Using the *Core Elements of Antibiotic Stewardship for Health Departments* to Expand State and Local Health Department Stewardship Activities

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*NACCHO's Healthcare Infection Prevention and Control Summit-Chicago, IL*

May 8, 2024
Objectives

- Describe the public health-supported stewardship implementation strategies listed in the Core Elements of Antibiotic Stewardship for Health Departments.

- Analyze examples from health departments in Chicago, Lake County and Illinois to illustrate the application and effectiveness of Core Elements in combating antimicrobial resistance.

- Discuss resources state and local health departments need to support their antibiotic stewardship programs.

Project Firstline is a national collaborative led by the U.S. Centers for Disease Control and Prevention (CDC) to provide infection control training and education to frontline healthcare workers and public health personnel. National Association of County and City Health Officials (NACCHO) is proud to partner with Project Firstline to host the NACCHO Healthcare Infection Prevention and Control Summit (Summit), as supported through CDC Grant # 6NU38OT000306-03-05. CDC is an agency within the Department of Health and Human Services (HHS). This presentation is being hosted as part of the Summit; the contents of this presentation and Summit do not necessarily represent the policies of CDC or HHS and should not be considered an endorsement by the Federal Government.
Five core strategies to combat the threat of antibiotic resistant infections

Antibiotic use and access:
• Improve **appropriate** use
• Reduce **unnecessary** use
• Ensure **improved** access

Infection prevention and control:
Prevent infections and reduce the spread of germs

Tracking and data:
Share data and improve data collection

Antibiotic use and access:
Improve appropriate use of antibiotics, reduce unnecessary use (called antibiotic stewardship), and ensure improved access to antibiotics

Vaccines, therapeutics, and diagnostics:
Invest in development and improved access to vaccines, therapeutics, and diagnostics for better prevention, treatment, and detection

Environment and sanitation:
Keep antibiotics and antibiotic-resistant threats from entering the environment through actions like improving sanitation and improving access to safe water

Antibiotic Resistance Threats in the United States, 2019 (cdc.gov)
Antibiotic Stewardship

- Antibiotic stewardship is a set of commitments and actions designed to **optimize** the treatment of infections while **reducing** adverse events associated with antibiotic use.
CDC’s Office of Antibiotic Stewardship

- Surveillance of antibiotic use and stewardship activities
- Developing guidance, leveraging policies and supporting healthcare and public health partners
- Developing and disseminating stewardship education to healthcare professionals and the public.
Core Elements of Hospital Antibiotic Stewardship Programs

- **Hospital Leadership Commitment**: Dedicate necessary human, financial, and information technology resources.
- **Accountability**: Appoint a leader or co-leaders, such as a physician and pharmacist, responsible for program management and outcomes.
- **Pharmacy Expertise (previously “Drug Expertise”)**: Appoint a pharmacist, ideally as the co-leader of the stewardship program, to help lead implementation efforts to improve antibiotic use.
- **Action**: Implement interventions, such as prospective audit and feedback or preauthorization, to improve antibiotic use.
- **Tracking**: Monitor antibiotic prescribing, impact of interventions, and other important outcomes, like *C. difficile* infections and resistance patterns.
- **Reporting**: Regularly report information on antibiotic use and resistance to prescribers, pharmacists, nurses, and hospital leadership.
- **Education**: Educate prescribers, pharmacists, nurses, and patients about adverse reactions from antibiotics, antibiotic resistance, and optimal prescribing.
The Implementation of the Core Elements of Antimicrobial Stewardship
CDC released the Core Elements of Antibiotic Stewardship for healthcare settings outlining structural and procedural components that are associated with successful antibiotic stewardship programs.

https://www.cdc.gov/antibiotic-use/core-elements/index.html
Epidemiology and Laboratory Capacity (ELC) Cooperative Agreement

- Health departments are crucial to the nation’s ability to monitor, prevent and respond to infectious diseases and outbreaks.

- Since 2009, CDC has funded 64 state and local health department HAI/AR programs through the ELC Cooperative Agreement to support epidemiology, laboratory and health information system capacity building.
  - Limited funding for some health departments for antibiotic stewardship before 2009
Expansion of public health stewardship activities

- A portion of COVID-19 supplemental funding included a focus on expanding stewardship activities through:
  - Hiring and maintaining staff to expand access to stewardship expertise
  - Rapid hiring stewardship leads/co-leads with variable stewardship experience in public health

- Adapt the *Core Elements* framework to a health-department specific guidance
  - Identify stewardship activities that are most feasible, impactful and sustainable
Identifying key strategies for health department stewardship activities

- **Core Elements of Antibiotic Stewardship for Health Departments** framework development
  - Review of published literature on health department-led stewardship activities

- Health departments submit yearly **performance measures**
  - Number and type of staff leading and supporting stewardship activities
  - Description of antibiotic stewardship activities implemented

- Review of performance measures of planned and implemented stewardship activities submitted by state and local health departments
Core Elements of Antibiotic Stewardship for Health Departments

- **Leadership Commitment**
  Dedicate human and financial resources for state and local health department antibiotic stewardship programs.

- **Accountability**
  Designate a leader or co-leaders, such as physician and pharmacist, responsible for the health department antibiotic stewardship program.

- **Stewardship Expertise**
  Ensure that the antibiotic stewardship program leader or co-leaders have expertise and experience implementing stewardship activities.

- **Action**
  Support the implementation of antibiotic stewardship activities by leveraging local partners or stewardship collaboratives.

- **Tracking**
  Monitor stewardship activities and antibiotic use data to inform and assess stewardship actions across the spectrum of health care.

- **Reporting**
  Report data on stewardship activities and antibiotic use to health department leadership, local partners, stewardship collaboratives, healthcare professionals and the public.

- **Education**
  Provide antibiotic stewardship education to healthcare professionals and the public to optimize antibiotic use.
- **Core elements definitions**

- **Example strategies**

- **Implementation resources**
Leadership, Accountability and Expertise
Leadership Commitment

- Engaging with *senior health department leadership* to establish stewardship as a priority and to secure dedicated human and financial resources;
  - Have regular meetings and reporting structure
  - Integrate stewardship with other health department programs
  - Ensure support for training and education of program leaders and staff
Accountability

- Accountability ensures having designated leadership (or co-leadership) who are accountable for the development, implementation, evaluation, and reporting of stewardship activities.
  - Individuals with skills and experience supporting stewardship activities in part-time or full-time capacity
    - Infectious diseases and clinical stewardship implementation
    - Epidemiology
    - Data analysis and information technology
    - Health communication and education
    - Project support and grant management
Stewardship Expertise

- Antibiotic stewardship leader/co-leaders should have expertise and experience in the implementation of stewardship activities.
  - Leader/co-leaders with training and experience in infectious diseases and/or stewardship
  - Access to local or remote stewardship experts
  - External multidisciplinary advisory group
49 (77%) jurisdictions reported identifying stewardship lead/co-lead
- 23 (47%) pharmacists
- 5 (37%) physicians
- 24 (19%) with infectious diseases training
10% of all stewardship staff work at a Local Health Department, 2022*

- **All Health Departments**
  - 354 unique persons working on stewardship
    - Range: 1-22
    - Average: 6.4 persons per jurisdiction
    - Full-time: 24%

- **Local Health Departments**
  - 36 unique persons working on stewardship
    - Range: 4-8
    - Average: 6 persons per jurisdiction
    - Full-time: 20%

*Local health departments receiving ELC funding are: Chicago, District of Columbia, Houston, LA county, NY City, and Philadelphia.
Action, Tracking and Reporting, Education
Action

- Support implementation of stewardship activities by leveraging local partners or collaboratives
  - Leverage data on stewardship activities and antibiotic use
  - Support the development and implementation of guidance and policies
  - Prioritize settings with limited access to stewardship expertise, provide technical assistance
Tracking & Reporting

- **Monitor and report** stewardship activities and antibiotic use data to inform and assess stewardship actions across the spectrum of healthcare.

  - Example Strategies:
    - Tracking data on stewardship activities and Core Elements uptake
    - Tracking antibiotic use data

- These data can be reported to health department leadership, partners, collaboratives, healthcare professionals and the public.
Antibiotic Resistance & Patient Safety Portal

Explore and Visualize Data on Antibiotic Use and Stewardship

For more information, visit www.cdc.gov/antibiotic-use or call 1-800-CDC-INFO.
Antibiotic stewardship refers to a set of commitments and actions designed to optimize the treatment of infections while reducing the adverse events associated with antibiotic use. The Centers for Disease Control and Prevention (CDC) recommends that all hospitals and nursing homes implement the Core Elements of Antibiotic Stewardship to improve antibiotic prescribing practices and reduce the threat of antibiotic resistance.

https://arpsp.cdc.gov/profile/antibiotic-use?tab=antibiotic-use
Education

- Provide antibiotic stewardship education to healthcare professionals and the public to optimize antibiotic use.
  - Outreach to healthcare professionals in rural settings where there may be limited educational resources available.
Continuous improvement opportunity identified

April 2023 Minnesota Department of Health (MDH) report revealed need to address LTC facility stewardship implementation barriers:
1. Resident/family pressure
2. Lack of awareness & commitment from HCPs

Resources & partnerships generously shared

NACCHO funded HCPH to implement the CDC LHD Strategy for HAI/AR to strengthen HCPH’s prevention capacity through June 2024.

Capacity-building goals developed & activities planned & initiated

Desired behavior: Clinical guideline-concordant diagnostic & prescribing behaviors
Desired outcome: Prevent antimicrobial resistance (AR) & HAIs caused by AR pathogens

SME-led virtual curriculum:
1) Interactive webinar series; 2) data use collaborative workshops; 3) Q&A panel
Interdisciplinary SMEs:
Sarah Kabbani, MD, MSc
Director, CDC Office of Antibiotic Stewardship
Steven J. Schweon, RN, MPH, MSN, CIC, LTC-CIP, CPHQ, FSHEA, FAPIC
Infection Preventionist, Steven J. Schweon LLC
Galina Shteyman, PharmD, RPH, BCPS, BCIDP
Antimicrobial Stewardship Consultant Pharmacist
HAI/AR Section | MDH

Data collection & evaluation in progress

Coalition members shared event invitations via multiple distribution lists throughout MN, WI, MI.
Cumulative participation for first three events = 325

Data spurred local coalition’s commitment to act.

Project deemed eligible for CME credit by MMA

Desired behavior: Clinical guideline-concordant diagnostic & prescribing behaviors
Desired outcome: Prevent antimicrobial resistance (AR) & HAIs caused by AR pathogens

Overall impact pending; responses to evaluation question, ‘As a result of this activity, what changes do you intend to make in your resident care practices?’:

“Work more confidently with the providers to manage abx”
“Better tracking & surveying of abx usage & UTI diagnostic testing”
“Pharmacy consultant review”

Abbreviations: AR= antibiotic resistance; CME= continuing medical education; HAI= healthcare-associated infection; HCP= healthcare personnel; IP= infection preventionist; LHD= local health department; LTC= long-term care; MMA= Minnesota Medical Association; NACCHO= National Association of County & City Health Officials; QAPI= quality assurance/performance improvement

1 Antibiotic Use & Stewardship in Minnesota (MN): 2023 Update on Progress & Opportunities

LTC Infection Prevention Coalition of Hennepin County*
*Convened by Hennepin County Public Health (HCPH)
CDC offers a number of materials and tools to help you learn about antibiotic resistance and appropriate prescribing and use for common infections. Permission is not needed to print, copy, or distribute any materials. Permission is needed if you plan to adjust content or add your brand to CDC materials. Contact antibioticuse@cdc.gov for more details. To order print materials, visit CDC-INFO on Demand - Publications and sort the “Programs” dropdown menu by selecting “Antibiotic Use.” Then click the “Search” button to view all available publications.

Print Materials

Treatment for Common Illnesses

Video and Audio

Web Images and Graphics

Featured Resource

Viruses or Bacteria—What’s got you sick?
Healthcare Professional Resources and Training

Educational resources, continuing education (CE) and training opportunities, and resources for state and local health departments on antibiotic stewardship.

Educational Resources for Healthcare Professionals

CE and Training

Treatment Recommendations for Common Illnesses and Penicillin Allergy

CDC training with over 8 hours of free CE credits
# Antibiotic Stewardship Bundles

## Antibiotic Stewardship Resource Bundles

### On this Page
- Outpatient Care
- Acute Care
- Dental Care
- Transitions of Care
- Long-Term Care

### Manual
For patient education resources, see our [Print Materials](#) page.

To order select free print resources, call 1-800 CDC INFO or visit [CDC INFO on Demand — Publications](#) and select "Antibiotic Use" from the Program drop-down menu. Then click the "Apply" button to view all available publications.

Healthcare professionals and partner organizations—including health departments and professional societies—can review and share the Antibiotic Stewardship Resource Bundles as part of their organizations' U.S. Antibiotic Awareness Week promotion efforts.

The Antibiotic Stewardship Resource Bundles organize CDC and partner stewardship resources for antibiotic stewards and healthcare professionals by setting of care, audience, and type of resource.

### Outpatient Care

### Dental Care

### Long-Term Care

### Acute Care

### Transitions of Care

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[Handouts and Posters | Be Antibiotics Aware Partner Toolkit | Antibiotic Use | CDC](#)
Transition of Care Bundle

**HEALTHCARE PROFESSIONALS: BE ANTIBIOTICS AWARE**

**At Hospital Discharge**

1. Use the most targeted and safe antibiotic
   - Consider patient’s allergy and resistance status.
   - Only consider if patient is at high risk of a resistant infection.

2. Use the shortest effective antibiotic duration
   - Duration of antibiotic therapy should be as short as possible.
   - Generally 5-7 days for uncomplicated cellulitis.

3. Document and communicate a structured and timely discharge summary
   - Include:
     - Diagnosis and treatment plan.
     - Antimicrobial regimen.
     - Length of therapy and number of days therapy was administered.

4. Educate patients and caregivers
   - Instruct patients to:
     - Continue antibiotic as prescribed.
     - Monitor for improvement.
     - Call if fever returns.

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**HOSPITAL PHARMACISTS: BE ANTIBIOTICS AWARE**

**Use the Shortest Effective Antibiotic Duration**

**SCENARIO**

You are performing medication reconciliation and reviewing discharge antibiotic orders for a patient.

Antibiotic stewardship programs are targeting interventions to reduce unnecessarily long durations of antibiotic treatment in adult patients who have a timely clinical response, guidelines suggest the following durations for uncomplicated cases of these infections:

- Community-Acquired Pneumonia: Five days
- Hospital-Acquired Pneumonia: Seven days
- Non-purulent Cellulitis: Five days

Pharmacists can help optimize antibiotic duration by:

1. Adding the total number of days of uninterrupted inpatient antibiotic therapy to planned post-discharge antibiotic duration.
2. Alerting the provider if the total duration of inpatient and post-discharge antibiotic therapy exceeds the recommended duration according to treatment guidelines.
3. Discussing optimizing the post-discharge antibiotic therapy with the provider if the patient had an uncomplicated clinical course and has responded appropriately to treatment.
4. Educating the patient and caregiver about appropriate antibiotic use.
U.S. Antibiotic Awareness Week

• Annual one-week observance that gives participating organizations an opportunity to raise awareness of the importance of appropriate antibiotic use to combat the threat of antimicrobial resistance.

• Be Antibiotics Aware, a CDC educational effort, complements U.S. Antibiotic Awareness Week by providing partners with up-to-date information to help improve human antibiotic prescribing and use in the United States.
Antibiotic Stewardship Activities
August 1, 2021–July 31, 2022, N=259 activities (mean=9)

*Activities are not mutually exclusive; some activities may involve multiple setting types and/or multiple activity categories. Their sum exceeds the number of total activities. Other settings include dialysis facilities, telehealth, dental clinics, OneHealth collaboratives, ambulatory surgical centers.

**Activities are not mutually exclusive; some activities may involve multiple setting types and/or multiple activity categories. Their sum exceeds the number of total activities.
Engagement of Healthcare Facilities and Healthcare Professionals—August 1, 2021–July 31, 2022

*Lighter shaded bars represent facilities; darker shaded bars represent professionals.
The Implementation of the *Core Elements of Antibiotic Stewardship* at the City, State and County Level
Antimicrobial Stewardship Perspectives from a City Health Department

Star (Estrella) Cervantes, PharmD, BCPS, AAHIVP
Antimicrobial Stewardship Pharmacist
The Chicago Department of Public Health (CDPH)
• Describe the public health-supported stewardship implementation strategies listed in the Core Elements of Antibiotic Stewardship for Health Departments.

• Analyze examples from health departments in Chicago, Lake County and Illinois to illustrate the application and effectiveness of Core Elements in combating antibiotic resistance.

• Discuss resources state and local health departments need to support their antibiotic stewardship programs.
Chicago Health Care Landscape

- 33 Acute Care Hospitals (ACHs)
  - 3 Long-Term ACHs (LTACHs)
- 79 Skilled Nursing Facilities (SNFs)
  - 4 Ventilator-Capable SNFs (vSNFs)
- 67 Dialysis Centers
- 35 Assisted Living Facilities
- Clinics
  - 103 Federally Qualified Health Centers (FQHCs)
- 390 Pharmacies
# Health Care Associated Infections & Antimicrobial Resistance (HAI/AR) Team

| **HAI/AR Medical Directors** | • Infectious Disease Physician  
• Infectious Disease / Clinical Microbiology Physician |
|-------------------------------|--------------------------------------------------|
| **Antimicrobial Stewardship (AS) Program** | • AS Pharmacist  
• AS Epidemiologist II & III  
• AS Public Health Administrator |
| **Infection Preventionist** | • Acute Care, Outpatient, and Other Settings (ACHOD)  
• Skilled Nursing Facility and Assisted Living/Supportive (SNFAL)  
• Long Term Acute Care Hospitals (LTACH) and Ventilator Capable SNF (vSNF) |
| **One Health Program** | • Doctor of Veterinary Medicine (2) |
| **HAI/AR Program** | • HAI/AR Coordinator  
• HAI Epidemiologist  
• AR Testing Lead |
Leadership Commitment

- CDPH medical directors serve as advocates for support, funding and visibility of AS program
- Collaborate to write grants and milestones
- Antimicrobial Stewardship Pharmacist meets twice a month with HAI/AR Medical Directors
- Feature stewardship initiatives and activities on weekly “Commissioners Updates” and “All-Hands Webinar”
### Accountability & Expertise

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<tr>
<th>HAI/AR Medical Directors</th>
<th>One Health Medical Directors</th>
<th>Antimicrobial Stewardship Pharmacist</th>
<th>Epidemiologist</th>
<th>Public Health Administrators</th>
<th>Others</th>
</tr>
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<tbody>
<tr>
<td>• Stephanie Black</td>
<td>• Michelle Funk</td>
<td>• Star (Estrella) Cervantes</td>
<td>• Clarissa Najera</td>
<td>• Jazmine Wright</td>
<td>• Student Interns</td>
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<td>• Do Young Kim</td>
<td>• Janna Kerins</td>
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<td>• Linda Li</td>
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<td>• Pharmacy Students</td>
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Action

- NHSN Antibiotic Use / Resistance (AU/AR) Acute Care Workgroup
- Infection Control Assessment and Response (ICAR) Tool for Antimicrobial Stewardship
- Long Term Acute Care Hospital Baseline Antibiotic Use Survey
NHSN AU/AR Acute Care Workgroup

- Assist acute care facilities in Chicago
- Bi-monthly virtual meetings
- Includes pharmacist, physicians, infection preventionist, IT

NHSN AU/AR Workgroup

CDPH Workgroup Goals

- Provide education to facilities on the AU/AR module reporting mandate in 2024
- Provide a space for facilities to discuss barriers and challenges
- Develop AU/AR quarterly data report for facilities to track benchmark measures
- Provide technical support

https://www.chicagohan.org/antimicrobial-stewardship-program
**Infection Control Assessment and Response Tool: Antimicrobial Stewardship**

**Send**

- ICAR form is sent to Antimicrobial Stewardship leads to facility

**Analyze**

- ICAR responses are analyzed by CDPH Antimicrobial Stewardship lead and Antimicrobial Stewardship Epi
- AS team will reach out to facility to clarify any questions and request protocols/guidelines

**Establish**

- AS team creates customized feedback and identify areas of opportunity at the facility

**Site Visit**

- AS team review’s written recommendations with facility based on results via site visit in person or virtually
LTACH Antibiotic Use Survey

• Created a Redcap survey distributed to LTACH’s in Chicago

• Survey was adapted from AHRQ Improving Antibiotic Use analysis

• Responses were reviewed with facility to address gaps and needs
  • Examples of Findings:
    • Lack of AS funding (FTE Pharmacist)
    • New EHR
    • Difficulty tracking and reporting

• Next Steps:
  • Point prevalence survey of antimicrobial use
Tracking and Reporting

NHSN
Acute Care Annual Survey Gap Analysis

NHSN AUR
Comparative Standardized Antimicrobial Administration Ratio (SAAR) Analysis

CHARM
Collaboration To Harmonize Antimicrobial Registry Measures

IQVIA
Antimicrobial Outpatient Prescriber Data
23 acute care hospitals completed the NHSN Annual survey 2022

Scores were calculated based on response per question (1 point per response) total possible points 81.

Only AS questions from the survey were analyzed

Our Findings:
- All Hospitals
  - Report information on antibiotic use, resistance, and stewardship to hospital staff, at least annually
  - Educate patients on antibiotic side effects though education by pharmacists are least common
  - Integrate antibiotic stewardship activities into quality improvement and/or patient safety initiatives.
- Many community hospitals do not have facility specific treatment recommendations for skin and soft tissue infection

Score based on number of questions answered positively per hospital

Mean score: 49.64
Median score: 51
Nurse Involvement

- Nurses receive training on appropriate criteria for sending urine and/or respiratory cultures
  - Teaching 4/6; Community Teaching 1/6; Community 4/11
- Nurses initiate discussions with the treating team on switching from intravenous to oral antibiotics
  - Teaching 2/6; Community Teaching 2/6; Community 3/11
- Nurses initiate antibiotic time-out discussions with the treating team
  - Only 1 Community hospital w/o teaching program
- Nurses track antibiotic duration of therapy
  - Only 1 Community hospital w/o teaching program

Possible Future Directions

- Engaging nurses in AMS
- Improving prospective audit and feedback and preauthorization
- Create mentorship program between lower performing and higher performing hospitals in the same category/with similar resources
NHSN Antibiotic Use and Resistance

• **Upcoming:** CDPH Comparative SAAR Analysis
• CDC NHSN AUR training videos
• Duke Antimicrobial Stewardship Outreach Network (DASON)
  • Clinical Scenarios
  • Quick guides
  • “Stew-tube” videos
  • Facility templates

COLLABORATION TO HARMONIZE ANTIMICROBIAL REGISTRY MEASURES (CHARM)

• Created by Ferris State University

• CHARM utilizes existing data from institution's electronic medical records (EMR) to quantify and assess antimicrobial prescribing practices

• Data analysis produced in a dashboard format
  • Promoting awareness
  • Supporting research
  • Disseminating best practices surrounding antibiotic utilization
IQVIA Antimicrobial Prescription Data

LRx and Dx data for antimicrobial prescription in the City of Chicago from retail pharmacies, mailed prescriptions, and long-term care facilities

Obtained 3.7 million prescription claims from 2019 to 2022

Goals
• Find trends in outpatient antibiotic prescribing in Chicago including appropriateness
• Identify gaps in antibiotic prescribing with the focus on health equity
• U.S. Antibiotic Awareness Week - November
  • Delivered CDC “Be Antibiotic Aware” posters and tri-folds to major Chicago Pharmacies
  • Participated in social media storm (X, Linked In, Instagram)
  • Displayed signage on Blue Cross Blue Shields Tower facing renowned Lake Shore Drive
  • Partnered with Light Up Chicago to display purple lighting throughout Chicago buildings

• Chicago AS Workgroups
  • NHSN AU/AR
  • Chicago Stewards To Antimicrobial Resistance (S.T.A.R)

• Antimicrobial Stewardship office hours on roundtables

• Upcoming:
  • Healthy Chicago Podcast
  • Chicago One Health Conference November 19th 2024
State Health Department
IDPH Antimicrobial Stewardship Program

Division of Patient Safety & Quality
- Division Chief
- Senior Epidemiologist
- Grants and Fiscal Coordinator

Healthcare-associated Infections & Antimicrobial Resistance (HAI/AR) Program
- HAI/AR Coordinator
- HAI Epidemiologist

Antimicrobial Stewardship (AS) Program
- Pharmacist Consultant
  - Antimicrobial Stewardship Program Unit Manager
  - Antimicrobial Stewardship Program Outreach Coordinator
Local Health Department Engagement

- HAI/AR Advisory Council Members
- AS Workgroup Members
- Illinois Summit on AS Planning Committee Members
- Illinois Action Plan to Prevent HAI/AR Contributors
- 1:1 Meetings with IDPH and LHD AS Leads
Action

- Illinois Action Plan to Prevent HAI/AR
  - Priority Area: Antimicrobial Stewardship

- IDPH AS Champion Call

- Implementation of the Core Elements of Outpatient Antibiotic Stewardship in a cohort of immediate care centers
  - Includes tracking of antibiotic prescribing and use, engaging prescribers in academic detailing, and developing educational resources for participating facilities and patients

- Upcoming:
  - 1:1 consultations for long-term care facilities in Central and Southern Illinois
    - In areas with limited access to AS expertise or for facilities seeking personalized guidance in implementing or improving their ASP
Tracking and Reporting

- Established DUA with CDC for access to NHSN AUR data from reporting Illinois facilities and NHSN Annual Hospital Survey; Section on Antibiotic Stewardship:
  - IDPH will analyze this data annually to monitor trends, identify opportunities for AS programs and funding, facilitate benchmarking, and assess the effectiveness of AS work

- Plan to procure proprietary antibiotic prescribing data (e.g., IQVIA Xponent and LRxDx data) to assess local antibiotic prescribing trends and identify prescribers and targeted regions for AS intervention

- Plan to partner with an academic partner to generate site-specific data dashboards for a cohort of Illinois health-system affiliated outpatient facilities
  - The academic partner will extract, summarize, and analyze antimicrobial prescribing and use data from institutional electronic medical records to quantify and assess local antimicrobial prescribing practices

- **Upcoming:** Launch of acute care tiered honor roll to publicly recognize healthcare facilities that meet specified criteria for antimicrobial stewardship and encourage uptake of the Priorities for Core Element Implementation
Education

• U.S. Antibiotic Awareness Week
  • Gubernatorial proclamation, social media messaging, and a series of educational webinars
  • “Spotlight on Antimicrobial Stewardship” to recognize stewardship champions in health care facilities, local health departments, and organizations across Illinois

• Partnering Acute and Long-Term Care to Advance Antimicrobial Stewardship Efforts (PALASE) Collaborative
  • Hospital-nursing home partnership aimed to strengthen cross-setting partnerships and establish successful and sustainable ASPs in long-term care settings
Education

• Virtual educational sessions and regional workshops
  • Focused on the Core Elements of AS for Nursing Homes

• Illinois Summit on Antimicrobial Stewardship
  • A yearly all-day forum which brings together healthcare professionals from various settings to share best practices and lessons learned around antimicrobial stewardship through plenary sessions, poster presentations, and roundtable exercises
  • Attendees participate in cross-cutting and setting-specific tracks, including advanced acute care, beginner acute care, outpatient, and long-term care
  • Save the Date: July 17th 2024

https://elearning.cimpar.com/users/sign_up
About Lake County Health Department

**Location:** Far northeast corner of Illinois  
**Population:** ~700,000 people

**Long-term care facilities:**  
- 140 Properties  
- 24 Skilled Nursing Facilities (SNFs)  
  - 0 Long term Acute Care Hospitals (LTACH)  
  - 2 SNFs with ventilator supported care (vSNF)

**Lake County Health Department (LCHD), Waukegan, Illinois**  
- 800+ employees  
- Including Federally Qualified Health Centers and Behavioral Health Programs, Environmental Health, etc.
Leadership, Accountability, Expertise

- Medical Epidemiologist
- Epidemiologist
- Registered Nurse

• Antimicrobial Stewardship Workgroup meets quarterly
  - Members include select infection preventionists from acute and long-term care and the pharmacists of acute care hospital system.

• Upcoming:
  - Involving infectious disease physicians and long-term care medical directors in stewardship efforts
## Lake County Health Department

### Action
- Yearly County-Wide Antibiogram
- Identify health inequity indicators associated with MDROs
  - **Upcoming:**
    - Develop the 2022 and 2024 antibiogram datasets
    - Identifying a utilization metric for the county-wide antibiogram

### Tracking & Reporting
- Enhancing the Tableau Dashboard that monitors MDROs in Lake County utilizing multiple data sources
- Currently using NHSN reported data to monitor MDROs and HAIs
  - **Upcoming:**
    - Tracking trends of antimicrobial resistance from 2022 to 2024 and work with subject matter experts to develop recommendations if concerning trends are noted
    - Utilizing IDPH hospital discharge data to enhance demographic data on Lake County residents with MDROs

### Education
- **Upcoming:** Providing educational information on how to use an antibiogram
How To Get Involved

1. Reach out to your Health Department Antimicrobial Stewardship Team

2. Sign up to receive emails from Illinois SIREN and Chicago Health Alert Network (HAN)

3. Follow us on Social Media!

https://www.siren.illinois.gov/
https://www.chicagohan.org/sign-up
Estrella.Cervantes@CityofChicago.Org

Chicago.gov/Health
@ChicagoPublicHealth

HealthyChicago@cityofchicago.org
@ChiPublicHealth
Antibiotic stewardship is core strategy to combat antimicrobial resistance.

State and local health department antibiotic stewardship programs play an important role in guiding antibiotic stewardship efforts in various healthcare settings and promoting appropriate antibiotic use for patients in their communities.

Smaller local health departments can select specific implementation strategies and participate in local or national collaboratives based on their priorities and available resources.

Takeaways
Thank you

Project Firstline is a national collaborative led by the U.S. Centers for Disease Control and Prevention (CDC) to provide infection control training and education to frontline healthcare workers and public health personnel. National Association of County and City Health Officials (NACCHO) is proud to partner with Project Firstline to host the NACCHO Healthcare Infection Prevention and Control Summit (Summit), as supported through CDC Grant # 6NU38OT000306-03-05. CDC is an agency within the Department of Health and Human Services (HHS). This presentation is being hosted as part of the Summit; the contents of this presentation and Summit do not necessarily represent the policies of CDC or HHS and should not be considered an endorsement by the Federal Government.

For more information, contact CDC
1-800-CDC-INFO (232-4636)

The findings and conclusions in this report are those of the authors and do not necessarily represent the official position of the Centers for Disease Control and Prevention.
Local Health Departments (LHD) Community of Practice

- Co-facilitated by LHD Antibiotic Stewardship Pharmacist
- 5 out of 6 ELC-funded LHDs attended
- Topics:
  - Size and makeup of stewardship team
  - Plans for additional staff and expertise
  - Coordination with state HD
  - Implementing the Core Elements for HDs at the city/county level
  - Project sharing across HDs
Action-Examples of Collaboratives

Clinical Infectious Diseases

A Statewide Antibiotic Stewardship Collaborative to Improve the Diagnosis and Treatment of Urinary Tract and Skin and Soft Tissue Infections

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JAMDA

Reducing Fluoroquinolone Use and Clostridiodes difficile Infections in Community Nursing Homes Through Hospital—Nursing Home Collaboration

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Annette Medina-Walpole MD, Chinwa K. Darnay MD, MPH

Concise Communication

Improving antibiotic prescribing for acute bronchitis in the ambulatory setting using a multifaceted approach

Philip Chung PharmD, Regina Nalion PhD, RN, M. Salman Ashraf MBBS, Scott Bergman PharmD, Teresa Micheels MSN, RN, Mark E. Rupp MD, Michelle Schwedhelm MSN, RN, Maureen Tierney MD, MS, Kate Tyner BSN, RN, Trevor C. Van Schooneveld MD, and Jasmine R. Marcellin MD