

# MICHIGAN

## Healthcare-Associated Infections Surveillance and Prevention Plan



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Michigan Department of Health & Human Services

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## Table of Contents

Acronyms and Abbreviations .....	3-4
Executive Summary.....	5
Mission and Vision.....	6
HAI Prevention Advisory Committee .....	7
HAI Plan Highlights and Reporting in MI .....	8
Framework and Funding for Prevention of HAIs .....	9
CDC’s Project FirstLine .....	10
HAI Activities and Milestones.....	11-14

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# Acronyms and Abbreviations

AMR	Antimicrobial Resistance
AMS	Antimicrobial Stewardship
APIC	Association for Professionals in Infection Control and Epidemiology
AR	Antibiotic Resistance
AST	Antimicrobial Susceptibility Testing
AU	Antibiotic Use
<i>C. auris</i>	<i>Candida auris</i>
CAD	Cumulative Attributable Difference
CAUTI	Catheter Associated Infection Urinary Tract Infection
CDC	Centers for Disease Control and Prevention
CDI or <i>C. diff</i>	<i>Clostridioides difficile</i> Infection
CHARM	Collaboration to Harmonize Antimicrobial Registry Measures
CL	Central Lines
CLABSI	Central Line Associated Blood Stream Infection
CMS	Centers for Medicare and Medicaid Services
COLO	Colon Surgical Site Infection
CP-CRE	Carbapenemase-Producing Carbapenem-Resistant Enterobacterales
CRAB	Carbapenem-Resistant <i>Acinetobacter baumannii</i>
CRE	Carbapenem-Resistant Enterobacterales
CRPA	Carbapenem-Resistant <i>Pseudomonas aeruginosa</i>
<i>E. coli</i>	<i>Escherichia coli</i>
ELR	Electronic Laboratory Report
ESBL	Extended Spectrum Beta-Lactamase
FDA	Food and Drug Administration
HAI	Healthcare-Associated Infections
HAV	Hepatitis A Virus
HBV	Hepatitis B Virus
HCV	Hepatitis C Virus
HIV	Human Immunodeficiency Virus
HPRO	Hip Arthroplasty Surgical Site Infection
HYST	Abdominal Hysterectomy Surgical Site Infection
IMP	Imipenemase Metallo–Beta-Lactamase
IVAC	Infection-Related Ventilator-Associated Complication microbial resistance
KPC	<i>Klebsiella pneumoniae</i> Carbapenemase
KPRO	Knee Arthroplasty Surgical Site Infection
LTAC	Long-Term Acute Care
LTC	Long-Term Care

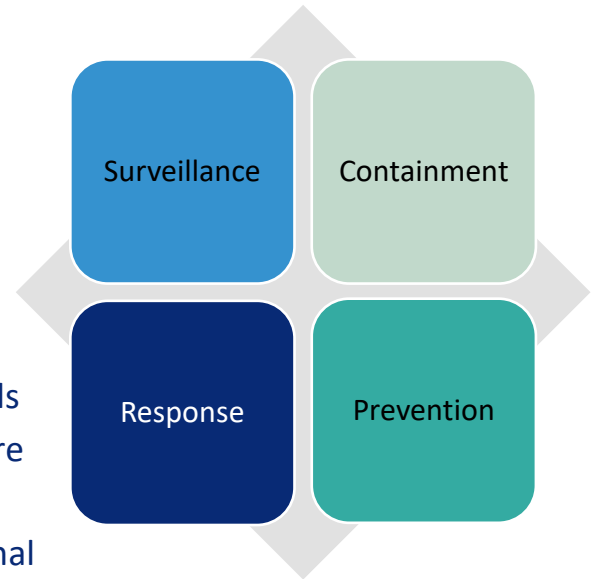
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MBI-CLABSI	Mucosal Barrier Injury-Central Line Associated Blood Stream Infection
mCIM	Modified Carbapenem Inactivation Method
MCR	Mobile Colistin Resistance
MDHHS	Michigan Department of Health and Human Services
MDRO	Multi-Drug Resistant Organism
MERS	Middle East Respiratory Syndrome
MHT	Modified Hodge Test
MRSA	Methicillin-Resistant <i>Staphylococcus aureus</i>
NDM	New Delhi Metallo-Beta-Lactamase
NHSN	National Healthcare Safety Network
OXA-48	Oxacillinase-48-Type Carbapenems
PICC	Peripherally Inserted Central Catheter
PPE	Personal Protective Equipment
SHARP	Surveillance for Healthcare-Associated and Resistant Pathogens Unit
SIR	Standardized Infection Ratio
SNF	Skilled Nursing Center
SSI	Surgical Site Infection
SUR	Standardized Utilization Ratio
TB	Tuberculosis
UC	Urinary Catheters
VAE	Ventilator Associated Events
VE	Ventilators
VIM	Verona Integron-Mediated Metallo-Beta-Lactamase
VISA	Vancomycin Intermediate <i>Staphylococcus aureus</i>
VRE	Vancomycin-Resistant <i>Enterococcus</i>
VRSA	Vancomycin-Resistant <i>Staphylococcus aureus</i>
vSNF	Skilled Nursing Center Caring for Ventilated Patients
WHO	World Health Organization

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## Executive Summary

In response to the increasing concerns about the public health impact of healthcare-associated infections (HAIs), the US Department of Health and Human Services (HHS) has developed an Action Plan to help prevent HAIs. The National Action Plan to Prevent Healthcare-Associated Infections: Road Map to Elimination (HAI Action Plan) sets goals and priorities for reduction of HAIs across healthcare settings, while the National Strategy for Combating Antibiotic-Resistant Bacteria and companion National Action Plan articulate goals, priorities, objectives, milestones, and reduction targets to provide an overarching framework to federal investments aimed at combating antibiotic-resistant bacteria.



Michigan’s Healthcare-Associated Infection Surveillance and Prevention Plan outlines the Michigan Department of Health and Human Services (MDHHS), HAI, Body Art, Tuberculosis, and Viral Hepatitis Section (HBTV), Surveillance for Healthcare-Associated and Resistant Pathogens (SHARP) Unit’s current HAI strategies, activities, and milestones.

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## MISSION AND VISION

### Mission

- Coordinate activities related to HAI surveillance, detection, response, and prevention in Michigan
- Improve surveillance, detection, and response of antimicrobial-resistant pathogens and HAIs
- Identify and respond to disease clusters and outbreaks
- Use data to monitor trends for action
- Educate healthcare providers, state and local public health partners, and the public on HAIs

### Vision

To reduce HAIs within Michigan's healthcare continuum.

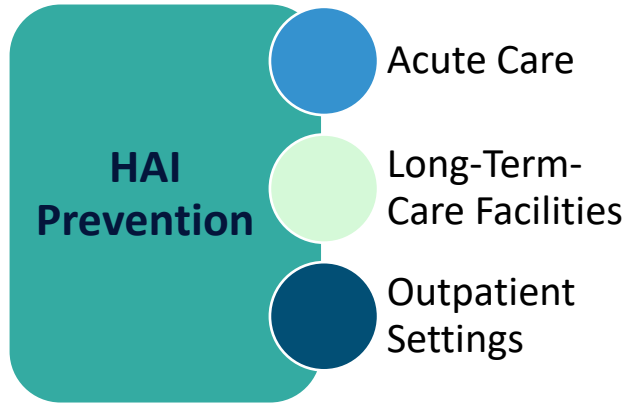
### Goals

To respond effectively to contain and mitigate HAI outbreaks and implement effective interventions to prevent HAIs and MDROs in Michigan.

## HAI PREVENTION ADVISORY COMMITTEE MEMBERS

Michigan Health and Hospital Association (MHA)	Keystone Center for Patient Safety and Quality	Superior Health Quality Alliance (MPRO)	Michigan Licensing and Regulatory Affairs (LARA)
Michigan Society for Infection Prevention and Control (MSIPC)	Association for Professionals in Infection Control & Epidemiology – Great Lakes Chapter (APIC-GL)	Michigan State Medical Society (MSMS)	Michigan Antibiotic Resistance Reduction Coalition (MARR)
Michigan Infectious Disease Society (MIDS)	South Central Association for Clinical Microbiology (SCACM)	Healthcare Association of Michigan (HCAM)	Local Health Department (LHD) representatives – Kent County
Acute Care Facility partners	Infectious Disease Physicians	MDHHS Bureau of Laboratories	MDHHS Bureau of EMS, Trauma, and Preparedness
Regional Epidemiologists	Community Health Emergency Coordination Center (CHECC)		

Many of these activities will be accomplished in coordination with our partners across the state, many of whom are members of the HAI Prevention Advisory Committee. The HAI Prevention Advisory Committee is a statewide group with stakeholders and representatives from the state and/or regional public health partners, state survey agency, hospital/emergency preparedness, health system and academic representatives, and professional organizations. The group, led by the HAI Coordinator, shares updates, projects, and activities to align resources and expertise to help define statewide priorities for HAI prevention and response to Antibiotic Resistance. With the additional COVID-19 funding, MDHHS was able to build an Infection Prevention Resource and Assessment Team (IPRAT). Subject matter experts in IPRAT provide remote and onsite technical assistance and guidance to multiple healthcare and congregate care settings. IPRAT is working with SHARP to expand Infection Prevention activities throughout the HAI program.

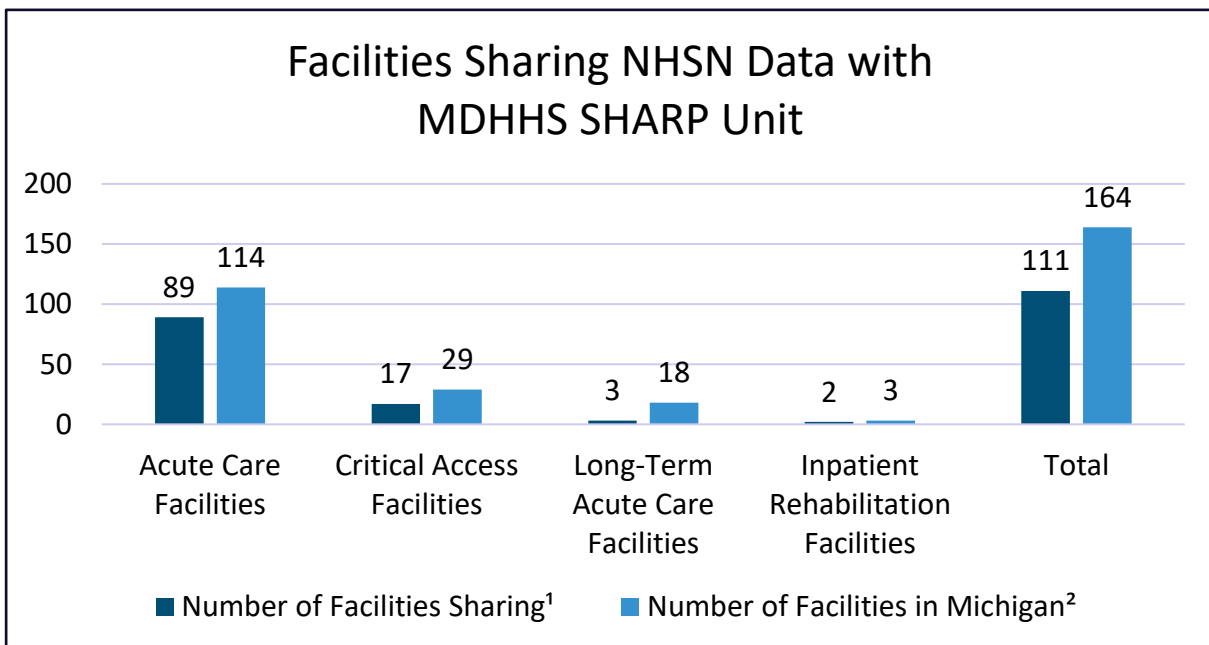


Michigan’s HAI Surveillance and Prevention Plan for 2021-2024, updated annually, will focus on HAI/AR Containment (surveillance and response), Investigations (HAIs and MDROs), Infection Prevention (ICARs at multiple high-risk facility-types including vSNFs, LTACs, and dialysis facilities), NHSN surveillance (Patient Safety and LTC Component modules), Antimicrobial Stewardship (data analysis of AU/AR,

outpatient prescribing, and patient claims, as well as, other data-driven projects as decided by Antimicrobial Stewardship Committee), and Project FirstLine (educational development, training and facilitation, and promotion of CDC Project FirstLine materials).

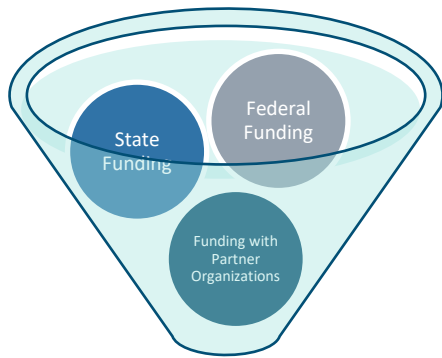
**MICHIGAN IS ONE OF 17 STATES THAT DO NOT REQUIRE**

**MANDATORY REPORTING OF HAIs.** The Michigan HAI Surveillance and Prevention Plan will collaborate on other valuable work currently underway throughout the state.



SOURCE: National Healthcare Safety Network (NHSN) 2020 Hospital Survey and MDHHS LARA State Licensed Map and Directories.





**HAI Prevention Funding**

## FRAMEWORK AND FUNDING FOR PREVENTION OF HAIs

CDC's framework is a coordinated effort of federal, state, and partner organizations based on a collaborative approach that includes:

- Surveillance, Detection, and Response
- Outbreak Response
- Prevention and Intervention
- Communication and Partnerships

## SIX MAIN TARGETS AREAS OF THE MICHIGAN HAI SURVEILLANCE AND PREVENTION PLAN



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## CDC's Project Firstline

### SHARP Unit's Educational Efforts

The MDHHS Surveillance for Healthcare-Associated & Resistant Pathogens (SHARP) Unit is leading statewide efforts in collaborating with CDC's Project Firstline.

CDC's Project Firstline is a collaborative of diverse healthcare and public health partners that aims to provide engaging, innovative, and effective infection control training for millions of frontline U.S. healthcare workers as well as members of the public health workforce.

Project Firstline's innovative content is designed so that—regardless of a healthcare worker's previous training or educational background— they can understand and confidently apply the infection control principles and protocols necessary to protect themselves, their facility, their family, and their community from infectious disease threats, such as COVID-19.

Project Firstline training materials and educational activities help to empower healthcare workers in building their foundational knowledge of infection control.

**In Michigan, Project Firstline** will reach workers in settings including:

- Adult Foster Care
- Behavioral Health
- Dental Practice
- Home Health
- School-based Health Centers
- Urgent Care

*“Health care-associated infections only usually receive public attention when there are epidemics.”*

## HAI Activities and Milestones

### Healthcare-Associated Infections, Antibiotic Resistance, and Antimicrobial Stewardship

#### Surveillance, Detection, and Response

##### Activity #1

**Support containment of novel or high-concern antibiotic-resistant organisms.**

##### Milestones

Update Performance Measure 2 (PM) "AR Containment Responses" with the information for each response activity during the Budget Period (BP) 3 period.

Track colonization screenings performed and update the PM2 "AR Containment Responses" with the information for each response activity, where applicable, during the BP3 period.

#### Surveillance, Detection, and Response

##### Activity #2

**Support rapid response.**

“Response” refers to efforts to control newly identified HAI and AR risks not described in section I and includes but is not limited to investigation of possible outbreaks or serious infection control breaches.

##### Milestones

Update the PM3 HAI "Non-AR Responses" with the information for each response activity during the BP3 period.

Track laboratory testing results, communications, and recommendations to facilities; update PM3 HAI "Non-AR Responses" with the information for each response activity, where applicable, during the BP3 period.

## Surveillance, Detection, and Response

### Activity #3

**Conduct response-driven onsite infection control assessments and evaluation and provide recommendations for containment and other responses.**

### Milestones

Track onsite containment IP assessments performed and update the PM2 "AR Containment Responses" with the information for each response activity during the BP3 period.

Track onsite HAI IP assessments and update the PM3 HAI "Non-AR Responses" with the information for each response activity during the BP3 period.

Conduct follow-up assessments with facilities to determine need for additional guidance, remote/onsite assistance, or other resources.

## Surveillance, Detection, and Response

### Activity #4

**Enhance other aspects of epi-lab coordination not already covered in Activity 1 and 2.**

### Milestones

Coordinate with all facilities, clinical and public health laboratories to ensure appropriate and timely submission and testing of targeted isolates.

## Surveillance, Detection, and Response

### Activity #5

#### **Use data for action.**

Demonstrate access to NHSN and state/local data, to identify healthcare facilities and networks (e.g., acute care facilities, LTACs, nursing homes) with high incidence of selected HAIs to facilitate prevention.

### Milestones

Develop HAI-specific action plans based on TAP-driven priorities and input from HAI Prevention Advisory Committee and other partners.

Recruit 20 skilled nursing facilities to report into NHSN LTC HAI Component.

Develop and distribute promotional materials to assist with recruiting skilled nursing facilities into NHSN LTC HAI Component.

Develop and distribute annual targeted/emerging MDRO surveillance reports to laboratory and healthcare facility networks and other HAI partners.

## Prevention & Intervention

<u>Activity #6</u>	<u>Milestones</u>
<p><b>Implement data-driven prevention strategies.</b> Conduct ongoing prevention-based onsite assessments and gap mitigation in long length-of-stay, high-acuity facilities with the goal to improve infection control practices and reduce transmission of selected MDROs, and to reduce HAIs.</p>	<p>Complete ICARs in 8 LTACs, 8 vSNFs, and 4 dialysis facilities.</p>

## Prevention & Intervention

<u>Activity #7</u>	<u>Milestones</u>
<p><b>Implement antibiotic stewardship efforts.</b></p>	<p>Identify project or statewide area to target prescribing practice improvement (through partners in AMS Subcommittee).</p> <p>Participate in U.S. Antibiotic Awareness Week.</p> <p>Engage with facilities statewide through the Collaboration to Harmonize Antimicrobial Registry Measures (CHARM) project, educational opportunities, and the MARR Coalition.</p> <p>Identify high-priority outpatient prescribing trends and share with AMS Subcommittee.</p> <p>Develop an action plan to address prescribing trends</p> <p>Create report template for hospitals reporting into the NHSN Antibiotic Use (AU) Option.</p>

## Communication, Coordination, and Partnerships

<u>Activity #8</u>	<u>Milestones</u>
<p><b>Sustain HAI/AR capacity to implement program (HAI coordinator, AR/AS expert).</b></p>	<p>Promote usage of the TAP Strategy (as determined by HAI Prevention Committee and interested partners).</p> <p>Assure alignment of HAI surveillance and prevention activities pertaining to SHARP Unit and our partners.</p> <p>Investigate AR and AMS data coming into the SHARP unit (via MDSS, NHSN, and other methods) and develop prevention and/or improvement strategies to assist.</p> <p>Train IP Nurse Consultants with the best available guidance, science, information, and PPE training to conduct assessments onsite.</p>

## Communication, Coordination, and Partnerships

<b><u>Activity #9</u></b>  <b>Engage public health and healthcare providers</b>	<b><u>Milestones</u></b>  Update the PM7 "Inventory of Facilities" with the appropriate information during the BP3 period.  Develop infection prevention related educational and training materials and distribute to healthcare settings via multiple platforms (i.e., website, social media, listservs, and partners).  Develop infection prevention related reference materials and trainings for local health department personnel based on current needs and guidance.  Lead Project FirstLine which incorporates trainings for non-healthcare personnel, including LHDs. Our Infection Prevention Nurse Consultants assist with subject matter expertise and training.
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## Communication, Coordination, and Partnerships

<b><u>Activity #10</u></b>  <b>Coordinate prevention activities with partners (MARR).</b>	<b><u>Milestones</u></b>  Execute community education programs and record pre/post program surveys to measure improvement.  Complete >50 dental student webinars at participating Michigan dental schools.  Track number of dental providers engaged in MARR activities through use of dental-specific delayed-prescribing pads and other materials (via webinars or patient education material use).
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## Communication, Coordination, and Partnerships

<b><u>Activity #11</u></b>  <b>Convene HAI advisory committee.</b>	<b><u>Milestones</u></b>  Assess current membership roles and responsibilities.  Coordinate with HAI Prevention Advisory Committee membership for recommendations and recruit new/needed expertise, as needed.
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