Epidemiology (IDE), the Healthcare Associated Infections and Antimicrobial Resistance (HAIAR) section, which is primarily responsible for surveillance activities, detection and response, and prevention and evaluation. The Division Director and State Epidemiologist, is Veronica Urdaneta, MD, MPH. She is responsible for the oversight of the HAIAR section which is comprised of one (1) public health physician, who functions as the section chief, two (2) doctoral level epidemiologists, and three (3) master-level epidemiologists. The OQA, is responsible for overseeing the program implementation, and for the integration, collaboration and capacity building, as well as communication with stakeholders. The Office Director is William Cramer, M.Ed, a Public Health Executive; other staff members include a Public Health Program Manager, seven Nurse Service Consultants, six Public Health Program Administrators and one Administrative Assistant.</p>	
	<input checked="" type="checkbox"/>	<input type="checkbox"/>	<p>3. Integrate laboratory activities with HAI surveillance, prevention and control efforts.</p> <p>i. Improve laboratory capacity to confirm emerging resistance in HAI pathogens and perform typing where appropriate</p> <p>The BOE through IDE is responsible for the investigation of reportable communicable diseases, including any HAI report. IDE manages the Pennsylvania Electronic Disease Surveillance System (PA-NEDSS), which receives electronic laboratory reports real-time thru the PA Electronic Laboratory Reporting (ELR) system which includes laboratory reports from the State Public Health Laboratory, as well as other private laboratories. Reports coming from BOL through the StarLIMS and the PA-ELR utilize HL7 to transmit the information into PA-NEDSS.</p>	<p>Ongoing</p>

Planning Level	Check Items Underway	Check Items Planned	Items Planned for Implementation (or currently underway)	Target Dates for Implementation
			<p>The Division provides outbreak investigation support for any HAI report received via PA-NEDSS or any of the other electronic reporting systems (NHSN &amp; PA-PSRS) thru its HAIAR and Investigation sections.</p>	
Level II	☒	☐	<p>4. Improve coordination among government agencies or organizations that share responsibility for assuring or overseeing HAI surveillance, prevention and control</p> <p>The appointed State HAI Coordinator will be accountable for the coordination of all HAI prevention activities conducted by the various government agencies and organizations throughout the State. He will coordinate PADOH, PSA, PHC4 and the Statewide advisory group activities to pool resources appropriately, insure a coordinated effort, minimize redundancy and maximize efficiencies. The PADOH also works closely with federal partners on HAI surveillance and investigation, and with the Department of Public Welfare (DPW), which oversees assisted-living facilities. The state HAI Prevention Coordinator is a member of the state medical board and works closely with the Department of State, which licenses health care practitioners.</p>	Completed/Ongoing
	☒	☐	<p>5. Facilitate use of standards-based formats (e.g., Clinical Document Architecture, electronic messages) by healthcare facilities for purposes of electronic reporting of HAI data.</p> <p>Act 52 requires reporting of 100% of HAIs through the NHSN reporting system for acute care facilities. The state provided resources to assist all 255 acute care facilities with the enrollment process as well as establishing user groups for the PADOH, PSA, and PHC4 to view submitted data. PADOH also conducted</p>	Completed/Ongoing

Planning Level	Check Items Underway	Check Items Planned	Items Planned for Implementation (or currently underway)	Target Dates for Implementation
			<p>extensive training and outreach programs for ICPs around the state to initiate surveillance and reporting through NHSN.</p> <p>Act 52 provides incentives to hospitals to adopt electronic surveillance systems (ESS) to provide support for the surveillance and reporting process. Currently, 46 hospitals have ESS and 95 more hospitals are in the process of installing these systems for an eventual total of 141/255 (55%) hospitals.</p> <p>The PA-PSRS data reporting system was modified to add a module for nursing home reporting using nationally recognized standards based on CDC definitions and McGeer criteria for nursing home infections. Nursing Homes began electronically reporting health care-associated infection data to PADOH and the PSA in July 2009.</p> <p>In an effort to assist long-term care institutions in complying with Act 52, PADOH implemented a mini-grant program to facilitate infection control and surveillance training among nursing home infection preventionists. Nursing homes throughout the state were encouraged to apply for up to a maximum of \$1,000 each to be used for infection control and surveillance training. PADOH worked with APIC to schedule several trainings around the state that would meet the requirements. Since then, APIC became a formal and approved vendor for the Commonwealth of PA and a formal agreement has been put in place for any future endeavors.</p>	

Planning Level	Check Items Underway	Check Items Planned	Items Planned for Implementation (or currently underway)	Target Dates for Implementation
<p><b>Additional activities:</b></p> <p>Act 52 requires that all facilities conduct screening activities for MRSA and other MDROs. PADOH intends to begin implementing surveillance activities around MDRO, MRSA, and <i>Clostridium difficile</i>-associated disease (CDAD) in 2010. The plan includes utilizing the new MDRO and CDAD modules in NHSN, to collect and analyze information related to MRSA and MDRO screening at the state's acute care facilities.</p> <p>Target Date: December 2011</p>				

**Table 2: Pennsylvania 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)	Target Dates for Implementation
Level I	☒	☐	<p>1. Improve HAI outbreak detection and investigation</p> <p>i. Work with partners including CSTE, CDC, state legislatures, and providers across the healthcare continuum to improve outbreak reporting to state health departments</p> <p>The BOE through IDE is responsible for the investigation of reportable communicable diseases, including any HAI report. IDE manages PA-NEDSS, and has access to the information contained in NHSN &amp; PA-PSRS. Staff members within the Division are responsible for the day to day investigation of reports received by way of any of its reporting systems, and constantly review reports in PA-NEDSS or NHSN for outbreak detection.</p> <p>The PADOH in collaboration with CSTE was able to bring on board a fellow for a 2-year fellowship period to support HAI activities. The focus of the fellow’s activities are to:</p> <ol style="list-style-type: none"> <li>1. Collect and analyze data on MRSA/MDRO screening practices and data in PA acute care facilities</li> <li>2. Conduct special analysis of PA NHSN data,</li> <li>3. Conduct investigations of outbreaks or unusual disease patterns (e.g. outliers) being reported by PA facilities in NHSN</li> <li>4. Conduct validation studies of data being reported in NHSN. An example of special analyses of NHSN data is assessment of reports of gastrointestinal infections and their relationship to CDAD.</li> </ol>	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 type="checkbox"/>	<p>The Fellow will also work with the BOE’s IDE staff, on disease investigations providing the opportunity for interactions with regional, county and municipal health departments. The Fellow will interact with other governmental and non-governmental stakeholders addressing HAIs in Pennsylvania, including PSA, PHC4, the Hospital and Health Systems Association of Pennsylvania (HAP), academic partners throughout the state, CDC, and others.</p> <p>ii. Establish protocols and provide training for health department staff to investigate outbreaks, clusters or unusual cases of HAIs.</p> <p>The IDE division is responsible for the investigation of HAI reports, including outbreaks, clusters or unusual cases of HAIs. The IDE “Policies and Procedure Manual” provides appropriate protocols for the field staff to conduct disease investigations. All investigators are required to follow these procedures and new personnel are trained and supervised by senior investigators according to department protocol.</p> <p>The Division provides outbreak investigation support for any HAI report received via PA-NEDSS or any of the other electronic reporting systems (NHSN &amp; PA-PSRS) thru its HAIAR and Investigation sections. When any report is suspected to be HAI related, the investigations section notifies HAI program staff to initiates or joins the investigation as appropriate.</p>	<p>Completed/ Ongoing</p>

Planning Level	Check Items Underway	Check Items Planned	Items Planned for Implementation (or currently underway)	Target Dates for Implementation
	<input checked="" type="checkbox"/>	<input type="checkbox"/>	<p>In the past two years, the Division has conducted a number of investigations of HAIs, including possible transplant associated infections; infected health care transmission, and nosocomial hepatitis</p> <p>Conversely, the HAI section will create an analytical framework to search for reportable diseases within NHSN and PA-PSRS to ensure that they are also reported into NEDSS and properly investigated by the PADOH field staff. Providers are required to report communicable and non-communicable diseases through the Department's electronic reporting system PA-NEDSS. Law in accordance with 35 P.S. § 521.1 et seq. and 28 Pa. Code § 27.4 require reporting by Providers through PA-NEDSS.</p> <p>The PADOH staff has attended several training opportunities including hospital epidemiology courses, as well as national conferences focusing on HAI. The BOE also conducts its Quarterly Epidemiology meeting in which outbreak investigations of any communicable disease are discussed and presented to the group. The participants include staff from four different bureaus within the Department.</p> <p>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</p>	<p>Completed/ Ongoing</p>

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	<input checked="" type="checkbox"/>	<input type="checkbox"/>	<p>During the investigation of communicable diseases, it is necessary for authorized representatives from the PADOH to examine hospital and medical records without the written consent of the individual concerned. The authority to examine records for these purposes is set forth in Article XXI of the Administrative Code of 1929, P.L. 177 <i>as amended</i>; the Disease Prevention and Control Law of 1955, the Act of April 23, 1956, P.L. 1510 <i>as amended</i>, and other applicable Department regulations.</p> <p>The Final Privacy Rule (45 CFR §§160.101 <i>et seq.</i> and 164.102 <i>et seq.</i>) (Rule), which was promulgated pursuant to the Administrative Simplification part of the Health Insurance Portability and Accountability Act (42 USCS §§ 1320d <i>et seq.</i>) (“HIPAA”) clearly states that covered entities may use or disclose protected health information without authorization if a use or disclosure is required by law (45 CFR §164.512(a)). The Rule also states that covered entities may disclose protected health information without an authorization to “A public health authority that is authorized by law to collect or receive such information for the purpose of preventing or controlling disease. . . including . . . the conduct of public health surveillance, public health investigations, and public health interventions . . .” (45 CFR § 164.512(b)). Departmental regulations also indicate that the results of individual case investigations are confidential and may not be disclosed, except as necessary to protect the public’s health.</p> <p>iv. Improve overall use of surveillance data to identify and prevent HAI outbreaks or transmission in HC settings</p>	<p>Completed/ Ongoing</p>

Planning Level	Check Items Underway	Check Items Planned	Items Planned for Implementation (or currently underway)	Target Dates for Implementation
			<p>Act 52 requires hospital-wide surveillance of HAIs through the NHSN reporting system for acute care facilities and the PA-PSRS for Nursing Homes.</p> <p>The IDE Division provides outbreak investigation support for any HAI report received via PA-NEDSS or any of the other electronic reporting systems (NHSN &amp; PA-PSRS) thru its HAIAR and Investigation sections. When any report is suspected to be HAI related, the investigations section notifies HAI program staff that initiates or joins the investigation as appropriate.</p> <p>Conversely, the HAI section will create an analytical framework to search for reportable diseases within NHSN and PA-PSRS to ensure that they are also reported into NEDSS and properly investigated by the PADOH field staff. Providers are required to report communicable and non-communicable diseases through the Department's electronic reporting system PA-NEDSS. Law in accordance with 35 P.S. § 521.1 et seq. and 28 Pa. Code § 27.4 require reporting by Providers through PA-NEDSS.</p>	
	<input checked="" type="checkbox"/>	<input type="checkbox"/>	<p>2. Enhance laboratory capacity for state and local detection and response to new and emerging HAI issues.</p> <p>The BOE through IDE is responsible for the investigation of reportable communicable diseases, including any HAI report. IDE manages the Pennsylvania Electronic Disease Surveillance System (PA-NEDSS), which receives electronic laboratory reports real-time thru the PA Electronic Laboratory Reporting (ELR) system which includes laboratory reports from the State Public Health</p>	<p>Completed/ Ongoing</p>

Planning Level	Check Items Underway	Check Items Planned	Items Planned for Implementation (or currently underway)	Target Dates for Implementation
			<p>Laboratory, as well as other private laboratories. The Division provides outbreak investigation support for any HAI report received via PA-NEDSS or any of the other electronic reporting systems (NHSN &amp; PA-PSRS) through its HAIAR and Investigation sections.</p> <p>The Bureau of Laboratories (BOL) of the PADOH, is the PA Public Health Laboratory and part of the Laboratory Response Network (LRN). BOL works in close collaboration with the BOE in the investigation of communicable diseases, including HAIs. The BOL is also responsible for regulating clinical laboratories in the Commonwealth, which includes providing adequate training and quality control assistance.</p>	
Level II	☒	☐	<p>3. Improve communication of HAI outbreaks and infection control breaches</p> <p>i. Develop standard reporting criteria including, number, size and type of HAI outbreak for health departments and CDC</p> <p>Act 52 requires that all health care facilities conduct facility-wide surveillance and mandates the use of the NHSN for reporting facility HAIs. Providers are required to report communicable diseases through the Department's electronic reporting system PA-NEDSS. Law in accordance with 35 P.S. § 521.1 et seq. and 28 Pa. Code § 27.4 require reporting by Providers through PA-NEDSS.</p> <p>All disease outbreaks or unusual expressions of disease are reportable in PA, including any that are health care associated. VRSA and VISA are reportable in PA.</p>	Completed/ 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 type="checkbox"/>	<p>ii. Establish mechanisms or protocols for exchanging information about outbreaks or breaches among state and local governmental partners</p> <p>The IDE division is responsible for the investigation of HAI reports, including outbreaks, clusters or unusual cases of HAIs. The IDE “Policies and Procedure Manual” provides appropriate protocols for the field staff to conduct disease investigations. PA has an integrated statewide surveillance system that is also used by the local county and municipal health departments. All investigators are required to follow these procedures and new personnel are trained and supervised by senior investigators according to department protocol. Staff within the division communicates with other bureaus, divisions, and/or state agencies as needed and according with the regulatory responsibility of each agency. Other protocols have also been established among all responsible state agencies in the sharing of information pertaining to data reported thru NHSN and PA-PSRS.</p>	Completed/ Ongoing
	<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> <p>i. Central Line-associated Bloodstream Infections (CLABSI)</p>	Completed/ Ongoing
	<input type="checkbox"/> <input checked="" type="checkbox"/>	<input checked="" type="checkbox"/> <input type="checkbox"/>	<p>ii. <i>Clostridium difficile</i> Infections (CDI)</p> <p>iii. Catheter-associated Urinary Tract Infections (CAUTI)</p>	2010 Completed/ Ongoing

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"/>	iv. Methicillin-resistant Staphylococcus aureus (MRSA) Infections	2010
	<input checked="" type="checkbox"/>	<input type="checkbox"/>	v. Surgical Site Infections (SSI)	Completed/ Ongoing
	<input type="checkbox"/>	<input type="checkbox"/>	vi. Ventilator-associated Pneumonia (VAP)	To be determined
	<input checked="" type="checkbox"/>	<input type="checkbox"/>	5. Adopt national standards for data and technology to track HAIs (e.g., NHSN). i. Develop metrics to measure progress towards national goals  Act 52 requires reporting of 100% of HAIs through the NHSN reporting system for acute care facilities. Reporting began in February 2008. Nursing Homes began phased-in reporting into PA-PSRS June-July 2009.	Completed/ Ongoing
	<input checked="" type="checkbox"/>	<input type="checkbox"/>	ii. Establish baseline measurements for prevention targets  Act 52 requires hospitals to meet or exceed the benchmark of a <b>10% reduction in HAI rates</b> when comparing baseline rates (2009 data) of indicator infections with rates from the subsequent year (2010 data). The PADOH then sets an annual reduction target for each subsequent year.  The PADOH, in consultation with CDC's DHQP, has elected to report facility-specific HAIs using Standardized Infection Ratios rather than crude rates to compare facilities to state rates and to one another. After a baseline is established, facility-level and	January 2010

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			<p>statewide trends for the report year will also be included.</p> <p>Additionally, PADOH will develop quarterly trend reports that will show trends at both the state and facility levels.</p> <p>MDRO and <i>C. difficile</i> NHSN modules are scheduled to start on a voluntary basis in January 1, 2010 with a goal of having more than 85% of selected facilities reporting by 02/01/2010 and 100% by 2011.</p>	<p>MDRO and <i>C. difficile</i> baselines: December 2011</p>
	<input checked="" type="checkbox"/>	<input type="checkbox"/>	<p>6. Develop state surveillance training competencies</p> <p>i. Conduct local training for appropriate use of surveillance systems (e.g., NHSN) including facility and group enrollment, data collection, management, and analysis PADOH successfully assisted all 255 hospitals, including acute care, long term acute care, rehab and freestanding psychiatric facilities in enrolling in NHSN, and establishing user groups for the PADOH, PSA, and PHC4 to view submitted data. PA also conducted extensive training and outreach programs for IPs around the state to initiate surveillance and reporting through NHSN (<a href="https://padoh.webex.com">https://padoh.webex.com</a>)</p> <p>The PADOH offered nursing homes a mini-grant program to facilitate infection control and surveillance training among nursing home infection preventionists. Nursing homes throughout the state applied for up to a maximum of \$1,000 each to be used for infection control and surveillance training. PADOH worked with APIC to schedule several trainings around the state that would meet the requirements.</p>	<p>Completed/ Ongoing</p> <p>March 2010</p>

Planning Level	Check Items Underway	Check Items Planned	Items Planned for Implementation (or currently underway)	Target Dates for Implementation
	☒	☐	<p>7. Develop tailored reports of data analyses for state or region prepared by state personnel</p> <p>The PADOH will create an Annual Report that will include annual data comparison among hospitals, against the state and against national data. This report will be shared with the state legislature and the public through different mechanism. Quarterly trend reports will be developed and provided to the state and each reporting facility.</p> <p>The PADOH, in consultation with CDC’s DHQP, has elected to report facility-specific HAIs using Standardized Infection Ratios rather than rates to compare facilities to state rates and to one another. Facility-level and statewide trends for the report year will also be included.</p>	December 2009
<b>Level III</b>	☒	☐	<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> <p>Data reported to the NHSN are validated using a number of methods:</p> <ol style="list-style-type: none"> <li>a. Point of entry checks: The NHSN is a web-based data reporting and submission program that includes validation routines for many data elements, reducing common data entry errors. Hospitals can view, edit, and analyze their data at any time.</li> <li>b. Monthly checks for internal consistency - Each month, PADOH staff download the data from the NHSN and run it through a computerized data validation code. Data</li> </ol>	December 2010

Planning Level	Check Items Underway	Check Items Planned	Items Planned for Implementation (or currently underway)	Target Dates for Implementation
			<p>that are missing, unusual, inconsistent, or duplicate are identified and investigated by sending a monthly data analysis and feedback report. This report is called the Data Integrity Validation (DIV) Report and consists of individualized reports sent to each hospital by the PADOH that identifies data quality issues that need to be investigated, verified, or resolved for each facility. The purpose of the DIV report is to ensure that the data supplied by the hospital, and the analysis that will be performed by PADOH, reflect as accurately as possible the HAI profile of that institution. These reports are distributed to respective hospitals for review and any appropriate action.</p> <p>Hospital IP's have thirty days from the end of the analysis month to make corrections to their data. At the end of the thirty day correction period, data for the pre-defined reporting period is locked down or extracted from NHSN and saved to a secure drive for formal analysis and rate calculation. This data extraction or lockdown is necessary because users are able to make changes to data within NHSN at any time</p> <p>The first DIV report, for the period July through October 2008, was distributed in December 2008. In January 2009, the Department began distributing a monthly DIV report starting with November 2008 data. Each series of reports showed significant reduction in the total number of errors or flagged data from the previous month.</p> <p>c. Annual on-site audits - Audits of a sample of medical records are been planned for the spring of 2010. These</p>	

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	<input type="checkbox"/>	<input checked="" type="checkbox"/>	<p>audits will be conducted by the Department to assess compliance with reporting requirements. The purposes of the audit are to:</p> <ol style="list-style-type: none"> <li>1) Enhance the reliability and consistency in applying the surveillance definitions;</li> <li>2) Evaluate the adequacy of surveillance methods to detect infections;</li> <li>3) Evaluate intervention strategies designed to reduce or eliminate specific infections; and</li> <li>4) Provide in-person opportunities to discuss data inconsistencies identified, discrepancies and to discuss if records need to be modified by the hospitals.</li> </ol> <p>i. Develop a validation plan</p> <p>PADOH is working to establish validation studies of current and new data captured thru the NHSN in an effort to assess the validity of the information provided by healthcare institutions. Since PA requires facility-wide reporting using all components of the NHSN Patient Safety Module, it is in a very unique position to conduct such validation studies since the volume of data from PA in NHSN exceeds that of virtually any other state.</p>	<p>December 2010</p>
	<input type="checkbox"/>	<input checked="" type="checkbox"/>	<p>ii. Pilot test validation methods in a sample of healthcare facilities</p> <p>The PADOH will design and implement a hospital pilot validation study of selected facilities no later December 31, 2010 with a completion date by December 31, 2011. One or</p>	<p>December 2011</p>



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	<input type="checkbox"/>	<input checked="" type="checkbox"/>	<p>Data collected from validation studies will be analyzed for:</p> <ul style="list-style-type: none"> <li>• Accuracy of reported infections against gold standard definitions as defined by PSRS or NHSN.</li> <li>• Evaluating a control group of patients or residents at risk for selected infection but had no infections reported looking for missed infections.</li> <li>• Evaluation of the sensitivity, specificity, and predictive value of the state’s HAI reporting program to capture HAIs.</li> </ul> <p>vi. Use validation findings to provide operational guidance for healthcare facilities that targets any data shortcomings detected</p> <p>The PADOH will work with those facilities not meeting reporting standards to develop a plan of correction. These facilities may be included again in subsequent validation studies or in separate auditing surveys to assess improvement.</p>	2011
	<input checked="" 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>The IDE division is responsible for the investigation of HAI reports, including outbreaks, clusters or unusual cases of HAIs. The IDE “Policies and Procedure Manual” provides appropriate protocols for the field staff to conduct disease investigations. All investigators are required to follow these</p>	Completed/ Ongoing

Planning Level	Check Items Underway	Check Items Planned	Items Planned for Implementation (or currently underway)	Target Dates for Implementation
			<p>procedures and new personnel are trained and supervised by senior investigators according to department protocol. The Division provides outbreak investigation support for any HAI report received via PA-NEDSS or any of the other electronic reporting systems (NHSN &amp; PA-PSRS) thru its HAIAR and Investigation sections. When any report is suspected to be HAI related, the investigations section notifies HAI program staffs that initiates or join the investigation as appropriate.</p> <p>The IDE Division Director is also the PA State Epidemiologist, and is responsible for inviting CDC epidemiologists to provide support and technical assistance in disease investigations including any HAI report.</p>	
	<input type="checkbox"/>	<input checked="" type="checkbox"/>	<p>10. Collaborate with professional licensing organizations to identify and investigate complaints related to provider infection control practice in non-hospital settings, and to set standards for continuing education and training</p> <p>PADOH has and will continue to investigate any complaints concerning inappropriate practices or unreported HAI, taking enforcement action under the Health Care Facilities Act as necessary which includes additional education and training as deemed appropriate.</p>	Completed/ Ongoing
	<input checked="" type="checkbox"/>	<input type="checkbox"/>	<p>11. Adopt integration and interoperability standards for HAI information systems and data sources</p> <p>i. Improve overall use of surveillance data to identify and prevent HAI outbreaks or transmission in HC settings across the spectrum of inpatient and outpatient healthcare settings</p>	Completed/ 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 type="checkbox"/>	<p>The IDE division is responsible for the investigation of HAI reports, including outbreaks, clusters or unusual cases of HAIs encompassing all healthcare setting. The IDE “Policies and Procedure Manual” provides appropriate protocols for the field staff to conduct disease investigations. All investigators are required to follow these procedures and new personnel are trained and supervised by senior investigators according to department protocol.</p> <p>The Division provides outbreak investigation support for any HAI report received via PA-NEDSS or any of the other electronic reporting systems (NHSN &amp; PA-PSRS) thru its HAIAR and Investigation sections. When any report is suspected to be HAI related, the investigations section notifies HAI program staff to initiate or join the investigation as appropriate. Staff within the division communicates with other bureaus, divisions, and/or state agencies as needed and according with the regulatory responsibility of each agency.</p> <p>The IDE Division Director is also the PA State Epidemiologist, and is responsible for inviting CDC epidemiologists to provide support and technical assistance in disease investigations including any HAI report.</p> <p>In the past two years, the Division has performed HAI investigations in both in-patient and outpatient settings, including assisted-living facilities, outpatient surgical centers, and long-term care facilities.</p> <p>ii. Promote definitional alignment and data element standardization needed to link HAI data across the nation.</p>	Completed/ Ongoing

Planning Level	Check Items Underway	Check Items Planned	Items Planned for Implementation (or currently underway)	Target Dates for Implementation
			<p>All hospitals are required to utilize the CDC NHSN methodology that is a nationally recognized and standardized reporting format for HAI surveillance activities. LTC facilities will utilize nationally recognized standards based on CDC definitions and McGeer criteria for nursing home infections. All Laboratories are required to utilize HL7 messaging standards.</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>Act 52 changed the reporting from minimally-risk adjusted facility-specific information to the use of the CDC's National Healthcare Safety Network (NHSN). The PA-PSRS database was modified with a new module for HAI reporting by nursing homes that began in July of 2008.</p> <p>Act 52 incentivized hospitals to adopt electronic surveillance systems (ESS) to provide support for the surveillance and reporting process. Currently, 46 hospitals have ESS and 95 more hospitals are in the process of installing these systems for an eventual total of 75% of acute care hospitals.</p> <p>i. Report HAI data to the public</p> <p>Public reporting of HAIs began in PA in 2005 thru the PHC4. Information is located on the following web site:</p>	<p>Completed/ Ongoing</p> <p>Ongoing</p>

Planning Level	Check Items Underway	Check Items Planned	Items Planned for Implementation (or currently underway)	Target Dates for Implementation
			<a href="http://www.phc4.org/reports/hai/06/">http://www.phc4.org/reports/hai/06/</a> . Annual reports will be made available to the public by accessing the PADOH web site at <a href="http://www.health.state.pa.us">www.health.state.pa.us</a>	
	<input type="checkbox"/>	<input checked="" type="checkbox"/>	<p>13. Make available risk-adjusted HAI data that enables state agencies to make comparisons between hospitals.</p> <p>The PADOH will develop:</p> <ul style="list-style-type: none"> <li>Statewide HAI rates by ward type that can be compared to national rates.</li> <li>acility-specific trend reports illustrating rate changes over quarterly or semi-annual intervals as measured against a baseline period.</li> <li>acility-level risk-adjusted standardized infection ratios (SIRs) to enable side-by-side comparisons of individual facilities. From these SIRs, each facility will be ranked by three major categories: <ul style="list-style-type: none"> <li>○ Facilities with HAIs significantly <i>greater</i> than the state average.</li> <li>○ Facilities with HAIs <i>similar</i> to the state average.</li> <li>○ Facilities with HAIs significantly <i>less</i> than the state average</li> </ul> </li> </ul>	December 2009 - Ongoing
	<input checked="" type="checkbox"/>	<input type="checkbox"/>	<p>14. Enhance surveillance and detection of HAIs in nonhospital settings</p> <p>Nursing Homes began phased-in reporting into PA-PSRS June-July 2009. The data will be reported on a patient-specific basis into the PA Patient Safety Reporting System (PA-PSRS) as outlined in the most current version of the PA-PSRS manual.</p>	Completed / Ongoing

**Table 3: Pennsylvania State 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 type="checkbox"/>	<input checked="" type="checkbox"/>	<p>1. Implement HICPAC recommendations.</p> <p>i. Develop strategies for implementation of HICPAC recommendations for at least 2 prevention targets specified by the state multidisciplinary group.</p> <p>Pennsylvania is one of 10 states selected by the Agency for Healthcare Research &amp; Quality (AHRQ) to participate in a three-year patient safety in-service training initiative to reduce central-line associated blood stream infections in Intensive Care Units throughout the nation. AHRQ awarded the American Hospital Association’s Health Research &amp; Education Trust (HRET) a contract to work with selected states around implementing the central line bundle using the John Hopkins Comprehensive Unit-Based Safety Program. PA is among the second cohort of states that will undertake the project that began in 2009.</p> <p>PADOH will seek resources to establish two or possibly three regional collaboratives that implement prevention strategies to target conditions that are compatible with the HHS prevention targets. The prevention collaborative will be based in different parts of the state to assure that the HAI reduction programs are distributed across the Commonwealth.</p> <p>PADOH will be working with the collaboratives on <i>Clostridium difficile</i> and MRSA as their two prevention targets.</p>	December 2011
	<input checked="" type="checkbox"/>	<input type="checkbox"/>	<p>2. Establish prevention working group under the state HAI advisory council to coordinate state HAI collaboratives</p> <p>i. Assemble expertise to consult, advise, and coach inpatient</p>	Completed/

Planning Level	Check Items Underway	Check Items Planned	Items Planned for Implementation (or currently underway)	Target Dates for Implementation
			<p>healthcare facilities involved in HAI prevention collaboratives</p> <p>The Patient Safety Authority was required by Act 52 to appoint an advisory panel of health care- associated infection control experts, including at least one representative of a not-for-profit nursing home, at least one representative of a for-profit nursing home, at least one representative of a county nursing home and at least two representatives of a hospital, one of which must be from a rural hospital, to assist in carrying out the requirements of the act. The HAI Advisory Committee has been meeting and advising PADOH for two years.</p> <p>The PADOH will create a “Collaborative Workgroup” as a subgroup of this advisory council that will be responsible for providing guidance and recommendations to the collaboration efforts.</p>	Ongoing
			<p>3. Establish HAI collaboratives with at least 10 hospitals</p> <p>The PADOH will established or augment two or three prevention collaboratives in different regions of the state. These collaboratives will select at least two HHS prevention targets to reduce the occurrence of HAIs in their region. The prevention collaborative will need to incorporate at least 50% of the acute care facilities within their region into the HAI reduction effort. PADOH has standing agreements with a number of academic partners and organizations that would allow the prompt funding and implementation of prevention collaboratives and allow for the demonstration of HAI reductions in the next two years.</p>	December 2011



Planning Level	Check Items Underway	Check Items Planned	Items Planned for Implementation (or currently underway)	Target Dates for Implementation
			<p>The PADOH will develop:</p> <ul style="list-style-type: none"> <li>Statewide HAI rates by ward type that can be compared to national rates.</li> <li>Facility-specific trend reports illustrating rate changes over quarterly or semi-annual intervals as measured against a baseline period.</li> <li>Facility-level risk-adjusted standardized infection ratios (SIRs) to enable side-by-side comparisons of individual facilities. From these SIRs, each facility will be ranked by three major categories:               <ul style="list-style-type: none"> <li>○ Facilities with HAIs significantly <i>greater</i> than the state average.</li> <li>○ Facilities with HAIs <i>similar</i> to the state average.</li> <li>○ Facilities with HAIs significantly <i>less</i> than the state average.</li> </ul> </li> </ul>	
	<input checked="" type="checkbox"/>	<input type="checkbox"/>	<p>4. Develop state HAI prevention training competencies</p> <p>i. Consider establishing requirements for education and training of healthcare professionals in HAI prevention (e.g., certification requirements, public education campaigns and targeted provider education) or work with healthcare partners to establish best practices for training and certification</p> <p>PADOH has conducted extensive training and outreach programs for ICPs around the state to initiate surveillance and reporting through NHSN. It has also provided continued education thru the creation of web-based educational materials that are accessible to all stakeholders 24/7 (<a href="https://padoh.webex.com">https://padoh.webex.com</a>)</p> <p>The PADOH will provide in-service sessions in Infection</p>	<p>Ongoing</p> <p>December 2011</p>

Planning Level	Check Items Underway	Check Items Planned	Items Planned for Implementation (or currently underway)	Target Dates for Implementation
			<p>Prevention and Hospital Epidemiology to PADOH staff responsible for HAI activities. These include staff from the OQA, BOE, and the Bureau of Community Health Systems. IPs from hospitals and nursing homes currently reporting to NHSN will also be invited to participate in these training sessions. Members of the collaborative projects will also be invited to attend these training sessions. The sessions will be conducted in the six (6) Community Health Districts of the PADOH. The PADOH will contract with a vendor to provide the speakers and training materials. PADOH staff will provide assistance with the logistics of the different training sessions.</p>	
<p><b>Level II</b></p>	<p style="text-align: center;"><input checked="" type="checkbox"/></p>	<p style="text-align: center;"><input type="checkbox"/></p>	<p>5. Implement strategies for compliance to promote adherence to HICPAC recommendations</p> <p>The prevention collaboratives will focus on evidence-based interventions that are known to result in HAI reductions within the HHS targeted areas. Process measures will be developed to reflect the evidence-based interventions and provide a means to measure compliance.</p> <p>i. Consider developing statutory or regulatory standards for healthcare infection control and prevention or work with healthcare partners to establish best practices to ensure adherence</p> <p>In July 2007, the PA legislature mandated a comprehensive reporting of HAIs in PA’s health care facilities. This legislation, known as the Health Care-Associated Infection Prevention and Control Act (Act 52), required that all PA acute care facilities (ACFs) use CDC’s NHSN for reporting. Reporting in NHSN must include all components of the</p>	<p>December 2011</p> <p>Completed/ Ongoing</p>

Planning Level	Check Items Underway	Check Items Planned	Items Planned for Implementation (or currently underway)	Target Dates for Implementation
	<input checked="" type="checkbox"/>	<input type="checkbox"/>	<p>Patient Safety Module and must be facility wide. The data are shared between PHC4, the PSA, and the PADOH, which is required to analyze the data and report facility-specific rates. Act 52 also requires annual HAI reduction targets by all facilities, making PA the first state to explicitly link HAI reporting to prevention. PADOH is tasked to set annual reduction targets. Act 52 also mandates MRSA and MDRO screening, along with HAI reporting (through a separate system) from long term care facilities (LTCFs).</p> <p>Act 52 requires hospitals to meet or exceed the benchmark of a <b>10% reduction in HAI rates</b> when comparing baseline rates (2009 data) of indicator infections with rates from the subsequent year (2010 data). A hospital with an HAI rate that does not meet the benchmark appropriate to that type of facility will be required to submit a plan of correction to the Department within 60 days. After 180 days, a hospital that has not shown progress in reducing its HAI rate will consult with and obtain PADOH approval for a new plan of correction that includes resources available to assist the facility. After an additional 180 days, a hospital that still fails to show progress in reducing its rate may be subject to sanctions under The Health Care Facilities Act. The PADOH will use standardized infection ratio (SIR) as the analysis framework to provide accurate comparison mechanisms among health care facilities.</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>The Office of Quality Assurance is the state regulatory</p>	<p>Completed/ Ongoing</p>

Planning Level	Check Items Underway	Check Items Planned	Items Planned for Implementation (or currently underway)	Target Dates for Implementation
	<input checked="" type="checkbox"/>	<input type="checkbox"/>	<p>authority for health care facilities and also the state survey agency for CMS conditions of participation of health care facilities and will also include HAI prevention activities.</p> <p>iii. Improve regulatory oversight of hospitals, enhancing surveyor training and tools, and adding sources and uses of infection control data</p> <p>The PADOH has integrated the HAI and regulatory oversight process and will use an HAI data driven approach to target surveys going forward</p>	<p>Completed/ Ongoing</p> <p>To be determined</p>
	<input type="checkbox"/>	<input checked="" type="checkbox"/>	<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>	
	<input type="checkbox"/>	<input checked="" 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>The Collaborative Workgroup will plan this activity after the initial data from the original pilot program has been analyzed for opportunities for improvement.</p>	December 2011
	<input type="checkbox"/>	<input checked="" type="checkbox"/>	<p>7. Establish collaborative to prevent HAIs in nonhospital settings (e.g., long term care, dialysis)</p> <p>Long Term Care Facilities are required to report HAIs through the PA-PSRS system. Collaborative efforts will be developed based on the data analyzed from these reports for</p>	December 2011

Planning Level	Check Items Underway	Check Items Planned	Items Planned for Implementation (or currently underway)	Target Dates for Implementation
			<p>the development of future collaborative process improvements models for this patient care setting.</p> <p>Quality Assurance will be performing the new CMS/CDC ambulatory survey protocols in one third of the states ambulatory surgery centers starting in 2010.</p>	

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

Planning Level	Check Items Underway	Check Items Planned	Items Planned for Implementation (or currently underway)	Target Dates for Implementation
Level I	<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 i. Establish evaluation activity to measure progress towards targets and  PADOH will monitor progress quarterly and will evaluate annual performance to determine benchmark targets and the need to change target measures or areas as well as identify any areas for improvement	2010
	<input type="checkbox"/>	<input checked="" type="checkbox"/>	ii. Establish systems for refining approaches based on data gathered  PADOH will present the data from the annual review to the HAI Advisory Committee for consultation	2010
Level II	<input 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 i. Disseminate state priorities for HAI prevention to healthcare organizations, professional provider organizations, governmental agencies, non-profit public health organizations, and the public  This will be provided in the annual reports on the benchmark areas.	2011
	<input checked="" type="checkbox"/>	<input type="checkbox"/>	3. Provide consumers access to useful healthcare quality	2010

			<p>measures</p> <p>Data will be provided at least annually in print and on the PADOH website</p>	
<b>Level III</b>	<input type="checkbox"/>	<input checked="" type="checkbox"/>	<p>4. Identify priorities and provide input to partners to help guide patient safety initiatives and research aimed at reducing HAIs</p> <p>The PADOH, thru its collaborative efforts, plans to issue the following reports, in an effort to provide guidance and patient safety initiatives to all ACF:</p> <ul style="list-style-type: none"> <li>i. <u>Quarterly project updates</u>: These updates will address all progress on data collection, analysis and other project related issues and problems. These reports will be submitted to the PADOH. The goal is to ensure that deadlines are met and problems are identified and resolved early.</li> <li>ii. <u>Interim Project Results Report</u>: This will be a report of preliminary project outcomes and will be submitted to the PADOH for review and discussion. The goal is to fully identify evaluation and project limitations and to begin organizing the final report.</li> <li>iii. <u>Publication-ready final report</u>: This report will outline and discuss the background, methods, results and the potential for wider application of the evaluated intervention. The goal is to disseminate and share this report with all facilities, interested organizations and eventually the public, and to identify “best practices” for the prevention of HAIs that could be incorporated into the state HAI Prevention Plan.</li> </ul>	December 2011