

## Oklahoma Preventing Healthcare Infections Program (OPHIP) State Plan 2010

The main objective of the Oklahoma Preventing Healthcare Infections Program (OPHIP) is to reduce the incidence of targeted infections that patients acquire in healthcare settings while receiving treatment for medical and surgical conditions. This will require a combination of: 1) implementing targeted statewide disease surveillance systems in select healthcare facilities and electronic reporting from targeted laboratories; 2) convening a multidisciplinary advisory group to assist the Oklahoma State Department of Health (OSDH) in further developing a detailed state plan to reduce and prevent healthcare-associated infections (HAIs); 3) training of healthcare infection preventionists in disease prevention strategies; and 4) establishing a prevention collaborative among acute care hospitals. The OSDH hired a HAI Plan Coordinator December 21, 2009, to facilitate these objectives.

### 1. Develop or enhance HAI program infrastructure

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

Planning Level	Check Items Underway	Check Items Planned	Items Planned for Implementation (or currently underway)	Target Dates for Implementation
Level I			<b>1. Establish statewide HAI prevention leadership through the formation of the Oklahoma Preventing Healthcare Infections Program (OPHIP) Advisory Council.</b>	
	<input checked="" type="checkbox"/>	<input type="checkbox"/>	i. Meet with stakeholders to explore options for formation of OPHIP Advisory Council.	10/12/09
	<input checked="" type="checkbox"/>		ii. Conduct regular meetings of the OPHIP Advisory Council.	01/26/10
	<input checked="" type="checkbox"/>		iii. Collaborate with local and state partners, including the Oklahoma Hospital Association, Oklahoma Foundation for Medical Quality, Oklahoma Association for Professionals in Infection Control (APIC), Epidemiologists and Professionals in Infection Control (EPIC), academic organizations, laboratorians and networks of acute care hospitals.	10/12/09
	<input checked="" type="checkbox"/>		iv. Identify specific HAI prevention targets	

		consistent with HHS priorities.	06/01/10
		<p><i>Other descriptions:</i>  The Commissioner of Health has appointed fourteen members to the OPHIP Advisory Committee. The first meeting is January 26, 2010. The Committee will initially meet bi-monthly. The Committee will provide leadership to the OSDH in further developing a comprehensive state plan to Prevent Healthcare-Associated Infections (HAIs), including identifying specific HAI prevention targets, determining training needs of healthcare infection preventionists, and establishing a prevention collaborative among acute care hospitals.</p>	
		<b>2. Establish an Oklahoma HAI surveillance, prevention, and control program.</b>	
<input checked="" type="checkbox"/>	<input type="checkbox"/>	i. Employ a State HAI Prevention Coordinator.	12/21/09
<input checked="" type="checkbox"/>	<input type="checkbox"/>	ii. Develop dedicated, trained HAI staff with at least one FTE (or contracted equivalent) to oversee the four major HAI activity areas (Integration, Collaboration, and Capacity Building; Reporting, Detection, Response and Surveillance; Prevention; Evaluation, Oversight and Communication).	12/21/09
		<p><i>Other descriptions:</i>  Since 2006, Oklahoma has had statutory {63 O.S. § Section 1-707} authority to require hospital public reporting of infection rates for intensive care unit patients for: 1) ventilator-associated pneumonia (VAP), and 2) central line-associated blood stream infections (CLABSI). Rules issued by OSDH Oklahoma Administrative Code Title 310 Chapter 667 – 310:667-1-3(h) and (i) require any hospital licensed in the State of Oklahoma to utilize the Centers for Disease Control and Prevention’s (CDC) National Healthcare Safety Network (NHSN) as the reporting mechanism for these infections. Statewide implementation was initiated in 2008 in adult intensive care units; all fifty hospitals identified are currently reporting</p>	

			CLABSI and VAP events through the NHSN. The Director of Quality Initiatives in the OSDH Medical Facilities Service (the hospital state licensing program) oversees the existing reporting system. The State HAI Prevention Coordinator was hired December 21, 2009.	
			<b>3. Integrate laboratory activities with HAI surveillance, prevention and control efforts.</b>	
	<input type="checkbox"/>	<input checked="" type="checkbox"/>	i. Expand laboratory reporting of reportable diseases to include reports of targeted HAIs.	02/15/10
Level II	<input type="checkbox"/>	<input checked="" type="checkbox"/>	<b>4. Improve coordination among OSDH programs that share responsibility for assuring or overseeing HAI surveillance, prevention and control i.e., Medical Facilities Service (MFS), Communicable Disease Division (CDD) and other government agencies or organizations (i.e., state licensing boards).</b>	12/31/10
			<i>Other descriptions:</i> Staff from the Office of the State Epidemiologist, MFS, and CDD are staffing the OPHIP Advisory Committee. The CDC Epidemic Intelligence Service Officer (pediatric infectious disease physician) assigned to Oklahoma in the CDD has also been appointed to the Advisory Committee. These staff will meet monthly to review and advance progress of the HAI objectives.	

	<input type="checkbox"/>	<input checked="" type="checkbox"/>	<p><b>5. Facilitate use of standards-based formats (e.g., Clinical Document Architecture, electronic messages) by healthcare facilities for purposes of electronic laboratory reporting (ELR) of HAI data.</b></p>	08/01/10
			<p><i>Other descriptions:</i>  The OSDH has already accomplished ELR projects with two high-volume laboratories in the state and receives data on general communicable disease laboratory results into our state's National Electronic Disease Surveillance System (NEDSS) database. Work to establish ELR with a third hospital laboratory in Tulsa, Oklahoma is underway. An important element of the Oklahoma HAI surveillance project is to contract directly with these laboratories to expand ELR transmission to include HAI-associated microbiology results, and to fund new ELR projects with in-state hospital laboratories. The developed HL7 ELR message will be sent directly to the OSDH, and then a subset message containing microbiology results and antimicrobial susceptibilities related to HAI surveillance will be transmitted in a compatible file format to the NHSN at CDC.</p>	

## 2. Surveillance, Detection, Reporting, and Response

Timely and accurate monitoring remains necessary to gauge progress towards HAI reduction. Public health surveillance has been defined as the ongoing, systematic collection, analysis, and interpretation of data essential to the planning, implementation, and evaluation of public health practice, and timely dissemination to those responsible for prevention and control. Increased participation in systems such as the National Healthcare Safety Network (NHSN) has been demonstrated to promote HAI reduction. Oklahoma is striving to simplify and enhance data collection, and improve dissemination of results to healthcare providers and the public to increase HAI prevention capacity. Additionally, we will enhance our capacity for investigating and responding to outbreaks and emerging infections among patients and healthcare providers. These outbreak investigations will help us identify preventable causes of infections including issues with the improper use or handling of medical devices; contamination of medical products; and unsafe clinical practices. The OSDH HAI Program also plans to develop and implement a validation method to ensure that data currently being collected and reported in the NHSN database is accurate and complete.

Improving the quality of health care is the vision of the OSDH. This is evident by how the OSDH Hospital Advisory Council worked with the OSDH and other partners to seek legislative action to publicly report healthcare-associated central line-related blood stream infections (CLABSI) and ventilator-associated pneumonia (VAP). Currently all fifty Oklahoma hospitals with adult intensive care units are reporting these infections. OSDH plans to additionally make healthcare-associated invasive methicillin-resistant *Staphylococcus aureus* (MRSA) a reportable condition for special study. OSDH plans to: 1) request the 25 hospitals that are currently reporting to the Oklahoma Foundation for Medical Quality MRSA project to join the OSDH group and confer view rights to the NHSN multi-drug resistant organisms (MDRO) module and 2) increase hospital participation to all medical surgical hospitals, excluding critical access hospitals. This would increase the program from 25 hospitals currently reporting data into the NHSN MDRO module to 97 hospitals. Finally, the OSDH HAI Program will enhance electronic laboratory reporting (ELR) with in-state laboratories to obtain HAI-associated microbiology test results.

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

Planning Level	Check Items Underway	Check Items Planned		Target Dates for Implementation
Level I	<input type="checkbox"/>	<input checked="" type="checkbox"/>	<b>1. Improve HAI outbreak detection and investigation.</b> i. Work with the OPHIP Advisory Committee and providers across the state to improve outbreak reporting to the OSDH. 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 healthcare settings (e.g., hepatitis B, hepatitis C, multi-drug resistant organisms, and other reportable HAIs).	
	<input type="checkbox"/>	<input checked="" type="checkbox"/>		12/31/10
	<input type="checkbox"/>	<input checked="" type="checkbox"/>		12/31/11
	<input checked="" type="checkbox"/>	<input type="checkbox"/>		ongoing
	<input type="checkbox"/>	<input checked="" type="checkbox"/>		12/31/10
	<input type="checkbox"/>	<input type="checkbox"/>	2. Enhance laboratory capacity for state and local detection and response to new and emerging HAI issues.	Not applicable
Level II			<b>3. Improve communication of HAI outbreaks and infection control breaches.</b> i. Develop standard reporting criteria including number, size and type of HAI outbreaks to be reported to OSDH. ii. Establish mechanisms or protocols for exchanging information about outbreaks or major infection control breaches among OSDH program areas and state licensing boards.	
	<input type="checkbox"/>	<input checked="" type="checkbox"/>		12/31/11
	<input type="checkbox"/>	<input checked="" type="checkbox"/>		12/31/11

Planning Level	Check Items Underway	Check Items Planned		Target Dates for Implementation
	<input checked="" type="checkbox"/>	<input type="checkbox"/>	<b>4. Identify at least two priority prevention targets for surveillance in support of the HHS HAI Action Plan</b>	
	<input type="checkbox"/>	<input checked="" type="checkbox"/>	i. Central Line-associated Bloodstream Infections (CLABSI)	07/01/08
	<input checked="" type="checkbox"/>	<input type="checkbox"/>	ii. Invasive methicillin-resistant <i>Staphylococcus aureus</i> (MRSA) Infections	12/31/10
			iii. Ventilator-associated Pneumonia (VAP)	07/01/08
			<b>5. Adopt national standards for data and technology to track HAIs (e.g., NHSN).</b>	
	<input type="checkbox"/>	<input checked="" type="checkbox"/>	i. Develop metrics to measure progress towards national goals (align with targeted state goals).	06/01/10
	<input type="checkbox"/>	<input checked="" type="checkbox"/>		07/01/10
	<input type="checkbox"/>	<input checked="" type="checkbox"/>	<b>6. Develop state surveillance training competencies.</b>	
			i. Begin local training for approximately 50 new hospitals regarding appropriate use of NHSN surveillance system including facility and group enrollment, data collection, management, and analysis.	07/01/10
			<i>Other descriptions:</i> To institute statewide reporting of healthcare-associated invasive methicillin-resistant <i>Staphylococcus aureus</i> (MRSA) infections, we will train personnel from nearly 75 hospitals (~50 new facilities) responsible for reporting MRSA infections.	
	<input checked="" type="checkbox"/>	<input type="checkbox"/>	<b>7. Develop tailored reports of Oklahoma surveillance data analyses.</b>	03/01/10
			<i>Other descriptions:</i> The first public reporting of VAP and CLABSI surveillance data will be released by March 1, 2010.	

Planning Level	Check Items Underway	Check Items Planned		Target Dates for Implementation
Level III	<input type="checkbox"/>	<input checked="" type="checkbox"/>	<b>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.</b>	
	<input type="checkbox"/>	<input checked="" type="checkbox"/>		i. Develop a validation plan. 01/01/11
	<input type="checkbox"/>	<input checked="" type="checkbox"/>	ii. Pilot test validation methods in a sample of healthcare facilities. 05/01/11	
	<input type="checkbox"/>	<input checked="" type="checkbox"/>	iii. Modify validation plan and methods in accordance with findings from pilot project. 06/01/11	
	<input type="checkbox"/>	<input checked="" type="checkbox"/>	iv. Implement validation plan and methods in all healthcare facilities participating in HAI surveillance. 09/01/11	
	<input type="checkbox"/>	<input checked="" type="checkbox"/>	v. Analyze and report validation findings. 12/31/11	
	<input type="checkbox"/>	<input checked="" type="checkbox"/>	vi. Use validation findings to provide operational guidance for healthcare facilities that targets any data shortcomings detected. 12/31/11	
	<input type="checkbox"/>	<input checked="" type="checkbox"/>	<b>9. Develop preparedness plans for improved response to HAI.</b>	
	<input checked="" type="checkbox"/>	<input type="checkbox"/>	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. 12/31/11	
	<input checked="" type="checkbox"/>	<input type="checkbox"/>	<b>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.</b>	ongoing
			<b>11. Adopt integration and interoperability standards for HAI information systems and data sources.</b>	



Planning Level	Check Items Underway	Check Items Planned		Target Dates for Implementation
	<input type="checkbox"/>	<input checked="" type="checkbox"/>	i. Improve overall use of surveillance data to identify and prevent HAI outbreaks or transmission in healthcare settings (e.g., hepatitis B, hepatitis C, multi-drug resistant organisms (MDRO), and other reportable HAIs) in inpatient healthcare facilities.	12/31/10
	<input type="checkbox"/>	<input checked="" type="checkbox"/>	ii. Promote definitional alignment and data element standardization needed to implement HAI surveillance.	12/31/11
	<input type="checkbox"/>	<input checked="" type="checkbox"/>	<b>12. Enhance electronic reporting and information technology for healthcare facilities to reduce reporting burden and increase timeliness, efficiency, comprehensiveness, and reliability of the data.</b>	12/31/11
	<input type="checkbox"/>	<input checked="" type="checkbox"/>	<b>13. Make available risk-adjusted HAI data that enables state agencies to make comparisons between hospitals.</b>	03/31/11
			14. Enhance surveillance and detection of HAIs in nonhospital settings.	Not applicable
			<i>Other descriptions:</i> Oklahoma piloted a 2008 CMS project that assessed ambulatory surgical center (ASC) infection control practices, however, we are not expecting to be able to expand HAI surveillance and prevention activities to include non-acute care facilities before 12/31/11.	

### 3. Prevention

State implementation of HHS Healthcare Infection Control Practices Advisory Committee (HICPAC) recommendations is a critical step towards the elimination of HAIs. CDC with HICPAC has developed evidence-based HAI prevention guidelines cited in the HHS Action Plan for implementation. These guidelines are translated into practice and implemented by multiple groups in hospital settings for the prevention of HAIs. CDC guidelines have also served as the basis for the Centers for Medicare and Medicaid Services (CMS) Surgical Care Improvement Project. These evidence-based recommendations have also been incorporated into Joint Commission standards for accreditation of U.S. hospitals and have been endorsed by the National Quality Forum. The Oklahoma HAI Program will develop strategies for implementation of HICPAC recommendations for at least two prevention targets and establish an HAI collaborative with at least ten hospitals.

**Table 3: 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"/>	<b>1. Implement HICPAC recommendations.</b> i. Develop strategies for implementation of HICPAC recommendations for at least two prevention targets specified by the OPHIP Advisory Committee	09/01/10
	<input type="checkbox"/>	<input checked="" type="checkbox"/>	<b>2. Establish prevention working group under the OPHIP Advisory Committee to coordinate state HAI collaboratives</b> i. Assemble expertise to consult, advise, and coach inpatient healthcare facilities involved in a HAI prevention collaborative.	06/01/10
	<input type="checkbox"/>	<input checked="" type="checkbox"/>	<b>3. Establish HAI collaboratives with at least 10 hospitals.</b> 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.	09/01/10
	<input type="checkbox"/>	<input checked="" type="checkbox"/>		09/01/10
	<input type="checkbox"/>	<input checked="" type="checkbox"/>		iii. Establish and provide feedback of standardized outcome data to track progress.

Planning Level	Check Items Underway	Check Items Planned	Items Planned for Implementation (or currently underway)	Target Dates for Implementation
			<i>Other descriptions:</i> Subject to approval by the OPHIP Advisory Council, the OSDH anticipates developing and implementing the Oklahoma HAI Prevention Collaborative, a multicenter focus on the use of “bundles” interventions to promote patient safety by preventing CLABSI. The key components of the central line bundle are: hand hygiene; maximal barrier precautions upon insertion; chlorhexidine skin antisepsis; optimal catheter site selection with avoidance of the femoral vein for central venous access in adult patients; and daily review of line necessity with prompt removal of unnecessary lines.	
	<input type="checkbox"/>	<input checked="" type="checkbox"/>	<b>4. Develop state HAI prevention training competencies.</b> 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.	06/01/11
			<i>Other descriptions:</i> In order to facilitate expertise throughout Oklahoma acute care facilities, the OPHIP will provide additional infection control certification educational training and extensive NHSN training.	
Level II	<input type="checkbox"/>	<input checked="" type="checkbox"/>	<b>5. Implement strategies for compliance to promote adherence to HICPAC recommendations.</b> i. Enhance survey staff knowledge and understanding of HICPAC recommendations by providing ongoing training in the area of infection prevention strategies and promote the implementation of these recommendations during onsite surveys of health care providers.	12/31/10

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"/>	<b>6. Enhance prevention infrastructure by increasing joint collaboratives with at least 20 hospitals.</b>	09/01/11
	<input type="checkbox"/>	<input type="checkbox"/>	7. Establish collaborative to prevent HAIs in nonhospital settings (e.g., long term care, dialysis).	Not applicable

#### 4. Evaluation and Communications

Program evaluation is an essential organizational practice in public health. Continuous evaluation and communication of practice findings integrates science as a basis for decision-making and action for the prevention of HAIs. Evaluation and communication allows for learning and ongoing improvement to occur. Routine, practical evaluations can inform strategies for the prevention and control of HAIs. The Oklahoma HAI Program will conduct evaluation, develop a communication plan, and provide consumers access to healthcare quality measures.

**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"/>	<b>1. Conduct needs assessment and/or evaluation of the state OPHIP program to learn how to increase impact.</b>	
	<input type="checkbox"/>	<input checked="" type="checkbox"/>	i. Establish needs assessment.	04/01/10
	<input type="checkbox"/>	<input checked="" type="checkbox"/>	ii. Establish evaluation activity to measure progress towards targets.	06/01/10
	<input type="checkbox"/>	<input checked="" type="checkbox"/>	iii. Establish systems for refining approaches based on data gathered.	12/01/10
	<input type="checkbox"/>	<input checked="" type="checkbox"/>	<b>2. Develop and implement a communication plan about the OPHIP and progress to meet public and private stakeholders needs.</b>	
			i. Disseminate comprehensive state plan for HAI prevention to healthcare organizations, professional provider organizations, governmental agencies, non-profit public health organizations, and the public.	12/01/10
Level II	<input type="checkbox"/>	<input checked="" type="checkbox"/>	<b>3. Provide consumers access to useful healthcare quality measures by posting data on <a href="http://www.health.ok.gov">www.health.ok.gov</a>.</b>	03/01/10 and annually
Level III	<input type="checkbox"/>	<input checked="" type="checkbox"/>	<b>4. Identify priorities and provide input to partners to help guide patient safety initiatives and research aimed at reducing HAIs.</b>	06/01/11