



State of Maine Healthcare-Associated Infections Plan 2015-2018



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Department of Health and Human Services
Maine Center for Disease Control and Prevention
Division of Infectious Disease
Healthcare Associated Infection Program

Introduction:

Healthcare-Associated infections (HAIs) are infections caused by a wide variety of common and unusual bacteria, fungi and viruses during the course of receiving medical care. Medical advances have brought lifesaving care to patients, yet many of those advances come with a risk of acquiring an HAI. These infections related to medical care can be devastating and even deadly.

On any given day, about one in 25 hospital patients have at least one HAI. There were an estimated 722,000 HAIs in United States acute care hospitals in 2011. About 75,000 hospital patients with HAIs died during their hospitalization.¹ As our ability to prevent HAIs grows, these infections are increasingly unacceptable.

Treatment for HAIs and other infections is becoming more challenging as antibiotic resistance increases. Several bacteria have gained the ability to generate enzymes that destroy antibiotics or can change their cell wall structure to block antibiotics. In these cases, antibiotic choices for treatment are becoming increasingly limited, expensive and in some cases, nonexistent.

Each year in the United States, at least 2 million people have an infection associated with bacteria that are resistant to antibiotics, and at least 23,000 people die each year because of these infections². Antibiotic-resistant infections can happen anywhere. Data show that most happen in the community; however, most deaths related to antibiotic resistance happen in inpatient healthcare settings, such as hospitals and nursing homes. Antibiotic resistance is one of the most pressing threats facing the world today.²

The road to eliminating HAIs and combating antibiotic resistance is a road traveled by many. National leadership is issuing guidance in the form of action plans. Goals are established and annual reports monitor progress.

- Action plans:
 - *National Action Plan to Prevent Health Care-Associated Infections: Road Map to Elimination.* April 2013. (U.S. Department of Health and Human Services)
 - *National Action Plan for Combating Antibiotic Resistant Bacteria.* March 2015. (U.S. Government)
- Goals: *Healthy People 2020.* December 2010. (CDC)
- Progress Reports: *HAI Progress Report.* Annual Report. (CDC)

The State of Maine has an important role in this national movement. Numerous organizations across the state as well as healthcare facilities in acute care, extended care, and ambulatory care settings are working hard to eliminate HAIs and combat antibiotic resistance. Maine's HAI Plan is our State's action plan for this work over the next three years. This plan has three key areas of focus:

- Responding to threats of infectious disease transmission
- Analyzing data to target prevention activities
- Preventing future HAIs and antibiotic resistance through education and training, promoting best practices through group collaborative programs and expanding antimicrobial stewardship.

The Maine CDC developed this plan in consultation with the HAI Collaborating Partners advisory council, a group jointly convened by the Maine CDC and Maine Quality Forum (MQF) and composed of a broad range of stakeholders listed in Appendix A. The MQF will include an annual summary of the plan's activities and outcomes in Maine's State HAI Report.

¹ 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.

² Centers for Disease Control and Prevention. Antibiotic/Antimicrobial Resistance website.: <http://www.cdc.gov/drugresistance>.

Acronyms

AR	Antibiotic Resistance
CAUTI	Catheter-Associated Urinary Tract Infection
CDC	federal Centers for Disease Control and Prevention
CDI	<i>Clostridium difficile</i> Infection
CEO	Chief Executive Officer
CLABSI	Central Line-Associated Blood Stream Infection
CRE	Carbapenem-Resistant Enterobacteriaceae
DART	Data Analysis by Region for Trends Program
DHHS	Department of Health and Human Services
DNA	Deoxyribonucleic acid
HAI	Healthcare Associated Infection
HETL	Health and Environmental Testing Laboratory
ICAP	Infection Control Assessment and Promotion Program
Maine CDC	Maine Center for Disease Control & Prevention
MDRO	Multidrug-Resistant Organism
MHA	Maine Hospital Association
MHDO	Maine Health Data Organization
MICIS	Maine Independent Clinical Information Service
MQF	Maine Quality Forum
MRSA	Methicillin-Resistant <i>Staphylococcus aureus</i>
NHSN	National Healthcare Safety Network
PTC-APIC	Pine Tree Chapter – Association for Professionals in Infection Control and Epidemiology
QIN-QIO	Quality Innovation Network – Quality Improvement Organization
VAE	Ventilator-Associated Event
VISA	Vancomycin-Intermediate resistant <i>Staphylococcus aureus</i>
VRE	Vancomycin-Resistant Enterococcus

GOAL

Maine will work to eliminate healthcare-associated infections and combat antibiotic resistance by collaborating with stakeholders across the healthcare continuum and the public to focus on three key actions:

Respond, Analyze, and Prevent.

RESPOND

Detect, investigate, validate, control and prevent HAI-related outbreaks

Ensure preparedness for emerging pathogens, especially those needing enhanced precautions

ANALYZE

Prioritize HAI data for statewide surveillance

Ensure quality of data

Ensure surveillance data is available to key stakeholders

Increased data analysis

PREVENT

Provide education, training and consultation

Engage in infection prevention activities

Expand antimicrobial stewardship

RESPOND				
Priorities	2015	2016	2017	2018
Detect, investigate, validate, control and prevent HAI-related outbreaks	Define HAI outbreak for State of Maine, based on federal CDC epidemiological definitions. Design and implement a system to track HAI outbreak response and outcomes, for outbreaks reported to public health.	Assess capacities of healthcare facilities to detect, report and respond to potential outbreaks and emerging threats using standardized tool from federal CDC. Determine gaps in HAI outbreak reporting and response in all healthcare settings	Address gaps in outbreak investigation capacity by working with healthcare partners to develop a plan and infrastructure to improve outbreak reporting and response.	Explore public reporting of outbreak data, the need for validation of outbreak data prior to public reporting and which outbreaks are appropriate of public reporting, in real-time.
		Explore the need for additional laws related to State authority for public health to conduct investigations related to HAI outbreaks and lapses in infection prevention and control.	Explore communication plans among healthcare facilities to minimize the risk of transmission of infectious disease and/or outbreak.	
Ensure preparedness for emerging pathogens, especially those needing enhanced precautions	Assess Ebola readiness at all four Ebola-assessment hospitals in the state. DHHS to work collaboratively with these selected healthcare facilities to address any remaining gaps in readiness in order to achieve “capacity met” status in each of 11 domains of preparedness. Conduct webinar with all hospitals to share findings.	Explore state level emerging pathogen drill and/or table top exercise at HAI conference.		
	CRE should become a ‘Notifiable Conditions’ by the fall of 2015. All cases of CRE would be reportable to Maine CDC for epidemiologic study.	Analyze initial data from CRE as a Notifiable Condition in the state. Based on first year findings, determine the need for additional guidance for control of CRE beyond the federal CDC 2012 CRE Toolkit. Investigate having local labs send CRE specimens to HETL to store, in case funds for PCR become available in the future.	Include CRE data in the Maine CDC’s <i>Reportable Infectious Diseases in Maine</i> annual summary report (include genotypic data).	

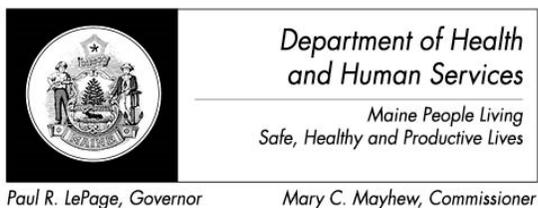
ANALYZE

Priorities	2015	2016	2017	2018
Prioritize HAI data for statewide surveillance	Update HAI reporting requirements (Chapter 270) to bring it into alignment with state and federal HAI changes.	Review and revise state mandated HAI reporting requirements (Chapter 270).		
		Explore surveillance for LTC facilities, targeting MDROs, antibiotic usage, use of MHDO vs. NHSN for reporting.		
Ensure quality of HAI data	Conduct validation for NHSN reportable data on a rotating schedule, as needed.			
Ensure surveillance data is available to key stakeholders	Legislature and Public: State HAI Annual Report issued by MHDO/MQF.			
	Public: Comparisons of acute care hospital cost, patient satisfaction and HAI data provided through Compare Maine			
	Healthcare Facilities: Facility and region (six New England states) reports for facilities in QIN-QIO collaborative programs.			
	Acute Care: CEO Dashboard Reports issued annually by Maine CDC; facility specific trend of HAI and prevention data. <i>(to be expanded to other facilities types as they come on board with HAI reporting)</i>			
	The Maine Hospital Association (MHA) Board of Directors: Regularly reviewing hospital specific and statewide C. difficile and MRSA data obtained from the Maine CDC/MHDO.			
Increase data analysis	<p>Develop and implement the Data Analysis by Region for Trends (DART) Program.</p> <ul style="list-style-type: none"> • Create an inventory of all healthcare settings in the state. Include at least one infection control point of contact at each facility; identify current regulatory/licensing authority for each healthcare facility; explore obtaining infection control related regulatory survey findings. • Build capacity to analyze data reported by facilities in a defined region to allow for comprehensive assessment of potential HAI threat, and communicate results with healthcare facilities • Work with federal CDC to guide analytic direction and identify facilities for prioritized assessment/response. 			

PREVENT				
Priorities	2015	2016	2017	2018
Provide education, training and consultation	Acute Care: Education webinars targeting CLABSI, CAUTI, CDI, VAE prevention (QIN-QIO). Acute Care: Ebola preparedness training (federal CDC)	Build resource list or library of various educational tools, presentations, etc. that have been created. Share repository with healthcare facilities in state.	Promote patient education ‘What you can do to help prevent infection’. Explore media sources such as public service announcements, Facebook, Twitter, radio spots, newspapers, and websites.	
	Offer Infection Preventionist mentorship program (PTC-APIC)			
		Explore logistics of holding a bi-annual HAI prevention conference in 2016 or 2017. Explore partnership to host conference with PTC-APIC and/or the six New England states with potential public participation.		
		Explore Infection Prevention and Control staffing capacity levels. Explore infection control and prevention competency as part of licensing or credentialing for providers.	<u>Extended Care Areas for Focus:</u> <ul style="list-style-type: none"> Enhance understanding of differences between acute and long term care environments, including patient and family education MDROs in long term care – recognition and management Accessibility to hand washing equipment/hand sanitizer & PPE IC issues with shared bathrooms, etc. 	
Engage in infection prevention activities.		Develop and implement Infection Control Assessment and Promotion (ICAP) Program. <ul style="list-style-type: none"> Based on data from the DART Program, perform targeted assessments in infection prevention and control at healthcare facilities. Identify gaps and work through the HAI advisory council for state/region mitigation planning. Implement a response plan to address potential emerging threats identified by using enhanced surveillance. 		
	Acute Care: Collaborative programs hosted by Healthcentric Advisors [QIN-QIO], to reduce HAIs related to CLABSI, CAUTI, CDI, and VAE.			
Expand antimicrobial stewardship	AMS education module and academic detailing continues for provider practices (MICIS).	Engage HAI advisory council in developing state action plan for improving antibiotic usage in state. <ul style="list-style-type: none"> Begin with survey of healthcare facilities AMS surveillance programs. Explore impact of antibiotic shortage issues on AMS recommendations. Explore best practices for patient education that a specimen for culture obtained, results, and dosage of antibiotic regimen, if necessary. Choosing Wisely campaign materials may be useful. 		
		Promote Get Smart About Antibiotics Week (November) through public service announcements and media.		
			State public health laboratory (HETL) to roll out study with clinical laboratories to conduct DNA analysis on isolates of multidrug resistant organisms (e.g. MRSA, VRE, CRE and VISA) in order to determine the resistance genes most frequently seen in Maine. The next class of antibiotics will target these resistance genes in bacteria. Share the findings with providers.	

Appendix A: Maine HAI Collaborating Partners Membership

Organization	Representative	Title
APIC-Pine Tree Chapter Acute Care, IPPS facility	Gwen Rogers	Infection Preventionist Maine Medical Center
APIC- Pine Tree Chapter Acute Care, CAH facility	Ann Graves	Infection Preventionist Waldo County General Hospital
Maine Healthcare Association, LTC	Lynn Johnston	Infection Preventionist Maine Veterans' Home
Home Health Representative	Bob Abel*	Chief Nursing Officer Home Health Visiting Nurses
Ambulatory Surgery Center Representative	Linda Ruterbories	Director Program Development OA Centers for Orthopaedics
Maine CDC	Dr. Siiri Bennett	State Epidemiologist
	Rita Owsiak	HAI Coordinator
Maine Hospital Association	Sandy Parker	VP & General Counsel
Maine Quality Forum / Maine Health Data Organization	Karynlee Harrington	Executive Director
Healthcentric Advisors (QIN-QIO)	Danielle Hersey	Acting State Director Hospital Coordinator
Husson Univ. School of Pharmacy / Eastern Maine Medical Center	Anthony Casapao, PharmD	Assistant Professor / Infectious Disease Clinical Pharmacy Specialist
Maine Society of Health Systems Pharmacists	Tyson Thornton	Director of Pharmacy Sebasticook Valley Hospital
	Frank Mack	Pharmacist, Mercy Hospital
Laboratory Representatives	Rick Danforth	Maine Health and Environmental Testing Laboratory:
	Cathy Dragoni	NorDx
Healthcare Systems and Districts	Dr. Jay Reynolds	Administration
	Dr. August Valenti	Infectious Disease Physician Maine Medical Center
	Dr. Sandy Harris	Infectious Disease Physician St. Mary's Regional Medical Center
	Dr. Josh Cutler	Physician, Maine Medical Center
OMNE – Nursing Leaders of ME	Bob Abel*	Chief Nursing Officer Home Health Visiting Nurses
Consumers for Affordable Healthcare	Emily Brostek	Executive Director
Consumer Representative	Kathy Day	Consumer Advocate
State of Maine: Public Health Emergency Preparedness	William Jenkins	Director Office of Public Health Emergency Preparedness, Maine CDC
State of Maine: Division of Licensing & Regulatory Services	Dale Payne	Health Surveyor Maine DHHS
Committee Staff	Rita Owsiak	Maine CDC HAI Program Coordinator
	Paul Livingston	Maine CDC
	Stuart Bratesman	Muskie School of Public Service
	Sherry Gildard	Univ. of Southern Maine



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