



Illinois Action Plan to Prevent Health Care Associated Infections and Antimicrobial Resistance

March 2015—April 2020

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Introduction/Strategic Planning Methods

Health care associated infections (HAIs), including those caused by antimicrobial resistant organisms, cause significant harm to patients, are costly, and are preventable. The Centers for Disease Control and Prevention (CDC) has identified eliminating HAIs as a “winnable battle,” in recognition of the fact that it is a national health priority for which there are effective strategies for prevention. The *Illinois Action Plan to Prevent Health Care Associated Infections and Antimicrobial Resistance* is intended to serve as a guide to coordinate efforts in Illinois to make a major impact on prevention of HAIs across the state.

The Illinois Department of Public Health (IDPH) Division of Patient Safety & Quality, in partnership with the HAI and Antimicrobial Resistance (AR) Prevention Advisory Council (hereafter “Advisory Council”), began a strategic planning process in May 2015 to develop a five-year strategic plan to monitor and prevent HAIs and combat antimicrobial resistance. The process was led by a Strategic Planning Committee comprised of five IDPH staff and six members of the Advisory Council. Additionally, two external consultants facilitated the planning process.

The strategic planning process was launched on May 1, 2015 via a two-hour conference call with approximately 35 members of the Advisory Council in attendance. To ensure a solid foundation from which to gauge the starting point for the new plan, this meeting provided an update on the progress made toward meeting the goals and objectives outlined in the 2009 Illinois HAI Prevention Plan. Many of the goals established in 2009 were exceeded, and it was agreed that, to be most effective, this strategic plan should be considered a *living document* and periodically updated in response to new developments in HAI/AR Prevention efforts. It should also be noted that while IDPH serves as the convener for the Advisory Council, this plan is intended to guide prevention efforts beyond the activities led by the state health department. The actions and contributions of partner organizations, stakeholders, health care institutions, and individual professionals across the state are critical to achieving common goals. Participants in the strategic planning process were asked to review, consider, and discuss alignment of *Illinois’ Action Plan to Prevent Health Care Associated Infections and Antimicrobial Resistance* with:

- National Action Plan to Prevent Health Care-Associated Infections: Road Map to Elimination (2013)
- National Strategy for Combating Antibiotic-Resistant Bacteria (2014)
- National Action Plan for Combating Antibiotic-Resistant Bacteria (2015)
- Strategic Plans of partner and stakeholder organizations

The Advisory Council identified four strategic priorities for HAI/AR prevention in Illinois:

- General infection prevention across the spectrum of care
- Treatment and assessment of infectious disease, including outbreaks
- Expansion of antimicrobial stewardship to all health care settings, including reporting of antimicrobial resistance
- Targeted efforts to prevent *C. difficile* and multidrug resistant organisms (MDROs) like carbapenem-resistant Enterobacteriaceae (CRE)

A one-day retreat with 50 members of the Advisory Council on June 2, 2015 resulted in a mission and vision statement for the action plan; a Strengths, Weaknesses, Opportunities, Threats (SWOT) analysis; and an initial draft of priorities for action. Work groups were formed around the four critical issue areas, and each work group met for two conference calls.

The output from the eight work group calls was presented at a one-day retreat on September 25, 2015, which included a presentation by Dr. Scott Fridkin, Senior Advisor for Antibiotic Resistance at the Centers for Disease Control and Prevention. At the retreat, 30 participants transitioned the action plan into a framework including goals, objectives, strategies/tasks, timeline, and performance indicators. IDPH staff compiled the output from the second retreat for final review by the Advisory Council in March 2015. In total, more than 85 people from IDPH, the Advisory Council, and other stakeholders contributed to the strategic plan through participation in the in-person retreats, conference calls, and/or via email.

Mission & Vision

Vision

The state of Illinois ensures health and patient safety through prevention of health care associated and antimicrobial resistant infections driven by a sustainable, collaborative, and coordinated health care system.

Mission

Reduce health care associated and antimicrobial resistant infections through education, practice guidance, surveillance, and data-driven public policy and quality improvement efforts that strategically engage health care consumers, providers, and stakeholders.

The Advisory Council created the mission and vision at its first retreat in June, and used these statements to guide the drafting of the goals of the action plan.

Four priority areas were identified as a result of the workgroup conference calls, and the action plan is structured as follows:

- Infection Prevention Infrastructure, Standards, and Practices
- Assessment/Treatment/Outbreak
- Antimicrobial Stewardship
- Multi-Drug Resistant Organisms

Key Strategies: Cross-cutting topics were integrated as key strategies throughout the plan rather than as separate goals. The following themes are incorporated throughout all areas of the plan:

Education & Training: Education and training for health care professionals is essential for ensuring a competent work force that adopts best practices to prevent HAIs and AR. Education for policy makers, administrators, and community members will increase awareness of, and support for, investment in efforts to prevent HAIs and AR.

Policy Development: Policies establish a clear standard for acceptable practices and can be used to focus investment of resources on priority areas. Examples include using policies about infection control training as a strategy to achieve the goal of having a competent work force; policies for HAI and AR reporting help to obtain the data necessary to inform action.

Data/Surveillance: Surveillance provides data that will be used to measure, inform, and guide improvement efforts. A collaborative approach that includes public health, health care, and electronic health records (EHR) is currently underway to determine how existing data and surveillance systems can be leveraged to inform prevention efforts further and create meaningful ways to monitor progress where data are lacking.

Communication: Communication is the exchange of information and is necessary to spread best practices. Improving communication across the continuum of care, particularly when patients transition between health care facilities or providers, will facilitate more timely interventions and prevention of HAIs. For example, when a facility admits a patient, it is critical that they know if that patient is (or suspected to be) infected or colonized with an MDRO so that appropriate action can be taken (e.g., placing the patient on contact precautions to contain spread of the organism to other patients).

Summary of HAI trends in Illinois

The Advisory Council discussed current efforts underway in Illinois to prevent and monitor AR and HAIs. The following summary of data from the National Healthcare Safety Network (NHSN) was used to guide action planning:

	2014 IL SIR	% Difference 2014 IL vs. National Baseline	% Change 2014 IL vs. 2012 IL		HHS 2013 Prevention Target	Target Met?	
CLABSI	0.45	55%↓	17%↓	★	50%↓	YES	★
MRSA	0.71	29%↓	16%↓	★	50%↓	NO	✘
C. DIFFICILE	1.00	0%↓	7%↑	✘	30%↓	NO	✘

CLABSI: For all ICUs combined in 2014, central line-associated bloodstream infections (CLABSI) Standardized Infection Ratio (SIR) in Illinois intensive care units (ICUs) was 0.45 (95% CI 0.403, 0.499). This translates to a 55% reduction compared to the national referent period. This statistically significant reduction in CLABSIs was achieved in all three intensive care settings combined and individually – adult ICUs (AICU), neonatal ICUs (NICU), and pediatric ICUs (PICU). The results show that the overall Illinois SIRs for CLABSIs decreased by 17% from 2012 to 2014.

MRSA: In 2014, there were 296 *methicillin-resistant Staphylococcus aureus* (MRSA) bloodstream infections reported compared to 419 predicted, for an SIR of 0.706 (95% CI 0.629, 0.790). This translates to a 29% reduction compared to the national referent period. There was a significant decrease of 16% from 2012 to 2014.

CDI: In 2014, there were 4640 *Clostridium difficile infections* (CDI) reported compared to 4661 predicted, for an SIR of 0.995 (CI 0.967, 1.024), which is statistically similar to the national referent period. There was a significant increase of 7% from 2012 to 2014.

	2013 IL SIR	% Difference 2013 IL vs. National Baseline	% Change 2013 IL vs. 2012 IL		HHS 2013 Prevention Target	Target Met?	
CAUTI	0.97	3%↓	7%↓	=	25%↓	NO	✘
SSI HYST	0.58	42%↓	36%↓	★			
SSI COLON	0.81	19%↓	32%↑	✘ ¹			
SSI KPRO**	0.36	64%↓	36%↓	★			
SSI CABG**	0.48	52%↓	14%↓	★			
SSI combined	0.63	37%↓			25%↓	YES	★

** SSI KPRO & SSI CABG measures for IL analyzed by state fiscal year: 2012 = 7/2011-6/2012;
2013=7/2012-6/2013

¹ Significant definition change in SSI Colon measure lead to an artificial increase in rates

For SSI (surgical site infection) measures, the table shows the 2013 data because 2014 data have not been analyzed as of the time of this publication. Overall, there were significant decreases in SIR values for all surgical categories except SSI Colon where definition changes affected the reported results.

Action Plan

Following the September 2015 retreat, members of the strategic planning committee further refined the action plan. It was subsequently presented to the Advisory Council and other participants in the strategic planning process in March 2016 for feedback. The following sections outline the key priorities, goals, objectives, strategies/tasks, and performance indicators to guide HAI/AR prevention efforts in Illinois over the next five years. The Illinois Department of Public Health, Division of Patient Safety and Quality will lead implementation of this plan in partnership with the Advisory Council.

Priority Area A: Infection Prevention Infrastructure, Standards, and Practices

Goal #1: Illinois will implement a comprehensive and effective infection prevention and control system with standards, policies, and practices in place for all health care settings.

Objective 1.1 IDPH will provide leadership for coordination and collaboration between public health and all health care settings across the continuum of care.

Strategy/Task

- 1.1.1 Engage an array of partners and stakeholders from across health care settings and disciplines in the HAI/AR Prevention Advisory Council. Coordinate efforts with partners and stakeholders to maximize impact of prevention efforts
- 1.1.2 Utilize the HAI/AR prevention plan to evaluate progress toward achieving goals set forth in the plan; revise the plan as needed to reflect emerging needs and priorities
- 1.1.3 Ensure efficient communication between IDPH & Infection Prevention contacts at facilities

Performance Indicator/Data Source

- Number of meetings/communications with HAI/AR Prevention Advisory Council
- Summary of progress toward achieving goals prepared every 6 months and shared with the Advisory Council
- Creation of a communication plan for disseminating information to all health care settings across the spectrum of care. This includes developing and annually updating an inventory of health care settings and facilities that includes a point of contact for infection prevention and control (or method for reaching that individual), available HAI/AR related data, and current regulatory/licensing oversight authorities

Objective 1.2 Identify and disseminate information on implementation of best practices across health care settings for infection prevention and control.

Strategy/Task

1.2.1 Provide resources and incentives for facilities to participate in quality improvement activities and to incorporate current guidelines and recommendations for infection prevention and control as a standard of practice

Performance Indicator/Data Source

- May include activities focused on a general standard of practice (e.g., environmental cleaning) or more targeted initiatives for preventing device or procedure related HAIs (e.g., CLABSI, catheter-associated urinary tract infections (CAUTI), select surgical site infections (SSI), CDI that are not otherwise specifically addressed in this plan

Objective 1.3 Develop sustainable capacities to assess and address gaps in infection control policies and practices in health care settings throughout Illinois.

Strategy/Task

1.3.1 Implement an Infection Prevention Liaison Program to work with selected facilities to perform onsite assessments, identify strengths and gaps, provide expert consultation to facilities on how to mitigate gaps, and follow up to ensure mitigation strategies are implemented

1.3.2 Provide remote assistance to facilities who did not receive an onsite assessment to perform a guided self-assessment to identify strengths and gaps and offer consultation on how to mitigate gaps

Performance Indicator/Data Source

- Number of facilities that receive onsite assessments and gap analyses (acute care hospitals, LTACHs, LTCs, outpatient settings)
- Number of recommended corrective actions implemented
- Number of facilities that perform guided self-assessments and gap analyses
- Number of recommended corrective actions implemented

Objective 1.4 Ensure health care facilities/settings are appropriately staffed with qualified personnel to implement comprehensive and effective infection control programs.

Strategy/Task

1.4.1 Develop a competency-based training program for infection prevention in Long Term Care (LTC) settings.

1.4.2 Expand offerings of competency based training program for infection prevention to other settings

Performance Indicator/Data Source

- Number of LTC facilities with a designated person for implementation of infection control plan who has completed competency-based training program for infection prevention and control in Long Term Care
- Number of facilities in targeted settings with infection prevention and control designee who has completed recommended training for

1.4.3 Ensure health care entities provide competency based training for all staff on basic infection prevention behaviors (e.g., hand hygiene, donning and doffing PPE, culture of safety) and monitor staff on adherence to infection control

1.4.4 Explore policy options to ensure that health care settings retain adequate staffing levels of qualified personnel to implement infection prevention and control programs

1.4.5 Explore policy options to mandate minimum training for personnel charged with overseeing infection prevention and control activities

1.4.6 Educate health care setting personnel on the approved policies

infection prevention and control

- Number of facilities in targeted settings that provide regular competency based training for all staff with patient contact
- Voluntary reporting in targeted settings of percentage of employees that adhere to infection prevention and control policies and practices
- Policies established to support staffing levels needed to effectively implement infection prevention and control programs. Evaluation data may include annual hospital/facility survey questions
- Policies are established to require minimum training standards for personnel charged with oversight of infection prevention and control
- Dissemination of policy changes via communication plan established in 1.1.3

Objective 1.5 Collect, analyze, interpret, and report HAI/AR surveillance data to direct and inform actions.

Strategy/Task

1.5.1 Develop informatics and epidemiology expertise within the HAI/AR prevention program at IDPH

1.5.2 Utilize public reporting of HAI/AR data to promote transparency and accountability

1.5.3 Leverage existing data sources and develop meaningful ways of analyzing and presenting data that inform action and evaluate the effectiveness of prevention efforts

Performance Indicator/Data Source

- Additional services for informatics and epidemiology retained to meet the needs of the HAI/AR prevention program
- Illinois Hospital Report Card web views and other metrics such as social media engagement/response
- Incorporation of expanded NHSN data (available as of January 1, 2016) into annual hospital HAI reports (e.g., CAUTI, facility wide CLABSI, SSI).
- Creation and publication of a new format for reporting facility-specific NHSN data, including technical and consumer friendly versions.
- Creation and evaluation of facility-specific "HAI Data for Action Reports" that demonstrate progress toward reductions in targeted HAIs

1.5.4 Implement new reporting mechanisms and/or requirements where data are insufficient to guide efforts

- Use of the Targeted Assessment for Prevention (TAP) strategy and other measures (assessment findings) to select facilities for engagement in quality improvement initiatives
- Access to and analysis of existing data sources that are not currently available to the HAI program, such as dialysis facility reporting to NHSN and long term care antibiotic use data derived from the Prescription Monitoring Program
- Expanded NHSN reporting to additional settings, and consideration of publicly reporting these measures, e.g., creation of new incentives or requirements for LTC facilities to report *Clostridium difficile* to NHSN
- Expand access to NHSN data to local health departments in Illinois
- Number of facilities participating in Antibiotic Use and Antimicrobial Resistance (AUR) module of NHSN
- Number of facilities who receive auto-alerts when patients with a history of CRE are admitted to their facility
- Development of a way for CRE to be automatically reported to the XDRO registry via Electronic Laboratory Reporting (ELR) data

Objective 1.6 Standardize and improve timeliness and completeness of communication during transitions in care about patients' infection or colonization status with high risk organisms, need for contact precautions, and history of antibiotic use.

Strategy/Task

1.6.1 Develop and recommend standardized reporting criteria to be communicated during inter- and intra- facility patient transfers related to patient HAI/AR history and antibiotic usage

1.6.2 Examine barriers to interfacility communication, including the root causes for why facilities may be reluctant to admit patients due to their infection or colonization status

1.6.3 Evaluate and develop solutions (e.g., guidelines, policies,

Performance Indicator/Data Source

• Recommendations developed and disseminated to health care facilities on minimum elements of HAI/AR-related information to communicate during patient transfers

• Summary of barriers to performing complete and timely interfacility communication

• Implementation of recommended actions to promote complete and

payment structures, or other tools) that address identified barriers and promote adherence to recommended standards/protocols for communication during transitions of care

1.6.4 Develop and expand ways to automate inter-facility communication of minimum elements of HAI/AR related information during patient transfers

timely interfacility communication

- Evaluation of the impact of solutions implemented to promote interfacility communication
- Number of acute care hospitals with XDRO registry auto-alerts in place for notification of patients admitted with a known history of CRE

Priority Area B: Assessment/Treatment/Outbreak

Goal #2 Improve detection, investigation, and response to infectious outbreaks including community and HAIs and AR organisms.

Objective 2.1 Increase knowledge and competency of relevant health care facility staff related to outbreak preparedness, detection protocols, containment, and resolution.

Strategy/Task

2.1.1 Educate and train relevant staff in health care facilities across the care continuum on outbreak preparedness and response for emerging and urgent infectious diseases (e.g., utilize CDC Outbreak Investigation Toolkit as a resource)

2.1.2 Review existing legislation and consider policy options necessary to establish standards and requirements for training of individuals responsible for coordinating HAI/AR outbreak detection and response activities

Performance Indicator/Data Source

- Incorporation of content on detection, investigation, and response to infectious outbreaks into the infection control education described in Objective 1.4
- New policies (if needed) and summary of existing policies disseminated to increase facility level capacity to detect and respond to outbreaks and emerging pathogens (related to Objective 1.4)

Objective 2.2 Prepare for emerging communicable disease threats that may enter health care facilities.

Strategy/Task

2.2.1 Grow partnerships between and coordinate efforts among HAI/AR Prevention Programs, Communicable Disease Programs, and Emergency Preparedness Programs at the state and local health departments, particularly to prepare regional response plans to emerging threats or special pathogens such as Ebola

Performance Indicator/Data Source

- Regional and facility-specific response plans for special infectious disease threats
- When feasible, performance of facility readiness assessments as a coordinated team effort across programs

2.2.2 Administer CDC standardized outbreak assessment tool for facility self-assessment of detection, reporting, and response to infectious disease outbreaks and emerging threats

- Summary reports outlining gaps identified in health care facility outbreak reporting
- Regional multidisciplinary meetings held to review gaps and foster improved communication about HAIs and AR within cross-continuum clusters of health care facilities and local health departments
- Outbreak/emerging threat toolkit developed from year-1 activities

Objective 2.3 Strengthen and expand surveillance system infrastructure for detection of infectious outbreaks across acute care, non-acute care, and community settings.

Strategy/Task

2.3.1 Evaluate current surveillance system infrastructure for (1) opportunities to detect community-onset *C. difficile* and AR outbreaks and (2) convergence of outbreak reporting/case investigation reporting in XDRO, I-NEDSS, REDCap, and NHSN

2.3.2 Enhance capacity to detect clusters among "social networks" of facilities that share patients rather than just by geographic location

2.3.3 Utilize hospital emergency department data (from National Syndromic Surveillance System) to monitor wide-spread outbreaks and assess trends of *C. difficile* and other AR infections in the community.

Performance Indicator/Data Source

- Action steps developed for collecting pertinent outbreak information that are not currently captured through existing surveillance systems
- Trainings held for local health department staff on use of XDRO, I-NEDSS, REDCap, and NHSN for outbreak monitoring
- Testing and application of CRE cluster detection models to other pathogens
- Utilization of the syndromic surveillance system by state and local health departments, hospitals, and ambulatory facilities

Objective 2.4 Improve HAI and AR outbreak reporting across all health care facilities.

Strategy/Task

2.4.1 Establish protocols for exchanging information about outbreaks or breaches among state and local governmental partners (e.g., state survey agencies, licensing boards, infectious diseases authorities)

2.4.2 Enhance diagnostic testing for rapid and automated

Performance Indicator/Data Source

- Preparedness plan developed defining processes and tiered response criteria to handle serious infection control breaches (e.g., syringe reuse), suspect cases/clusters, and outbreaks
- Additional resources secured to increase the capacity at the state laboratory and/or work with a regional lab to perform specialized

detection of clusters

2.4.3 Develop a communicable disease “Critical Call List” and reporting process for laboratories to notify facilities/ infection preventionists/ Hospital Epidemiologists of critical values

testing

- Outline developed of appropriate and recommended laboratory testing for specific AR organisms, including list of laboratories which perform the recommended tests
- Summary of current testing methods/practices from existing data sources such as NHSN and Annual Hospital Survey
- “Critical Call List,” which includes communicable disease and critical values, as well as establishment of reporting processes available on website by 2017
- Education provided to health care facilities that have contractual agreements with outside laboratories to include “Critical Call List” in their vendor contracts. Education will address “Critical Call List” values and reporting process and target direct care staff, microbiology staff, laboratorians, discharge planners/case managers, nurse liaisons, hospital epidemiologists, physicians, and administration

Priority Area C: Antimicrobial Stewardship (AS)

Goal #3: Improve antimicrobial prescribing practices across all health care settings.

Objective 3.1 Promote and monitor antibiotic stewardship programs (ASP) across health care settings.

Strategy/Task

- 3.1.1 Assess AS practices in inpatient, outpatient, and long term care settings
- 3.1.2 Evaluate trends in antibiotic prescribing and resistance

Performance Indicator/Data Source

- Summary findings of Illinois health care facility AS practices disseminated
- Number of hospitals reporting to the NHSN Antimicrobial Use and Resistance Module
- Access to and analysis of data from new data sources (e.g., outpatient Medicaid claims data, long term care facility Prescription Monitoring Program data) to monitor antibiotic prescribing practices

3.1.3 Provide technical assistance, education, and tools to increase best practice sharing and action across the health care spectrum related to AS implementation; target facilities with few AS activities or high ratios of antibiotic resistant infections

3.1.4 Evaluate strategies, including policy options, to promote AS implementation in health care facilities.

- Regional antibiotic resistance profiles developed and distributed to prescribers
- Summary report/presentation on health care facility antibiotic prescribing and resistance
- Implementation of pilot to enhance AS in acute care hospitals
- Identification of strategies for development of hospital antibiograms tailored to service line and syndrome
- Number of presentations, educational programs, and initiatives implemented related to AS and AR prevention (e.g., Illinois Summit on Antimicrobial Stewardship, expanded Precious Drugs & Scary Bugs campaign)
- Number of facilities participating in initiatives that are focused on or include a substantive component on AS
- Number of facilities that report implementation of CDC's core elements of antibiotic stewardship programs (data sources may include NHSN facility survey)
- Implementation of strategies to promote AS, including proposed legislation related to antibiotic stewardship if deemed appropriate

Objective 3.2 Strengthen public health and health care facility infrastructure to facilitate AS work.

Strategy/Task

3.2.1 Ensure designated staff to coordinate state health department AS initiatives

3.2.2 Expand and maintain collaboration with health care facilities and key stakeholders

3.2.3 Provide AR/AS-related information to health care facility

Performance Indicator/Data Source

- At least one appropriately qualified individual designated for AS coordination
- Up-to-date AS resource page established on IDPH website
- Number and types of multi-stakeholder HAI Advisory Council and One Health partners that participate in planning and implementation of AS activities
- Number of health care facilities that have written statement of

leadership, payers, policy makers, and others to increase their commitment on this issue

support from leadership for AS activities

- Number of facilities that report establishing antibiotic stewardship programs
- Inclusion of AS education in clinician training programs (e.g., medical, pharmacy, nursing, and residency programs)

Goal #4: Raise public awareness about antibiotic use and misuse.

Objective 4.1 Establish infrastructure to facilitate outreach to general public.

Strategy/Task

- 4.1.1 Ensure designated staff to coordinate state health department AS initiatives
- 4.1.2 Identify and engage with community interest groups and other key stakeholders that work with the general public

Performance Indicator/Data Source

- Services of a subject matter expert as an Antimicrobial Resistance Prevention Coordinator retained
- Number of community, local health department, and other partners that are on IDPH listserv for AS-related communications
- Number and types of stakeholder groups collaborating with IDPH on AS initiatives for the general public. Increased number of partners incorporating AS activities in their work.

Objective 4.2 Educate the general public on antibiotic resistance and appropriate antibiotic use.

Strategy/Task

- 4.2.1 Expand Precious Drugs & Scary Bugs Campaign to target general public

Performance Indicator/Data Source

- Participation in annual Get Smart about Antibiotics Week
- Implementation of at least one AS activity targeting pre-school through high school (e.g., AS lesson plans, recommendations for school policies on attendance during illness)
- Number of likes and reposts of IDPH social media postings related to appropriate antibiotic use
- Summary of trends in antibiotic prescribing at ambulatory care clinics engaged in Precious Drugs and Scary Bugs Campaign

4.2.2 Evaluate and implement strategies (including but not limited to legislation) to increase vaccination rates as a means to prevent infections among health care workers and the general public

4.2.3 Evaluate changes in the public's knowledge, attitudes, and practices related to appropriate antibiotic use to better target efforts

- Vaccination rates of health care workers reported to NHSN
- Vaccination rates in targeted communities
- Presentation/report of summary findings produced and disseminated.
- Additional strategies for impacting public knowledge and practices developed based on findings

Priority Area D: Multi-Drug Resistant Organisms

Goal #5: Slow the emergence of resistant bacteria and *Clostridium difficile*, and prevent their transmission.

Objective 5.1 Increase reporting of antimicrobial resistant organisms to surveillance systems, and enhance those systems.

Strategy/Task

5.1.1 Expand reporting of MDRO data to various systems used to monitor antimicrobial resistance including: XDRO Registry, NHSN Antimicrobial Resistance (AR) Module, and other systems

5.1.2 Enhance the quality of reporting by providing case-reporting procedures for CRE and other MDROs and validate information in the XDRO Registry

5.1.3 Enhance the XDRO registry to streamline reporting and notification features

Performance Indicator/Data Source

- Number of facilities reporting to these systems, with summary of successes and challenges learned during process of onboarding facilities to new data systems
- Additional organisms added to the XDRO registry if feasible (currently only CRE are reported)
- Incorporation of Electronic Laboratory Reporting (ELR) capability into the XDRO registry and AR Module
- Creation of guidelines for case reporting of CRE and other MDROs
- Completion of laboratory validation project to verify cases reported to XDRO registry
- Completion of data validation project to assess completeness of reporting to the XDRO registry
- Number of hospitals and other facilities that receive automated XDRO registry alerts for new admissions with a history entered in the

5.1.4 Increase the number and types of health care settings that report CDI

registry

- Development of a way for CRE to be automatically reported to the XDRO registry via Electronic Laboratory Reporting (ELR) data
- Expanded XDRO registry dashboard to include hospital vs. community category (Also see Objective 5.1.1)
- Examination of data to inform rationale for increased reporting burden, including analysis of NHSN data to determine burden of community onset CDI among hospitalized patients in Illinois
- NHSN CDI reporting expanded to long term care facilities

Objective 5.2 Enhance testing and laboratory capability to detect antimicrobial resistant organisms and mechanisms of resistance.

Strategy/Task

5.2.1 Assess the current capacity and testing practices of laboratories and facilities for detecting high priority MDROs; this information may be available from NHSN survey data and other sources

5.2.2 Create recommendations on laboratory testing methods for identifying and characterizing high priority organisms such as CRE (e.g., susceptibility testing only vs. mechanism of resistance testing) and *C. difficile* (e.g., immunoassay vs. molecular and other tests)

5.2.3 Collect data on facility screening protocols for CRE. Develop standardized protocols for performing active surveillance cultures for CRE in acute care hospitals and long term care facilities

Performance Indicator/Data Source

- List of laboratories with advanced capabilities to perform recommended or advanced testing for high priority MDROs that are willing to partner with IDPH or other facilities; this information may be available from NHSN survey data and other sources
- Partnership established between IDPH lab and another state or regional reference lab to expand testing capabilities
- Education provided to health care providers and laboratory professionals on the merits of various testing methods and appropriate specimen collection procedures
- Potential data sources (e.g., CMS survey) identified or survey conducted on screening practices
- Summary of current practices and dissemination of recommendations for screening and active surveillance for CRE

Objective 5.3 Engage health care facilities in targeted prevention activities for specific MDROs.

Strategy/Task

5.3.1 Use existing data sources and methods to prioritize outreach to facilities on specific prevention initiatives

5.3.2 Work with subject matter experts and academic partners to recommend and implement specific strategies for priority MDROs (e.g., specific recommendations based on facility experience on testing practices, screening, and surveillance procedures, environmental cleaning practices, patient bathing/de-colonization)

Performance Indicator/Data Source

- Evaluation of existing sources, such as the Targeted Assessment for Prevention reports of NHSN data, to prioritize outreach
- Identification of priority MDROs and development of prevention strategies
- Change in incidence and burden of the target MDRO

Objective 5.4 Improve communication about MDROs and *C. difficile* among health care facilities, providers, and public health departments.

Strategy/Task

5.4.1 Develop a speaker's toolkit for providers and other health care workers to ensure consistent messages are being communicated to the public

Performance Indicator/Data Source

- List of speakers (or speaker's bureaus) to provide education for public and other health care providers
- Number of presentations and educational offerings provided

Appendix: Strategic Planning Contributors

Strategic Planning Committee

Name	Role/Job Title	Organization
Angela Tang, MPH	CRE Project Director	Hektoen (IDPH Grantee/HAI Program team)
Anh-Thu Runez, MPH	HAI Program Epidemiologist	Hektoen (IDPH Grantee/HAI Program team)
Barbara Fischer, RN	Division of Patient Safety and Quality	Illinois Department of Public Health/HAI Program team
Chinyere Alu, MPH	AMS and CDI Program Director	Hektoen (IDPH Grantee/HAI Program team)
Erica Runningdeer, MSN, MPH, RN	HAI Prevention Coordinator	Illinois Department of Public Health/HAI Program team
Jennifer Polk, BS	Project Associate	Hektoen (IDPH Grantee/HAI Program team)
Jessica Ledesma MEd MPH	Senior Policy Analyst	Illinois Department of Public Health/HAI Program team
Laura McAlpine	Strategic Planning Consultant	McAlpine Consulting for Growth, LLC
Mary Alice Lavin, RN, MJ, CIC	Infection Preventionist	Hektoen (IDPH Grantee/HAI Program team)
Mary Driscoll, RN, MPH	Chief, Division of Patient Safety and Quality	Illinois Department of Public Health/HAI Program team
Mary Fornek	Infection Preventionist Consultant	IC Consulting
Robynn Cheng Leidig, MPH	CDC Public Health Prevention Service Fellow	Illinois Department of Public Health/HAI Program team
Suzanne Williams, MPH	Project Associate	Hektoen (IDPH Grantee/HAI Program team)

Strategic Planning Contributors: HAI Prevention Advisory Council and stakeholders

Name	Role/Job Title	Organization
Abraham Scarr	Director, Illinois PIRG	Illinois Public Interest Research Group (PIRG)
Angela Rupp, MT, MS, CIC	Director, Infection Prevention & Control	Ann & Robert H. Lurie Children's Hospital
Angela M Charlet, RN, MHA	Director of Quality and Education	Illinois Critical Access Hospital Network (ICAHN)
Ann Lucey RN, MS	Infection Preventionist	St. Alexis Medical Center
Ashley N. Thoele RN, BSN	Hospital Preparedness Program Coordinator	Illinois Department of Public Health
Bernard Cobbins, Jr. M.A.	Regional Ombudsman Chicago	Chicago Department of Family &

		Support Services Regional Long Term Care Ombudsman
Carol Schultz	Infection Control Practitioner	.
Carol Wilhoit, MD, MS	Senior Medical Director, Quality & Outcomes	Blue Cross Blue Shield of Illinois
Cathy N. Grossi, JD, BSN, CPHQ	Vice President The Institute for Innovations in Care and Quality/Health Policy & Regulation Illinois Hospital Association	Illinois Hospital Association
Cathy Nelson Krewer, RN, MS, LNHA	Senior Director of Clinical Services	LeadingAge Illinois
Christina Boyd, MPH	Clinical Services Program Manager	Metropolitan Chicago Healthcare Council (MCHC)
Craig Conover, MD MPH	Senior Medical Advisor/State Epidemiologist	Illinois Department of Public Health
Deb Patterson Burdsall, MSN, RN-BC, CIC	Director of Infection Prevention	Lutheran Life Communities
Debbie Camacho, BSN, MA	Quality Improvement Manager	Telligen
Debbie Jackson, RN, LNHA	Vice President of Education/Clinical Services	Illinois Health Care Association
Debra D. Bryars, MSN, RN	Acting Deputy Director, Office of Health Care Regulation	Illinois Department of Public Health
Debra Steele RN, BSN, MS	Infection Preventionist	Unity Point Health Methodist
Dheeraj Mahajan, MD,CMD,CIC	Medical Director	Illinois Medical Directors Association (IMDA)
Diane Cullen RN, BSN, CIC	Manager, Infection Control	RML Specialty Hospital
Donna Currie, MSN, RN	Director, Clinical Outcomes	Advocate Health Care
E. Matt Charles, BA	Assitant Division Chief	Illinois Department of Public Health
Elisabeth K Weber, RN, MA, CEN	Project Administrator, Hospital Preparedness Program	Chicago Department of Public Health, Hospital Preparedness Program
Elizabeth B. Murphy, MPH, CIC	Communicable Disease and Epidemiology Manager	DuPage County Health Department
Elizabeth Duarte, RN, BSN, MBA	Preparedness coordinator	Illinois Department of Public Health
Femi Jegede, MPH, CIC	Epidemiologist/Infection Prevention Specialist	Cook County Department of Public Health
Fred Echols, MD	Chief, Communicable Disease Section	Illinois Department of Public Health
Helga Brakk		Illinois Hospital Association
Jeanine Thomas	Founder/President	MRSA Survivors Network
Jodi Morgan, RN, BSN	Infection Control Coordinator, Communicable Disease Control Section, Office of Health Protection	Illinois Department of Public Health
John Cotter, MD	Director of Antimicrobial Stewardship	OSF Saint Francis Medical Center
Karen Boland	Senior Quality Improvement Facilitator	Telligen
Karen Finerty RN, BSN, MBA	Director, Organizational Performance Improvement	RML Speciality Hospital
Karen Senger, RN, BSN	Office of Health Care Regulation	Illinois Department of Public Health

Karen Trimberger, MPH, RN, NE-BC, CIC	System Director Infection Prevention	Memorial Health System
Kathy Sanabria, MBA, PMP	Associate Executive Director, Illinois Chapter, American Academy of Pediatrics	Illinois Chapter, American Academy of Pediatrics
Lance J. Kovacs, M.A.	Assistant Director, Medical Service and Public Health Policy	Illinois State Medical Society
Lance Peterson, MD	Director, Clinical Microbiology and Infectious Disease Research	Northshore
Lisa Johnson		Metropolitan Chicago Healthcare Council (MCHC)
Lisa Waldowski MS, APRN, CIC	Infection Control Specialist	The Joint Commission
Lynn Skelton RN, BSN, CIC	Manager Epidemiology and Infection Prevention	Advocate Medical Group (AMG) and Dreyer Medical Group
Manasi Jayaprakash		Illinois Primary Health Care Association
Marc Oliver Wright	Director of Quality Improvement and Infection Control	NorthShore University HealthSystem
Margaret Okodua	Communicable Disease Nurse	Chicago Department of Public Health
Margie Kochsmier MSN RN CMSRN CIC	Infection Preventionist	Blackhawk Chapter of APIC & FHN Memorial Hospital
Marguerite Gribogiannis, SM (ASCP) MT, MPA, CIC	Infection Preventionist	Chicago Metropolitan Chapter of APIC
Mary Hayden, MD	Director, Division of Clinical Microbiology, Rush University Medical Center; Professor of Medicine (Infectious Diseases) and Pathology, Rush Medical College	Rush University Medical Center
Massimo Pacilli, MS, MPH, C(ASCP)	Manager of Quality Assurance, Laboratory Liaison	Chicago Department of Health
Michael Lin, MD MPH	Assistant Professor; Hospital Epidemiologist	Rush University Medical Center
Michael O. Vernon, DrPH, CIC	Director, Infection Prevention & Control	Loyola University Medical Center
Michael Postelnick, RPh, BCPS AQ Infectious Diseases	Senior Infectious Diseases Pharmacist, Clinical Manager	Illinois Council of Health Systems Pharmacists
Mike Gulley		OSF Health Care
Pamela Bierbaum RN, BSN, CIC	Infection Prevention Coordinator	APIC Central Illinois Chapter & Advocate BroMenn
Patricia Merryweather	Executive Director	Telligen
Paul Schreckenberger	Director, Clinical Microbiology Laboratory	Loyola University Medical Center
Ramona Tomshack RN CIC CWOCN APN-CNS	Infection Preventionist - Wound, Ostomy, Continence Nurse	Central Illinois Chapter of APIC & Sarah Bush Lincoln Health Center
Rashmi Chugh, MD, MPH	Medical Officer	DuPage County Health Department
Robert A Weinstein MD	Chief Academic Officer The C Anderson Hedberg MD Professor of Internal Medicine, Rush Medical College	Chicago CDC Prevention Epicenter

Roberta Berg	Quality Improvement/HEDIS Director	Blue Cross Blue Shield of Illinois
Rupal Patel, PharmD	Clinical Pharmacist	Ann & Robert H. Lurie Children's Hospital of Chicago
Sameer Patel, MD	Director of Antimicrobial Stewardship Assistant Professor in Pediatrics Infectious Diseases	Ann & Robert H. Lurie Children's Hospital of Chicago
Sarah Kemble, MD	Medical Director, Communicable Disease Program	Chicago Department of Public Health
Scott Bergman, PharmD, BCPS	Associate Professor	Illinois Pharmacists Association (IPhA) & Illinois Council of Health-System Pharmacists (IHP)
Shane Zelencik, MPH, CIC	Infection Preventionist	NorthShore University HealthSystem
Sharon F Welbel, MD	Director, Infection Control and Hospital Epidemiology, CCHHS	John H Stroger Hospital
Sonya Dudley, MBA, MT (ASCP), CHQ	Vice President, Quality	Norwegian American Hospital
Stephanie Black, MD	Medical Director, Communicable Disease Program	Chicago Department of Public Health
Stephen Weber, MD, MS	Chief Medical Officer	University of Chicago Medicine
Steven A. Gunderson, DO	CEO/Medical Director Rockford Ambulatory Surgery Ctr	Ambulatory Surgery Center Association of Illinois (ASCAI)
Sylvia Garcia-Houchins, RN, MBA, CIC	Director, Infection Control Program	University of Chicago Medical Center
Tammy Woolsey, RN, LNHA	RN - Nursing Field Supervisor	Heritage Enterprises
Trish Anen, RN, MBA, NEA-BC	Vice President for Clinical Services	Metropolitan Chicago Healthcare Council (MCHC)
Wayne Mathews, MS, PA-C, DFAAPA	Epidemiologist, Physician Assistant	Downstate Illinois Partnership Against Antibiotic Resistance
William Scharf, MD	Physician Change Agent	OSF Health Care System
William Trick, MD	Director, Collaborative Research Unit	Cook County Health and Hospitals System
Yuliya Thomas, RN/ICP	RN/ICP	Southern Illinois Chapter of APIC

Note: The list above reflects the individuals and affiliated organizations at the time of participation in the strategic planning meetings. and work groups.