



Introduction to Healthcare-associated Infections and Antimicrobial Resistance Program, Nebraska Department of Health and Human Services

Ishrat Kamal-Ahmed, PhD.,MSc.,
Epidemiologist | 2025

NEBRASKA
Good Life. Great Mission.
DEPT. OF HEALTH AND HUMAN SERVICES

**DIVISION OF
PUBLIC HEALTH**

1



Contents

- Mission
- Program Overview
- Funding Structure
- Strategies: Response and Prevention Activities
- Personnel & Required Tasks
- Surveillance & Reporting
- Partnerships

NEBRASKA
Good Life. Great Mission.

**DIVISION OF
PUBLIC HEALTH**

2



PROGRAM OVERVIEW

3



Problem Statement

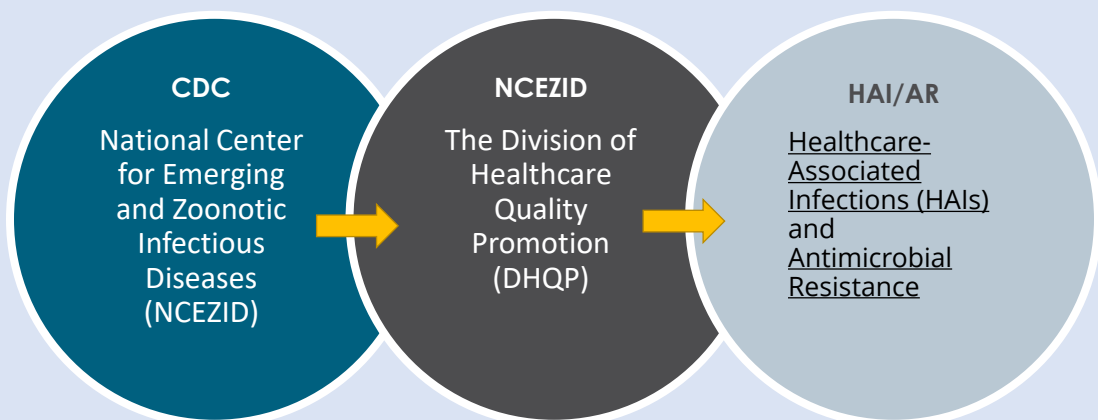
- HAIs are associated with morbidity, mortality, and increased healthcare costs, yet many are preventable
- The threat posed by HAIs caused by antibiotic-resistant pathogens vary nationwide. Inappropriate prescribing and use of antibiotics contribute to this growing problem

4

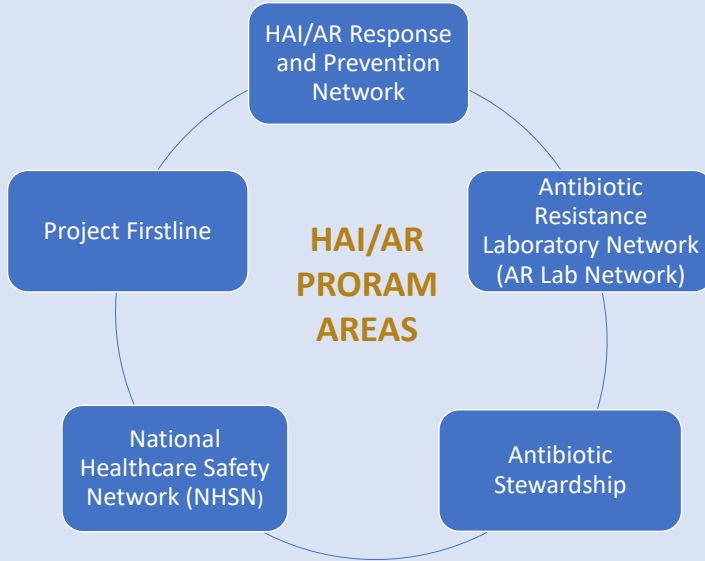
HAI Burden in the United States

- ☐ CDC estimates that on any given day, 1 in 31 hospital patients has at least one healthcare associated infection
- ☐ Cost billion of dollars in added expenses to the health-care system
- ☐ Can have devastating effects on physical, mental/emotional, and financial health
- ☐ Super germ (antibiotic resistant germs) is a big concern. A growing number of HAIs are caused by pathogens (germs) that are outsmarting the antimicrobial drugs typically used to fight them

About the HAI/AR Program



Programs are Organized around Five key Program Areas



7

7



FUNDING STRUCTURE

8



Funding of the HAI/AR Program

- HAI/AR Programs in health departments are one of the largest program areas funded through ELC. **Epidemiology and Laboratory Capacity for Prevention and Control of Emerging Infectious Diseases (ELC) Program**
- The current 5-year ELC Cooperative Agreement funding cycle runs from FY 2019–2023. The annual project period is from August 1 – July 31.



NEBRASKA
Good Life. Great Mission. DIVISION OF
PUBLIC HEALTH

9

STRATEGIES

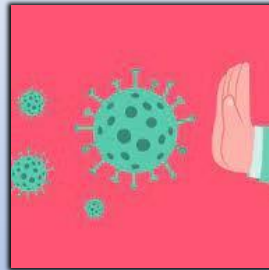
10

The 2022–2023 Guidance describes 11 Strategies related to 3 areas



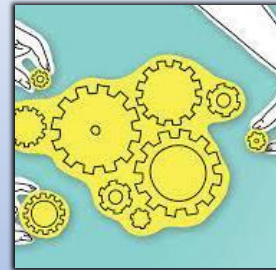
Area-1

Surveillance, Detection,
and Response



Area-2

Prevention and
Intervention



Area-3

Communications,
Coordination, and Partnerships

NEBRASKA DIVISION OF
Good Life. Great Mission. PUBLIC HEALTH

11

11



Area-1

Surveillance, Detection,
and Response

Strategy 1

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

Strategy 2

Support rapid response

Strategy 3

Conduct response-driven onsite
infection control assessments and
evaluations and provide
recommendations for containment
and other responses

Strategy 4

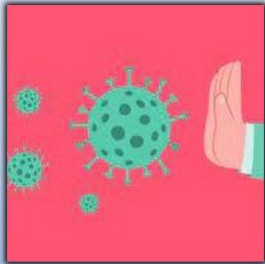
Enhance other aspects of epi-
lab coordination not already
covered in Strategies 1 and 2

Strategy 5

Use data for action

12

12



Area-2
Prevention and
Intervention

13

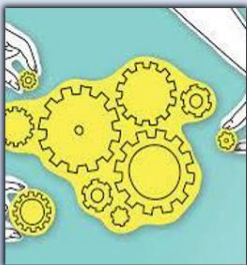
Strategy 6

Implement data-driven
prevention strategies

Strategy 7

Implement antibiotic
stewardship efforts

13



Area-3
Communications,
Coordination, and Partnerships

14

Strategy 8

Sustain HAI/AR workforce
capacity to implement
program

Strategy 11

Convene HAI advisory
committee

Strategy 9

Engage public health and
healthcare providers

Strategy 10

Coordinate prevention activities
with partners

14



15

The following describes typical HAI/AR Program response and prevention roles:



**DR. M. SALMAN
ASHRAF**

HAI/AR Program
Lead/Medical
Coordinator



**DR. ISHRAT
KAMAL-AHMED**

Epidemiologist



LACEY PAVLOVSKY

Infection Prevention
and Control Expert



**DR. JENNA
PREUSKER**

HAI/AR Pharmacist

16

16

The following describes typical HAI/AR Program response and prevention roles: (Example: NE DHHS HAI/AR Program)



**KATELYNN
PIPER**

HAI/AR Program
Manager



RABIA SYED, CSTE
Fellow



KAT BURBACH,
Epidemiology Graduate
Student

17

Nebraska DHHS HAI/AR Program

State

Monitors HAI rates and AR data and keep facilities informed regarding progress and opportunities

Initial outbreak response/consultations

Assist facilities with data reporting and validations

Partners with stakeholders to drive changes focused on decreasing HAIs and AR



Academia

Partners with facilities to assess & advance their IC and AS programs on voluntary basis

Assist with IC assessment during outbreaks

Connect all facilities in the state with IC and AS subject matter experts

Develop educational resources and guidance

PARTNERSHIP

Nebraska Infection Control Assessment and Promotion Program (ICAP)

Nebraska Antimicrobial Stewardship Assessment and Promotion Program (ASAP)

18

18

HAI-AR Program in Nebraska
 Nebraska State office Building
 301 Centennial Mall S,
 Lincoln ,NE 68508



NEBRASKA
 Good Life. Great Mission. DIVISION OF
 PUBLIC HEALTH

19

19

Antimicrobial Resistance: What are MDROs?

Multi-Drug-Resistant-Organisms or MDROs are defined as microorganism, predominantly bacteria, that are resistant to one or more classes of antimicrobial agents

****Although the names of certain MDROs describe resistance to only one agent (e.g., MRSA, VRE), these pathogens are frequently resistant to most available antimicrobial agents**

Prevalence of MDROs varies:

- Temporally
- Geographically, and by

NEBRASKA
 Good Life. Great Mission. DIVISION OF
 PUBLIC HEALTH

20

20

HAI/AR PROGRAMS REQUIRED TASKS

In addition to addressing the strategies and activities listed above, HAI/AR Programs are required to complete the following required tasks for the ELC G1 component:

- Maintain containment plan
 - Maintain Epi-Lab coordination plan
 - Maintain jurisdiction's HAI/AR plan
- *As long as CDC guidance is addressed, above three plans can be separate or combined
- Attendance at HAI/AR annual meeting
 - Submit mid-period and end-period HAI/AR performance measures
 - Assess health disparities related to HAI/AR and develop priorities for targeted prevention and response activities
 - Regular staffing updates to the DHQP HAI/AR staffing directory
 - Collaborate with CDC-funded programs such as AR Lab Network, Emerging Infections Program, Prevention Epicenters
 - Collaborate with other health agencies, associations, laboratories, health facilities, academic partners, and other public health partners to maximize detection and prevention efforts, make progress toward national targets, and reduce duplication of efforts

21

21

SURVEILLANCE

22



HAI/AR Surveillance Data

CDC's NHSN is the nation's tracking and response system

- Used to identify emerging and enduring threats across healthcare, such as COVID-19, healthcare-associated infections (HAIs), and antibiotic-resistant (AR) infections
- Provides facilities, states, regions, and the nation with data needed to identify problem areas, measure progress of prevention efforts, and ultimately eliminate HAIs
- Allows healthcare facilities to track blood safety errors and important healthcare process measures such as healthcare personnel influenza vaccine and COVID-19 vaccine status and infection control adherence rates
- Offers learning opportunities

23

NEBRASKA
Good Life. Great Mission.
DIVISION OF
PUBLIC HEALTH

23

DHQP's Antibiotic Resistance & Patient Safety Portal (AR&PSP)

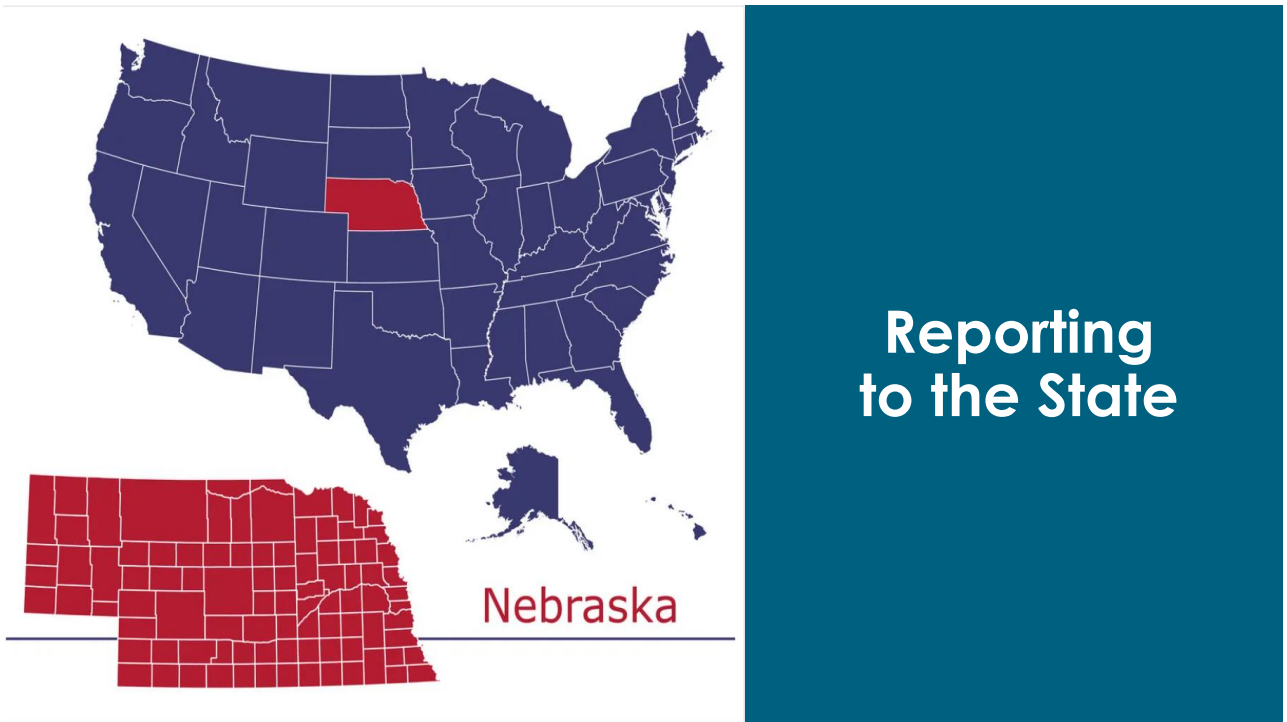


- Allows users to explore and visualize data on antibiotic resistance and patient safety from data reported to NHSN and the AR Lab Network
- Users can explore profiles on HAI and antibiotic resistance, as well as geographic, Standardized Antimicrobial Administration Ratio (SAAR), inpatient antibiotic stewardship, and AR Lab Network profiles.

24

NEBRASKA
Good Life. Great Mission.
DIVISION OF
PUBLIC HEALTH

24



25

HAIs are Reportable in Nebraska – Title 173

1-003.01C Reporting by Healthcare Facilities in lieu of Physicians for Healthcare Associated Infections (HAIs): Healthcare Associated Infections (HAIs) that are reported by healthcare facilities to CDC's NHSN are reportable. If a healthcare facility provides access to NSHN Healthcare Associated Infection (HAI) data to the department and its local public health department and Healthcare Associated Infections (HAIs) are reported to NHSN on a quarterly basis aligning with the CMS Reporting Schedule, the physician is not required to make the Healthcare Associated Infection (HAI) report. Physicians remain obligated to report Healthcare Associated Infections (HAIs) when access to NHSN data is not provided to the department. In the event of an outbreak, the department has the authority to require Healthcare Associated Infection (HAI) data reports from facilities not currently reporting to NHSN.

1-004.01B Clusters, Outbreaks, or Unusual Events, Including Possible Bioterroristic Attacks*: Clusters, outbreaks, or epidemics of any health problem, infectious or other, both in the community and in healthcare settings, including food poisoning, healthcare-associated outbreaks or clusters, influenza, or possible bioterroristic attack; increased disease incidence beyond expectations; unexplained deaths possibly due to unidentified infectious causes; and any unusual disease or manifestations of illness must be reported immediately.

https://www.nebraska.gov/rules-and-regs/regsearch/Rules/Health_and_Human_Services_System/Title-173/Chapter-01.pdf

26

How to IMMEDIATELY report to the State

Preferred Method (in additiona to electronic laboratory reporting or ELR)

Notify the state HAI team by creating an alert for the NEDHHS HAI team:

<https://epi-dhhs.ne.gov/redcap/surveys/?s=7XWYTPPFHAAP3ALX>

Website: <https://dhhs.ne.gov/pages/Healthcare-Associated-Infections.aspx>

Or Call: 531-207-4053 (Ishrat) or 402-219-3115 (Storm)

Other:

General Epidemiologic Unit phone number: 402-471-2937 (8 am to 5 pm, M through F)

Poison Control (Last Resort): 1-800-222-1222 (After hours and weekends)

https://www.nebraska.gov/rules-and-regs/regsearch/Rules/Health_and_Human_Services_System/Title-173/Chapter-01.pdf

27

Example:

In accordance with Nebraska Title 173 the following must be reported immediately:

Carbapenem resistant *Enterobacterales* (suspected or confirmed)

Both CRE and CP-CRE are included in this Title 173

Notify the state HAI team by creating an alert for the NEDHHS HAI team:

<https://epi-dhhs.ne.gov/redcap/surveys/?s=7XWYTPPFHAAP3ALX>

Website: <https://dhhs.ne.gov/pages/Healthcare-Associated-Infections.aspx>

Or Call: 531-207-4053 or 402-219-3115

28

Responsibility of IPs, Providers, HCPs

- First and for most – is the laboratory notifying the infection/organism preventionists/nurses/providers or anyone involved in the patient care of any or all organisms with a high resistance pattern?

Laboratories MUST alert clinical and infection prevention staff when reportable organisms are identified

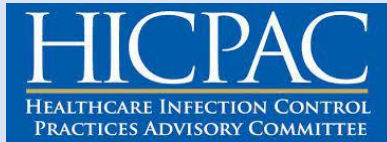
- Laboratories should be sending specimen to the state public health (Nebraska Public Health Laboratory---NPHL) upon approval from the state HAI-AR team
- Start appropriate precautions for the patient while further testing is pending
- Notify the state HAI team by creating an alert for the NEDHHS HAI team

29



30

Policy Resources



HICPAC is a **federal** advisory committee appointed to provide **advice and guidance** to the Department of Health and Human Services and CDC regarding the practice of infection control and strategies for surveillance, prevention, and control of healthcare-associated infections, antimicrobial resistance and related events in U.S. healthcare settings.



CORHA works to **improve practices and policies** at the local, state, and national levels for the detection, investigation, control, and prevention of HAI/AR outbreaks across the healthcare continuum.

CORHA is led by a **Governance Committee** with members from ASTHO, CSTE, and NACCHO. Additional CORHA member organizations include APIC, SHEA, CMS, FDA, and APHL.

31

31

Strategy Developed by DHQP for the Local Health Departments (LHD)



This Strategy aims to strengthen LHD capacity to respond to, control, and prevent HAI/AR across all healthcare settings and in the community by supporting enhanced coordination between state and local partners

Focus is on three main goals:

1. Growing strong partner networks;
2. Building internal operational capacity; and
3. Expanding the scope of programmatic activities to effectively address HAI/AR in their jurisdictions.

32

32

The Need for Integrated Infection Control Programs Move from infection “control” to infection “prevention”

Services and trained individuals to perform the functions include:

- ☐ Department of epidemiology and infection control/prevention (rates of HAI, epidemiology, evaluate effective strategies for control and prevention)
- ☐ Microbiology laboratory (rapid culture and identification for timely intervention, whole genome sequencing, storing isolates etc.)
- ☐ Occupational health services (protect healthcare personnel from exposure)
- ☐ Pharmacy (antibiotic stewardship, monitor antibiotic susceptibilities)
- ☐ Informatics (Surveillance, manage patient data)

33

NEBRASKA
Good Life. Great Mission. DIVISION OF
PUBLIC HEALTH

33

CSTE HAI Subcommittee

INFECTIOUS DISEASE: HAI



Subcommittee Chair:

Kelley Gardner, MPH, MLS(ASCP)CM (AR)

Sarah File Lineberger, MPH (VA)



The Healthcare-Associated Infections (HAI) Subcommittee brings together state HAI coordinators and others interested in the surveillance, reporting, and prevention of healthcare-associated infections (HAIs). CSTE works closely with federal agencies, including CDC, CMS, and HHS, and other partner organizations, such as APIC and SHEA, on this important program area. CSTE continues to create opportunities to increase the capacity of public health agencies and competency of the public health workforce in the area of HAIs. CSTE also convenes subject matter experts at the state, territorial, local, and tribal (STLT) levels and leaders from other organizations to address HAI-related issues, such as data analysis and validation, the National Healthcare Safety Network (NHSN), and prevention efforts.

The HAI Subcommittee hosts monthly conference calls and webinars as a forum for members to discuss current HAI outbreaks, share best practices on surveillance and capacity building, and hear updates on CDC's Division of Healthcare Quality and Promotion priorities, Meaningful Use, and Healthcare Infection Control Practices Advisory Committee (HICPAC). CSTE also offers peer-to-peer technical assistance opportunities to STLT HAI coordinators and epidemiologists.

For more information about the HAI Subcommittee and their activities, please contact [Will Fritch](#). [Click here](#) to view other Infectious Disease Steering Committee activities.

34

<https://www.cste.org/members/group.aspx?code=HAI>

34

HAI/AR **Prevention** Partners

HAI/AR Partnerships: To advance HAI/AR Programs' effectiveness and sustainability, these programs rely on strong partner networks

35

Agency for Healthcare Research and Quality (AHRQ) | <https://www.ahrq.gov>

Association of Health Facility Survey Agencies (AHFSA) | <http://www.ahfsa.org/>

Association of Immunization Managers (AIM) | www.immunizationmanagers.org

Association of Public Health Laboratories (APHL) | www.aphl.org/Pages/default.aspx

Association for Professionals in Infection Control and Epidemiology (APIC) | www.apic.org

American Healthcare Association (AHCA) | www.ahcancal.org/Pages/Default.aspx

Center for Medicare & Medicaid Services (CMS) | www.cms.gov

Council of State and Territorial Epidemiologists (CSTE) | www.cste.org

CSTE HAI Subcommittee | www.cste.org/members/group.aspx?id=87599

CSTE Antimicrobial Resistance Surveillance Task Force (ARSTF) | www.cste.org/page/ARS

Hospital Preparedness Program (HPP) | <https://aspr.hhs.gov/HealthCareReadiness/HPP/Pages/default.aspx>

Infectious Disease Society of America (IDSA) | www.idsociety.org

Making Dialysis Safer for Patients Coalition | www.cdc.gov/dialysis/coalition/index.html

National Association of County and City Health Officials (NACCHO) | www.naccho.org

National Quality Forum (NQF) | www.qualityforum.org

Pew Charitable Trusts | www.pewtrusts.org

Public Health Emergency Preparedness Program (PHEP) | www.cdc.gov/cpr/readiness/phep/index.htm

Quality Innovation Network-Quality Improvement Organizations (QIN-QIOs) | www.qioprogram.org/locate-your-qio

State Hospital Association (SHA) | www.aha.org/directory/2020-06-09-state-hospital-associations

State Survey Agency | www.cms.gov/Medicare/Provider-Enrollment-and-Certification/SurveyCertificationGenInfo

Society for Healthcare Epidemiology of America (SHEA) | www.shea-online.org

35

OTHER partners (not a comprehensive list)

HAI/AR Partnerships: To advance HAI/AR Programs' effectiveness and sustainability, these programs rely on strong partner networks

36

Academic partners (e.g., schools of public health, academic medical centers)

Administration on Aging (AoA) | <https://acl.gov/about-acl/administration-aging>

Commissions/state licensing boards (medical, dental, nursing)

Environmental Protection Agency (EPA) | www.epa.gov

HRSA Federally Qualified Health Centers (FQHC) | <https://bphc.hrsa.gov/>

HRSA Federal Office of Rural Health Policy (FORHP) | www.hrsa.gov/about/organization/bureaus/forhp

HRSA State Offices of Rural Health | www.hrsa.gov/rural-health

Indian Health Service (IHS) | www.ihs.gov

National Association of Community Health Centers (NACHC) | www.nachc.org

National Institute of Health / Office of the Assistant Secretary for Planning and Evaluation (ASPE) | <https://aspe.hhs.gov>

Office of the Assistant Secretary for Preparedness and Response's (ASPR) Regional Emergency Coordinators (RECs) | <https://aspr.hhs.gov/REC/Pages/default.aspx>

US Department of Agriculture | www.usda.gov

US Food and Drug Administration (FDA) | www.fda.gov

36

National Conferences

The following national conferences may be of interest to some HAI/AR Program staff.

Title	Information
CSTE Annual Conference and CSTE HAI/AR Sunday Workshop	CSTE's Annual Conference connects public health epidemiologists from across the country to share best practices. CSTE and CDC also host a full-day HAI/AR Sunday Workshop prior to the beginning to the meeting. Visit www.csteconference.org for details.
ASTHO Annual Meeting and Policy Summit	The ASTHO Annual Meeting and Policy Summit has been on hold since 2020 due to COVID-19 however you can check this link for upcoming ASTHO events.
NACCHO Annual	The premier public health conference where local health department staff, partners, and funders share the latest research, ideas, strategies and innovations across public health focus areas. Visit www.nacchoannual.org for details.
SHEA Conference	The SHEA Conference is attended by professionals of all disciplines related to Infection Prevention Programs, Antibiotic Stewardship Programs, Public Health, Pharmacy, Occupational Health, Clinical Microbiology, Quality Improvement, and Patient Safety. Visit www.sheaspring.org for details.
APIC Conference	APIC's Annual Conference is attended by healthcare professionals to advance their network and learn about evidence-based advances in infection prevention. Visit https://annual.apic.org for details. Local APIC Chapters have additional meetings and conferences: https://apic.org/member-services/chapters/chapter-map/ .

37



QUESTIONS?

38



THANK YOU

DIVISION OF PUBLIC HEALTH

NEBRASKA
Good Life. Great Mission.
DEPT. OF HEALTH AND HUMAN SERVICES

ENTER YOUR INFO HERE

Enter any additional info here