

# Rural Local Health Department Partnership in Healthcare Associated Infections (HAI), Antimicrobial Resistance (AMR) and Antimicrobial Stewardship (AMS)

## In-Depth Interviews Report

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**July 6, 2022**

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**Health Communications Consultants, Inc.**



Health Communications Consultants  
Knowledge, Innovation, & Equity.

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# Executive Summary

Health Communications Consultants, Inc. (HCC, Inc.) provided assessment and evaluation of rural, frontier, and small local health department (LHD) partnerships in Healthcare Associated Infections (HAI), Antimicrobial Resistance (AMR), and Antimicrobial Stewardship (AMS). This analysis focused on (1) assessing performance of LHD's engaged in HAI, AMR, and AMS initiatives, (2) assessing barriers for LHD's not currently engaged in these initiatives and (3) informing on workforce development and capacity building for rural, frontier and small LHD's.

## Assessing Performance

Conversations with both engaged and not engaged LHDs and organizations provided details about their engagement and performance, successes and barriers, workforce development and capacity building. The analysis showed that program successes for engaged organizations were based on quality partnerships with consistent communications, up to date guidance, continual learning, and desire to learn, supportive teams and access to knowledgeable mentors and subject matter experts. Performance is measured by tracking the number of ICARS conducted, the number of investigations, and tracking of other outreach activities. Timely reporting of cases and outbreaks was a measure of success along with the level of engagement of partners in community activities, partnering for community outreach activities, and responding to surveys.

## Assessing Barriers

Time, staffing, turnover, funding were consistent barriers for both groups. Program barriers for the engaged were heavily based on funding, staff capacity with turnover at the LHD and the healthcare facilities, time and resources to build competency, the time and resource required to respond to an HAI issue, external perceptions of the health department by healthcare facilities, inefficient data systems, non-supportive legislations or policies which limited standardization, and competing responsibilities within and outside the program. The key challenges for the not engaged LHDs were the lack of communication, information, and/or data from a robust State HAI Program. Another barrier was funding algorithms based on case incidence which puts small, rural, and frontier LHDs at a disadvantage. Lack or restrictive funding limited the not engaged LHDs from participation in initiatives. Not engaged LHDs reported that personnel and the community must be motivated to initiate any program.

## Workforce Development & Capacity Building

Workforce development and capacity building opportunities for small, rural, frontier LHDs and organizations were frequently overlooked without a direct invitation to participate in training or initiatives. Small, rural, and frontier LHDs and organizations would like to be asked to the table to participate with clear standards and agreements in place due to their limited time, staff, and resources. The not engaged LHDs thought that the best way for them to initiate engagement and make the greatest impact in HAI, AMR and AMS activities without additional

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funding was in messaging and education but that it had to be a direct ask with support in the form of an accessible point-of-contact and tailored resources.

Engaged organizations reported that personnel working in HAI must demonstrate a desire to learn and be open to being involved. Skillsets should include people and communication skills, technical skills, academic experiences, and a basic knowledge of epidemiology and infection control. Training in small, rural, and frontier areas was perceived to be more effective in-person than in a virtual environment. The need for more hands-on training was identified by both engaged and not engaged LHDs. Experiential learning and the need for continual education were important to both groups.

The in-depth interview provided a wealth of data to further answer the evaluation questions. HCC, Inc. incorporated this information into digestible specific **Recommendations** separated into six categories for review.

1. **Building an HAI, AMR, AMS Program/Project**  
HAI, AMR, and AMS program/project must incorporate both the LHD and the community partners equally and fit the program/project into the work the LHD is already doing.
2. **Understand the needs of Small, Rural and Frontier LHDs**  
Building capacity requires collaboration in the form of facilitation and training as well as setting expectations, roles, and desired outcomes across agencies and partners. These actions must be conducted with the understanding that small, rural, and frontier LHDs have vastly unique needs, cultures, and structures and that rural is not equivalent to small urban.
3. **Funding and Resources**  
Improved funding algorithms and application protocols for funding need to account for the need to fund infrastructure, capacity, and KSAs. Additionally, tools and resources should be specifically tailored to these LHDs' needs, cultures, and structures.
4. **Training and Technical Assistance**  
Direct engagement of small, rural, and frontier LHDs must involve personalization, peer-to-peer coaching and mentoring programs, and specific training for HAI, AMR, and AMS topics.
5. **Tailored State Engagement**  
State HAI programs should personally reach out to small, rural, and frontier LHDs and ask how they can engage in these activities specifically and ensure a point-of-contact for information, resources, and public health orientation and HAI, AMR, and AMS training.
6. **CDC & NACCHO Role**  
CDC and NACCHO should increase awareness and knowledge through tailored communications and timely updates on their websites to small, rural, and frontier LHDs that is aligned with regulatory agencies.

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# Introduction

Health Communications Consultants, Inc. (HCC, Inc.) provided assessment and evaluation of rural, frontier, and small local health department (LHD) partnerships in Healthcare Associated Infections (HAI), Antimicrobial Resistance (AMR), and Antimicrobial Stewardship (AMS).

This project had five goals:

1. Identify and recruit rural LHDs and their partnerships to provide exploratory assessment criteria for HAI, AMR, and AMS work.
2. Assess performance for rural LHD-their partnerships collaborations engaged in HAI, AMR, and AMS initiatives.
3. Assess barriers for rural LHD-their partnerships collaborations not currently engaged in HAI, AMR, and AMS initiatives.
4. Inform on workforce development and capacity building in LHD and their partnerships engaged or not engaged in HAI, AMR, and AMS initiatives.
5. Produce products to share data from assessments and evaluation (e.g., one event, resource, research brief, and/or infographic).

The initial evaluation was comprised of an exploratory survey conducted with a convenience sample of rural, frontier, and small LHDs to identify next steps for the project. Results of that survey can be found in the May 2022 report “*Exploratory Survey Results.*” Upon review of the report, NACCHO, CDC, and HCC, Inc. identified the following next steps for the HAI, AMR, and AMS rural, frontier, and small LHD project:

1. Create a template for a blog series based on the exploratory survey results.
2. Create the assessment tool for in-depth phone interviews to further explore objectives 2-4 listed above.
3. Provide NACCHO with interview schedule with list of candidates for recipients of NACCHO360 scholarship.
4. Invite, schedule, and conduct in-depth phone interviews.
5. Perform data analyses.
6. Write project report.
7. Produce products to share data from assessments and evaluation (e.g., one event, resource, research brief, and/or infographic).

This report serves to summarize the in-depth interviews (next steps 2-5 above) of rural, frontier, and small LHD’s who self-identified as currently engaged and not engaged in a local HAI program activities at their health organization. An analysis was conducted to understand processes, engagement, barriers and challenges and successes for HAI in rural settings.

This report has an analytical structure with Methodology, Results and Discussion, Conclusions and Recommendations sections. The Recommendation section is followed by a Program Models and Description section before the Appendices. Understanding these

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structures is critical to identifying the frameworks, responsibilities, and roles of each of the interview participants.

## Methodology

In collaboration with NACCHO, HCC, Inc. developed two (2) interview tools. One tool was the *Interview Guide for LHDs Engaged in HAI Activities* which contained fourteen (14) open-ended questions (see [Appendix D - Interview Guide for LHD's Engaged in HAI Activities](#)). The second tool was the *Interview Guide for LHDs Not Engaged in HAI Activities* which contained nine (9) open-ended questions (see [Appendix E - Interview Guide for LHD's NOT Engaged in HAI Activities](#)).

Fifteen (15) potential participants for in-depth interviews (see [Appendix C - Potential Interview Participants](#)) were identified from the initial exploratory survey. Invitations to participate in the in-depth interviews were sent individually via email on Friday, April 29, 2022, by HCC, Inc (see [Appendix A - Email to Potential Engaged Participants & Appendix B - Email to Potential Not Engaged Participants](#)). Eleven (11) of the fifteen potential participants agreed to participate in the in-depth interviews. The email contained a Doodle Poll for scheduling interview dates and times as well as to ascertain participation to offer a scholarship for the 2022 NACCHO 360 Annual Conference. Participants were provided the interview tools prior to their scheduled appointment. Interviews were recorded using Zoom Cloud Recording Services with the use of closed captioning to produce a text file. The text file was used to create interview transcripts which can be found in [Appendix J - Interview Transcripts](#). The resulting data was collated and synthesized by HCC, Inc. to identify common themes, understand program processes, and compare LHD's that are engaged and not engaged in HAI activities. Synthesized and collated data may be found in [Appendix F - Synthesized Interview Responses – LHD Engaged in HAI activities](#), [Appendix G - Synthesized Interview Responses – LHD Not Engaged in HAI activities](#), [Appendix H - Collated Interview Responses – LHD Engaged in HAI activities](#), and [Appendix I - Collated Interview Responses – LHD Not Engaged in HAI activities](#).

## Results & Discussion

### Participants

Eleven (11) in-depth interviews were conducted from May 5, 2022, to May 26, 2022. The duration of the interviews was in the range of 60 minutes -150 minutes.

The following five (5) participants self-identified as *Engaged in HAI Activities* and were part of the in-depth interviews:

- Jill Bullock, Associate Director at the Arizona Center for Rural Health located in Tucson, Arizona.



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- Greg Danyluk, PhD, MPH, MS, Epidemiology Program Manager at the Florida Department of Health in Polk County & Hardee County located in Bartow, Florida
  - Erika Baldry, MPH, CIC, ICP/HAI Section Supervisor in the Epidemiology and Scientific Support Bureau of the Montana Department of Public Health and Human Services located in Helena, Montana
  - Zullymar Rios Velazquez, MPH, CIC, Epidemiologist III in the Epidemiology and Emergency Preparedness Williamson County and Cities Health District located in Round Rock, Texas
  - Lena Turner, LVN, Epidemiology Investigator & Mary Beth Bess, MPH, MSN, APRN, Health Services Director, Chambers County Health Department located in Anahuac, Texas

The following six (6) participants self-identified as *Not Engaged in HAI Activities* and were part of the in-depth interviews:

- Marcy Rein, RN, MPH, Public Health Director, Whitley County Health Department located in Williamsburg, Kentucky
- Grace Grinager, Public Health Supervisor, Cook County Public Health and Human Services located in Grand Marais, Minnesota
- Majusta Kleven, RN, Administrator, Towner County Public Health located in Cando, North Dakota
- Allison “Allie” DeVore, BSN, RN, Nursing Unit Manager, Stark County Health Department located in North Canton, Ohio
- Robert Kirkpatrick, MS, Executive Director, Milam County Health Department located in Cameron, Texas
- Donna Wiegert, RN, BSN, Public Health Nurse, Langlade County Health Department located in Antigo, Wisconsin

It should be noted there were two (2) non-local health departments interviewed. The Arizona Center for Rural Health is a partner with the State Health Department participating in the Flex Program; this is a program created to support Critical Access Hospitals (CAH) in quality improvement, quality reporting, performance improvement and benchmarking. The program is currently involved in a CAH AMS program. In addition, the Montana Department of Public Health and Human Services is a State HAI program. The other participants represented local health departments (LHD) in Florida, Texas, Kentucky, Minnesota, North Dakota, Ohio, and Wisconsin. Community and program descriptions and models are presented in another section of this report. This Results and Discussion Section will concentrate on the interview collated and synthesized responses categories as engaged and not engaged.

The data was thematized across each question; common themes were then identified. Respondents could have more than one response in each category or theme and total responses are presented next to each theme.

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## Engaged LHD Responses

Using the *Interview Guide for LHD's Engaged in HAI Activities* (see **Appendix D - Interview Guide for LHD's Engaged in HAI Activities**) thirteen (13) open-ended questions and one (1) closed-ended question were posed to participants from Arizona (AZ), Montana (MT), Florida (FL), and Texas (TX-Chambers & TX-WCCHD). Arizona and Montana are not LHDs; they are the Arizona Center for Rural Health and the Montana Department of Public Health and Human Services. For additional detail on the results see **Appendix F - Synthesized Interview Responses – LHD Engaged in HAI activities**.

Starting the program and knowing that we are going somewhere.  
Higher level of thinking.  
- Mary Beth Bess,  
Chambers County Health Department

The first two questions in the interview guide asked the participants to describe the community they serve, the services they provide, and their HAI program. The responses to these question as well as question 9, to describe their collaborations with partners, are written in the **Program Models & Descriptions** section of this report.

Question 3 asked participants to reflect on the most important decisions which should be made within the program/project; follow-up questions were asked to clarify what must in place before implementing a program and if a needs assessment was conducted prior to implementation.

### Needs Assessment

When engaged organizations were asked about a formal needs assessment, two (2) of the five (5) or 40% of the programs (AZ & MT) said that they had conducted a formal needs assessment. However, the program in Arizona stated it initiated its program without the results as the analyses was taking too long to complete. The other (MT) advised it was a requirement of Project First Line to conduct a learning needs assessment.

Do it because it is the right thing to do. It's the right thing to give the best quality care.  
- Jill Bullock,  
Arizona Center for Rural Health

### Important Decisions to Make within the Program/Project

When engaged organizations were asked about the most important decisions to make within the project/program, the responses sorted into seven (7) categories which are presented below. Next to each theme is the total number of responses.

- Access to mentor/knowledge (5)
- Establish goals/purpose/plans (4)
- Funding/capacity resources to do the work (4)
- Develop trusted relationship (3)
- Understand policies (3)

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- Openness to learn/desired to be involved (2)
  - Value-quality care (1)

Across the engaged organizations, there was agreement that access to a mentor or someone that has the right background and knowledge was important when starting a HAI program. The organizations perceived that there was an abundance of resources and having the ability to reach out to a knowledgeable person was important. For these engaged organizations, accessing their State HAI program as well as gaining specific training to improve that knowledge was critical.

Another major decision to make within the program/project was that the organization must have established goals, purpose, or plan before initiating a program. One participant (MT) suggested getting buy-in from partners to understand their needs when establishing the program, ensuring that the program goals aligned with positions, and establishing a plan for succession (MT). Another LHD (TX-WCCCHD) advised it was important to establish not only what the organization will do, but also determine what the organization won't do.

Funding to build capacity and develop resources to do the work was another weighty decision to be made before implementation. The engaged organizations advised it was important to ensure there is an understanding of policies and procedures from each entity. This included understanding what is reportable to the State, who the facility is governed by, understanding the facility's capabilities to respond, how much help the entity will need, knowing the gaps in the organization's system, and identifying the ways in which to fill those gaps. Another key component for implementation of an HAI program for engaged organizations was understanding the facilities' capabilities and having open and transparent communications would assist in developing trusted relationships.

### **Program Successes**

Engaged organizations were asked to identify the successes in their HAI program/project including key milestones and deliverables. Responses were thematized into five (5) categories:

- Collaboration opportunities (11)
- Improved processes (10)
- Knowledge gain (7)
- Stronger & trustful relationships (5)
- Satisfaction (3)

The engaged organizations found success in the quantity and quality of collaborations that were developed. Relationship building through activities, such as providing one-on-one technical assistance, providing peer-to-peer support, mentoring novice programs/staff, providing training and resources, and using the Project First Line initiatives were identified.

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Improved processes included engagement of partner organization leadership, conducting assessments at a variety of healthcare facilities, implementation of dedicated staff positions, increased reporting from facilities, improved communications with facilities, providing capacity and competency to fit a tailored need (FL, MT, AZ), and ensuring the population was represented in LHD staff (TX-WCCHD).

After asking about successes in the program, engaged organizations were asked about the metrics they had for measuring success. Most LHD's stated quantifiable data like the number of trainings, participants, ICARs conducted, or other outreach activities conducted. Impactful data included the proportion of cases specifically linked to LTCF and fatalities from COVID-19 significantly decreasing after conducting ICARS and helping maintain good infection control.

### **Program Barriers/Challenges**

Engaged organizations were asked to identify the challenges or barriers in their HAI program/project. Their responses sorted into nine (9) categories:

- Turnover (9)
- Time requirement for doing HAI work (9)
- Funding (8)
- Lack of training/experience/knowledge/support system (8)
- Lack of communication/doing the job (6)
- External perceptions of the health department (5)
- Lack of supportive regulation (4)
- Inefficient data system (3)
- Competing responsibilities (2)

Turnover of staff, not only within their workforce, but also with the partner facilities, was the most frequent challenge the organizations discussed. Examples provided included conducting ICARs or performing trainings and building relationships only to have to restart a few weeks later because of staff turnover which frustrated the organizations as they worked to move forward in their program goals.

**It's a revolving door of staff. Not only with nursing but with administrative staff, managerial staff and even the corporations themselves change hands.**

- Greg Danyluk,  
Florida Department of Health in  
Polk & Hardee Counties

HAI work also required a significant amount of time and work, with infection preventionists (IPs) not having the time to dedicate to infection control practices. Additionally, the lack of a sufficient full-time employees (FTE) dedicated to the program was a challenge especially for rural health departments. Lack of funding resulted in not having the means to fund a

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dedicated FTE or meet the demands of growing populations in order to provide resources to reach program milestones, to retain staff, or to keep up with the reporting demands.

Lack of training, experience, knowledge, and support systems were also challenges for the programs. Two engaged organizations (MT & TX-WCCHD) mentioned that when they started in their HAI positions, not only did their leadership not know what was needed, they did not know what training they needed and there was no support system to reach out to. All engaged organizations mentioned the burden of learning HAI information as they had limited HAI knowledge and/or experience. As one engaged organization (MT) stated, *“HAI is not always checking boxes, there is no playbook, you have to learn a little bit about everything and its continuous learning.”* Another stated (AZ), *“Most people just step into the role, and they have never done it before, and they need resources.”*

Lack of communication from partners in reporting on processes such as inter-facility patient transfers, medical documentation, and working in silos were among other barriers mentioned by the programs. One program noted, *“Even though we have big relationships, people are used to playing in their own world and doing their own response.”*

Lack of supportive regulation influenced how much time was spent by facilities in their infection control and prevention duties, standardization of processes across facilities, and ability to provide the best care. Insufficient data systems complicated reporting responsibilities, made standardization of processes difficult, provided for complicated access processes, and required more work when workforce turnover was high. Competing responsibilities and needs were also barriers mentioned from the engaged organizations.

After the inquiry on barriers and challenges, engaged organizations were asked how they overcame or planned to overcome these challenges. Engaged organizations stated they were vigilant, *“I keep trying”* to find a way to collaborate with partners was a typical response. One LHD stated they shared resources, another stated they would try to develop some of the relationships further in the future. One engaged organization stated, *“We are going to have to find out about how to fit into their policies and guidelines.”*

### **Staffing Capacity**

Engaged organizations were asked to discuss staffing, capacity, and competency. Responses were divided for competency into seven (7) themes and capacity into four (4) themes. Competency is discussed further below. The themes for capacity were:

- Training (6)
- Rely on other resources (5)
- Insufficient capacity (2)
- Hire Skills (1)

**This question on capacity is easy to answer because so far it just been me!**

**- Zullymar “Zully” Rios Velazquez, Williamson County and Cities Health District**

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To build capacity, training and the reliance on other resources were among the most frequently mentioned themes. Arizona and Montana stated they had the expertise in-house to train others, while the other engaged organizations stated they relied heavily on the State, CDC, or other partners for training. Project First Line, specific areas such as NHSN for hospitals or healthcare facilities, the State HAI program, and the University of Washington were mentioned as frequently used resources and trainings. One engaged organization indicated that no one in their LHD was specifically trained on HAI. Another explained that in rural counties it is a frequent practice to have one nurse responsible for several duties, therefore building capacity was difficult. To mitigate this, one program stated they hired for skills, clarifying that the new employee should already have the skills they needed to do HAI work. Finally, two LHDs mentioned staffing gaps as barriers and/or challenges for building capacity for HAI efforts.

### **Staffing Competency**

When asked to discuss staffing, capacity, and competency, engaged organizations' responses were divided for competency into seven (7) themes and capacity into four (4) themes. Competency is discussed above. The themes for competency were:

- Scheduled, Collaborative Training (6)
- Access to Resources (6)
- Access to SME (3)
- Hire the KSA (3)
- Access to Networks (2)
- Formal Certifications (2)
- Hands On Training (2)
- State/Federal Support (1)

Responses related to the theme of scheduled, collaborative training included statements about utilizing the State's HAI program's training resources, training days with intent to specifically train on HAI topics, and cross training of team members with case study presentations. Competency was also built by connecting partners and their workforce to HAI resources, access to subject matter experts, and access to networks. Consistent communication and the use of tools such as listservs and processes such as office hours and peer-to-peer mentors provided the ability to ensure this accessibility. Finally, having contracts at the Arizona Center for Rural Health for training and being a centralized health department with an HAI program at the State were helpful to build competency.

Two (2) LHD's (FL, TX-WCCHD) specifically mentioned the certification of infection control (CIC); although one did not mention it (TX-Chambers), staff were actively engaged in receiving this certification at the time of interview. Three (3) engaged organizations

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mentioned they built competency by ensuring they hired the KSA's or a person who was motivated to gain the KSA's to build competency.

Hands-on training and cross training were other methods used to build competency. One engaged organization (MT) stated *“learn by doing. Take staff on ICARs, show them, then have them perform one. Mentor kind of program.”* Another program (TX-WCCHD) discussed their mock ICAR set-up on the first-floor clinic of their facility.

### **Length of Time to Build Competency**

When asked how long it takes to build competency, the engaged organizations provided a range from 1 month to 4 years. There was consensus that the information to learn about HAIs was massive with a large learning curve; starting out with a mentor and support system was particularly important. The engaged organizations reported that building competency was person-dependent and correlated with how interested that person was in the topic as well as how quickly they could absorb the information.

MT, FL, and TX-WCCHD agreed that gaining a reasonable knowledge and basic understanding of HAI would take a few months. This basic understanding helped to get staff out in the field doing HAI work. MT noted that the expectation was that once trained, staff should be able to complete an ICAR within 6 months within a two-person team.

### **Skills Needed**

When asked what skills were needed to work in an HAI program, engaged organizations' responses were split into seven (7) themes:

- Academic (4)
- People Skills (4)
- Epidemiologic Skills (4)
- Communications Skills (3)
- Technical Skills (3)
- Foundation of Infectious Disease (3)
- Prioritization and Continual learning (2)

Academic, people, and epidemiological skills were among the top skills identified to work in an HAI program. Academic skills included having higher education (degree seeking) and/or a degree such as a master's in public health (MPH) and/or academic training in biology, microbiology, or equivalent clinical experience at a healthcare facility. People skills cited included being able to pivot communication skills to meet the audience, being open and friendly, and culturally aware and sensitive. Several of the programs indicated having staff that were representative of the population was important.

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Epidemiologic skills included basic epidemiology skills, epidemiology background to think analytically and figure things out, track outbreaks and/or understand how outbreaks are spread and basic infection control.

Technical skills, communication skills, and the ability to prioritize and the desire to learn were additional skills identified. Technical skills including report writing to communicate findings and make recommendations, working with computers, and the ability to perform data analyses. Communication skills aligned with people skills and focused specifically on the ability to build trust and rapport through communication, being an effective communicator, and the ability to talk to a variety of facility backgrounds.

### **Training Resources**

When asked what resources are used for training, the responses were categorized into five (5) themes:

- CDC (5)
- Hands-On (4)
- State HAI (3)
- APIC (3)
- SHEA/CORA (1)

All engaged organizations referenced the Centers for Disease Control and Prevention (CDC) as a resource for training. Hands-on training such as mock interviews, ICARs, and tabletop exercises played a significant role in building capacity and competency. However, engaged organizations wanted more training and resources because HAI efforts called for continual learning. Association for Professionals in Infection Control and Epidemiology (APIC), Society for Healthcare Epidemiology of America (SHEA) and CDC's Center for Forecasting and Outbreak Analytics (CORA) were among the professional organizations mentioned for engaged organizations' resources and trainings. The HAI program at the State level was stated as a resource for all 3 LHDs (FL, TX-Chambers, TX-WCCHD).

### **Perception of CDC/NACCHO**

When asked what motivates engaged organizations to look at tools, resources, or trainings from CDC, all advised CDC was the "gold standard" for public health professionals especially when looking for guidance, information on ICARs, training in infection control audits, and the sharing of references with facilities. The Center for Rural Health advised that the CDC has great resources which were frequently forwarded to their cohort members. The Center for Rural Health accessed the CDC website to review the most recent antibiotic stewardship survey to encourage hospitals to use the paper tool to help with inputting data into NHSN. Williamson, TX also advised that in the curriculum used for the Texas mentorship program; there were references and links to CMS guidelines and Joint Commission in PDF.



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When asked about NACCHO specifically, engaged LHDs indicated they had never used a NACCHO tool or its website.

### **CDC Improvement**

The engaged organizations were asked “What can CDC do better?” The responses revolved around training and guidance for Antimicrobial Stewardship (AMS) which were split into five (5) themes:

- Training - Pathogen Specific (3)
- Training - Management (2)
- Training - IP/Hospital Specific (2)
- Training - Shadowing & Hands-On (1)
- Guidance - AMS (1)

All the engaged organizations mentioned some form of training. Three (3) responses targeted pathogen specific training to include guidance on disease specific infection control and guidance, definition of outbreaks, time to maintain transmission-based precautions, improving AMR for conditions like CRE and MRSA, and updating the containment of multi-drug resistant organisms, with particular attention to using an infection control scope.

Previously, engaged organizations stated that hands-on training was the preferred method for building competency and capacity. These organizations recommended that CDC provide more shadowing and hands-on training opportunities. Specific training for content that was common for IP and hospitals such as sterilization and reprocessing of medical devices was suggested. In addition, when looking at the ICAR tool, specific training should be developed on each of the sections so that when the LHD goes to the facility, they can provide the best guidance.

Other suggested training included management of the HAI program with an emphasis on the scope and role of the HAI coordinator as this has changed over the past 2 years. There was a call for not only AMR guidance updates, but for AMS program guidance. One LHD noted that the last guidance on AMS was in 2015, and there was nothing available for use when reaching out to long-term care facilities (LTCFs) who were starting from scratch.

### **Formal Agreements with Partners**

When asked about formal agreements, three (3) of the five (5) or 60% of the engaged organizations stated they had no formal agreements with partners. Of the three, two (2) cited the public health law and public health response which did not necessitate a formal agreement since the LHD had jurisdiction to respond, investigate, provide guidance, make recommendations, and identify hazards. Montana stated their formal agreements were with a contracted pharmacist as the AMR expert for their HAI program; their formal agreement was with facilities who must participate in the Montana AMS program and featured a signed enrollment letter.

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## Areas of Success for Partnerships

The areas of success within the engaged organizations' partnerships were grouped into seven (7) themes. These included:

- Improved communications (11)
- Building relationships and infrastructure (9)
- Excellent relationships (9)
- Guidance (5)
- Improved process (5)
- Subject Matter Experts (3)
- Training together (1)

Improved communications were an area of success for the partnerships. The COVID-19 response and the rapidly changing guidance supported constant communications. Communications were also improved for facilities when partners aligned their messages and worked together to reduce confusion and duplication of efforts. Ensuring up-to-date listservs, call-downs, faxing and emailing information, and face-to-face meetings were processes used to improve communications. Maintaining open dialogue and ensuring partners fostered relationships were also included in this area.

Another theme representing an area of success was excellent relationships with partners which had been fostered for years with other public health responses, shared meetings, continual communications, and constant interaction. As the engaged organizations built new relationships and infrastructure, face-to-face meetings were held, grant opportunities were identified and shared, information about HAI was distributed, process improvement such as sharing platforms and training resources were provided, and more outreach activities were conducted.

**With small towns and less CAHs you have the ability to work with each facility and build those relationships well.**

**- Lena Turner, Chambers County Health Department**

COVID-19 and its associated outreach served to build relationships which improved reporting processes, increased antimicrobial stewardship engagement, provided access to subject matter expertise (e.g., pharmacist), and reduced confusion. Providing guidance on using NHSN, sending reminders of when measures were due, conducting ICARs and pointing out deficiencies at LTCF, referencing tools and sharing resources across facilities, providing recommendations, and having hospitals implement COVID-19 procedures were all seen as areas of success with partners. COVID-19 also provided the opportunity for a shift in perception wherein the health departments became known as subject matter experts, support systems for health departments (MT), and other resources for infection control guidance, AMR, and AMS information. Finally, the ability to conduct training across agencies was seen as an area of success.

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## **Metrics for Success**

Engaged organizations indicated that success was measured by tracking the number of ICARS conducted, the number of investigations completed, and the tracking of activities and other outreach efforts. Timely reporting of cases and outbreaks also was a measure of success along with the level of engagement of partners in community activities, partnering for community outreach activities, and responding to surveys.

## **Processes for Success**

To ensure success, engaged organizations meet with partner leadership face-to-face to build the relationship and trust. Partner organizations were receptive to resource sharing. Constant contact and communications also ensured success with partners, even when there was no public health emergency. One LHD stated, “Being in touch periodically, even if you have not heard from them, making sure they know we still exist,” was one process they used for success.

## **Challenges in Partnerships**

Engaged organizations were asked to identify areas that were challenging within the partnership. The responses were thematized into ten (10) categories.

- NHSN-System Barriers (5)
- Trust (4)
- Decreased engagement/competing responsibilities (4)
- Reporting (3)
- Conflicting agendas (3)
- Lack of Knowledge (3)
- Turnover (2)
- Lack of Communication (2)
- Insufficient Staffing (1)
- HAI work requires lots of time (1)

Arizona and Montana were engaged organizations that frequently used NHSN and/or required systems to educate partners. One drawback was that there was more than one system required to enter HAI programs metrics at the partner level, and the screens were not the same for the supporting organization. Training on NHSN to pull reports where data interpretation was lacking for the health department was a challenge. The NHSN system itself was a challenge to access especially with frequent staff turnover.

Building trust was a challenge in the partnerships as facilities could be fearful as they associated the LHDs with a regulatory agency that could issue a citation. This made the facilities reluctant to build a partnership. For organizations that were part of the Indian Health Service (IHS), there was a historical distrust of organizations outside of their sovereign nation.

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There was also the challenge of competing health department responsibilities and decreased engagement because of those responsibilities. Reporting, conflicting agendas, and lack of knowledge were also identified as challenges. Critical hospitals were sometimes not required to report quality measures, facilities did not report in a timely manner which delayed an investigation, and some facilities lacked the knowledge that they had to report. Some providers were not educated on reporting conditions and some people lacked education in general on how to use their health department as a resource. Conflicting agendas were seen when LTCF staff got messages from the LHD that did not align with corporate ownership; this was especially challenging when ownership was changed frequently.

Turnover, lack of communication, insufficient staffing, and the perception that HAI required substantial amounts of time were also challenges within partnerships. Some of the engaged organizations discussed that there was overlap in duties when funding was received at various levels of government. This resulted in time and effort spent trying to identify who would do what without being territorial about the response.

### **Sustainability**

Engaged organizations were asked about their sustainability plans for their HAI program/project. An array of responses indicated the responsibility for sustainability was on their partners. Statements such as *“it’s getting our hospitals to not only report the data but use it”* and lack of funding and staffing in the local health departments were examples. Florida advised that the *State HAI Strategic Plan* was recently shared and while the new aspects of the plan sounded good in theory, in practice the Plan was limited due to funding and staffing. Williamson TX reported their efforts for sustainability included trying to reduce risk for failures by cross-training everyone in their programs and providing flexibility for taking time off to reduce staff burnout.

### **Lessons Learned**

When asked about the lessons learned in implementing their HAI program, the engaged organizations’ responses were categorized into eleven (11) themes:

- Communication tools/process (4)
- Administrative and management process (4)
- Transparency (4)
- Build relationship with SME (3)
- Be available with expertise (3)
- Small is mighty (2)
- Self-reliant and initiative (2)
- Build relationships with training (2)
- Invest in staff (2)
- Needs assessment (1)
- Know the burden (1)

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Communication tools/process, administrative and management process, and transparency were among the most frequent lessons learned in implementing an HAI program for engaged organizations. Communication tools and processes included use of the listserv, maintaining day-to-day, constant communication (not just in an outbreak), partners needing to know their face/voice, and ensuring public health was in the loop. Administrative and management processes included learning that contracts take a long time to finalized, building delegation skills, developing skills to manage the people within a program for different sections and deliverables, and ensuring leadership was involved and engaged. Transparency lessons learn included complimenting instead of competing with other agencies, communicating about projects, and funding, and understanding that people don't always know so providing consistent education was important. COVID allowed for the recognition of gaps in services that were being provided and how LHDs could facilitate assistance to their partners.

The themes of building relationships with subject matter experts (SMEs) and being available with expertise had some overlap. Engaged organizations discussed working with experts and finding expertise to assist partners by using a mentor relationship within the region. For example, one engaged organization reported they had a pharmacist expert to answer AMS questions for therapies and prescription use. Other lessons learned included having a multidisciplinary team with analytical skills was necessary in the organizations to get work done efficiently and effectively.

**Rural hospitals and rural states are not the same as everywhere else.**  
- Erika Baldry,  
Montana Department of Public Health and Human Services

Building relationships with training not only included getting together for training but also providing opportunities for peer-to-peer exchange. Being available 24/7 with expertise to partners for guidance, specimen collection, and whatever else they needed ensured successful partnerships and programs.

Investing in staff ensured continual training and competency, particularly since there was an abundance of information on HAI. Ensuring staff were representative of the population including bilingual and cultural awareness and sensitivity were other ways to invest in staff and their competency.

Two (2) engaged organizations (MT & TX-WCCHD) spoke about their lessons learned in self-reliance and initiative. Both had similar experiences when starting their programs; they did not know where to start or their specific role. They were able to find their niche and navigate working across programs, agencies, experts, and resources by more fully understanding their role and establishing how they could work with facilities. TX-Chambers, who recently started their program, admitted they were not sure what their role should be in HAI, AMR, AMS work. Although one engaged organization discussed a needs assessment to find out the interest of

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partners, none of the organizations used one when specifically asked the question earlier in the interview.

Finally, both FL for DOH-Hardy and TX-Chambers discussed the nuance of being small but mighty. In small towns, *“the people who work at the healthcare facilities also shows up at the same PTA meeting or bump into each other at the grocery store.”*

### **Advice to Organizations considering Implementing an HAI Program**

The advice the engaged organizations would give LHDs considering implementing an HAI program or project included finding the support their facilities needed and resources, knowing who to reach out to, utilizing the State HAI program, considering the start of a consortium, having a separate position for the HAI program, ensuring face-to-face meetings, and leveraging existing partnerships. They also suggested that when a facility wants to join a program or become a critical access hospital (CAH), they should know how to connect them and who to connect them with. Getting into a CIC review program was seen as helpful in understanding the HAI information. Having access to an IP was considered valuable advice by several of the engaged organizations.

When navigating the CDC website and other resources, it was recommended to have a mentor or someone to reach out to including the State HAI program. Rural areas should consider starting a consortium to be able to have a separate position in the HAI program and share the resources. It was suggested to share an epidemiologist across two LHDs as HAI efforts are labor intensive, even if the incidence is relatively infrequent. Engaged organizations reported that maintaining face-to-face meetings aids in building trust, rapport, and relationships, and was seen as adding value and important to developing relationships. Leveraging existing partnerships for HAI work was an additional lesson learned.

### **HAI Prevention that is Effective, Efficient, and Seamless**

The final open-ended interview question posed to the engaged organizations was *“What needs to happen for HAI prevention to be effectively, efficiently, and seamlessly delivered in your community?”* Engaged organizations indicated that having a champion, professional IPs, good relationships, capacity and competency in staffing, and expertise were all critical components for HAI prevention efforts. In addition, engaged organizations discussed being available, maintaining constant, continued communications, educating providers, and ensuring less restrictive grant funding guidelines.

### **Other Comments**

Interviews for engaged organizations were closed by asking interviewees if they had any comments that they wanted to share with NACCHO or CDC. The following represents their comments for each specific organization:

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## NACCHO

- I don't have a person at NACCHO to reach out to. I would love to have a person to reach out to. I am good at recognizing what I don't know and would like to have a mentor there that has knowledge and can guide us through.
- I did not know how to register for resources from NACCHO. I just got registered not too long ago. Our leadership has NACCHO access, and I did not realize I had to register for courses.
- NACCHO is a great resource for people to use but I don't think this is common knowledge and it's not necessarily a resource used by everyone.
- I hope NACCHO uses this information to help develop future program or response or assess needs or funding. We have put a lot of time into this.
- We want to be of assistance to NACCHO because we know our state gets a lot of mentorship and information from NACCHO, but at the same time we do not want to seem like we are coming across like we are trying to do something that we just can't yet. There is a lot of work we need to do, but we need additional resources for that.

## CDC

- The future of HAI. Receiving a lot of funding right now and we have grown our program but what is the plan for sustainability? Recognize the growth of the HAI programs and plan for them to be sustained.
- I feel that sometimes there is a disconnect between CDC and CMS of what guidance is being shared or what regulation says verses what guidance says. I share guidance and the facility gets cited; my credibility is gone. So, if we could get training on the CMS requirements so that the guidance, I am giving is complementary to that and not detrimental to.
- Disconnect example - CMS requirements for vaccination for healthcare facilities. CMS uses the language "fully vaccinated," and CDC uses "up to date." With the booster shots, there was confusion on this. I think when guidance comes out like this to have a small workgroup that has rural representation on it so that these things are seen from other perspectives.
- Recommendation to have a small workgroup of HAI coordinators before guidance is shared to determine the implications of it especially for rural hospitals and a rural state.
- Rural hospitals and rural states are not the same as everywhere else. The guidance is for every state, but my rural hospitals are not able to do this, or the guidance would not work in a rural hospital.
- I think we are lucky that we have the support system at CDC level. I think they have a lot of people that really care about us as coordinators and about our programs and the work we do. But I am not sure if our jobs are going to stick around. So, I think CDC should help our leadership to buy-in and support us moving forward.

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- I would like to request training for the local health department such as the basics of infection control, what you need to know as a public health professional as it relates to infection control, HAI, AMR, AMS, and why does it matter to you.

### **CDC/NACCHO**

- I just wanted to ensure tribes were heard because they are left out a lot.
- Send more money and people. Epidemiologists are scarce these days; there is definitely a shortage of epidemiologists available.

## **Not Engaged LHD Responses**

Using the *Interview Guide for LHD's Not Engaged in HAI Activities* (see **Appendix E - Interview Guide for LHD's NOT Engaged in HAI Activities**) thirteen (13) open-ended questions and one (1) closed-ended question were posed to LHDs from Kentucky, Minnesota, North Dakota, Ohio, Texas, and Wisconsin. For additional detail on the results see **Appendix F - Synthesized Interview Responses – LHD Engaged in HAI activities**.

The data was thematized across each question; common themes were then identified. Respondents could have more than one response in each category or theme and total responses are presented next to each theme.

The first question in the interview guide asked the participants to describe the community they serve, the services they provide, and their HAI program. The responses to this question are written in the **Program Models & Descriptions** section of this report.

### **Awareness & Level of Knowledge**

LHDs not engaged in HAI activities stated their level of expertise for HAI, AMR and AMS was at a novice level (N=6). All LHD's stated that they had a supportive role in providing HAI, AMR, AMS support and assistance, and not a lead role. These LHDs reported there was limited and/or out-of-date information on HAI, AMR, and AMS when they pulled data directly from their State. Additionally, when data was pushed to the LHDs, the data was either out-of-date or not county-level specific which limited their ability to initiate any action. As one LHD stated (OH), *"If it's not reportable, and an outbreak, or like an anomaly or something like that, we don't have that data just right at our fingertips."*

Not engaged LHDs' awareness of what constitutes HAI, AMR and AMS activities was mixed and somewhat limited. One LHD (WI) advised that she had done research prior to the interview to understand what the interview would be about. This was exemplified by her statement *"I would say the first barrier is probably a lack of knowledge in our department."*

**When you have multiple healthcare systems involved trying to get all that information when, when you're just the little person in the corner.**

**- Marcy Rein,  
Whitley County Health Department,  
Kentucky**



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When the not engaged LHDs provided examples, all realized they were doing some level of HAI work (e.g., influenza outbreaks at healthcare facilities, norovirus, and COVID-19 responses, etc.).

When the not engaged LHDs were asked about their awareness regarding others doing HAI, AMS, AMR work in their community/jurisdiction, they responded their awareness was narrow when it came to understanding partner efforts in HAI, AMS, and AMS because they had a limited role. Education and outreach were performed when asked, but no formal agreements were in place. Some not engaged LHDs advised that they were aware that local hospitals had infection control departments, but that a regional epidemiologist managed these activities, or that the State office was the lead on these activities. One LHD (MN) advised that this state-local model was ideal because the state had the materials and resources to provide the best assistance to the counties.

**It's just more standardized across the State and then it makes it so that we don't have to be experts, we can just ask them for help, and then, if they want us to play a more active role, they can provide us with the training to get involved.**

**- Grace Grinager,  
Cook County Public Health, MN**

### **Awareness of Others in Community Doing HAI, AMR, AMS Activities**

Not engaged LHDs were asked about their awareness of other community partners doing HAI, AMR, AMS activities in their community. Four (4) themes emerged in the discussion.

- No clear role of LHD (31)
- Role is outreach (18)
- Limited training with partners (10)
- Partnerships (9)
- Lack of data (9)
- Lack of formal agreements (4)

All the not engaged LHDs reported there was not a clear role for the LHD in conducting HAI, AMR, AMS activities. Coupled with the second most reoccurring theme, the not engaged LHDs perceived their role as providing resources and education, collecting, and shipping samples, and providing support to the local healthcare providers and state efforts. Three (3) of the six (6) or 50% of the LHDs report they did not have a role in HAI, AMR, AMS efforts. One of the LHDs (MN) stated, *"I think, for us it is really helpful to have this State take the lead on it, because, like I think they can have materials and resources and things that are in common that they can provide to counties."*

The not engaged LHDs perceived their role as providing outreach to local healthcare providers in form of training, brochures, and resources and referrals to LHD and clinic programs and services. For example, one LHD (KY) provides STD education to the local jail

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and sex education to the middle and high school and thought HAI work could follow a similar model.

Training with community providers was limited for not engaged LHDs. Some of the LHDs provided targeted training to community partners, participated in LTCF conference calls, or used the state infectious disease manual for protocols.

### **Barriers & Challenges to Implementing HAI, AMR, AMS Activities**

When asked about barriers and challenges to implementing HAI, AMR, AMS activities at a small, rural, and frontier LHD, the top three themes were poor communication, limited LHD role, and limited LHD experience and/or knowledge with HAI, AMR or AMS.

- Poor Communication (9)
- Limited LHD role (7)
- Limited LHD experience/knowledge with HAI, AMR, AMS (7)
- Limited time (6)
- Lack of funding/revenue (6)
- Staffing concerns (4)
- Limited resources (4)
- LHD prioritization of programs (4)
- Lack of Infrastructure (3)
- Lack of capacity (2)
- Limited training (2)
- Community concerns (1)
- Lack/limited access to data (1)

Time, funding, and staffing were also identified as barriers or challenges for the not engaged LHDs. Limited staffing dictated LHD prioritization of programs and identification of services they could provide. One LHD (MN) supported this theme stating, *“It’s always a challenge to know how we’re gonna focus our limited time and resources to address them.”* Turnover in the public health workforce was a significant barrier for small, rural, and frontier LHDs as one person usually was managing multiple programs. Moreover, in a small, rural, and frontier community, it was difficult to find physical space and IT services. As one LHD (TX-Milam) stated, when the funding *“comes it is for people, not space. I just don’t have the free space needed to house them.”*

There was also a perception that small, rural, and frontier LHDs may not be willing or able to do the HAI, AMR, AMS work or program. One LHD (KT) stated, *“the idea that we’re small and we don’t have the existing resources to have a program is a barrier.”*

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## Building Capacity to Engage

When asked about building capacity to engage in HAI, AMR, and AMS efforts, training and tools were the largest area of response with the LHDs identifying a number of desired training topics and tools. Relationship building, improving the LHD role, and the use of CDC and NACCHO resources were all discussed by the not engaged LHDs as important for building their capacity.

- Training/Tools (20)
  - Communication skills
  - Relationship building skills
  - Team skill building
  - Coalition building
  - Building motivation for involvement
  - Defined expectations
  - Defined processes & protocols
  - Ability to demonstrate positive intent
  - Training & tools on formal agreements – how to develop, how to implement
  - Program evaluation
  - Quality Improvement
  - Assessment, planning, evaluation (PDCA)
- Relationship building (14)
- Improve LHD role (12)
- Use CDC/NACCHO resources (10)
- Improved communication (4)
- Use other resources (4)
- Funding (3)
- Need staff (3)
- Need up-to-date data (2)
- Address public perceptions of Public Health (1)
- Need time (1)

Relationship building was a significant discussion point by all not engaged LHDs. Improving their role in terms of moving from support and assistance to being more proactive and taking a lead required knowledge on implementing formal agreements with partners, improved communications, access to data, and access to easily editable tools to fit the needs and culture of the community. To build relationships required “*good communication skills and having good relationship with our partners*” (OH), but it was also important to maintain those relationships by “*nurturing them and keeping them going especially with staff turnover*” (KT). Coalition building was an idea that was brought up to reduce barriers but the motivation to initiate and maintain that type of work was not there for some of the not engaged LHDs. As one LHD (WI) stated, “*The motivation isn’t there, even from the community.*”

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## CDC & NACCHO Resources

When asked specifically about resources from CDC and NACCHO, all LHD's responded that they used these resources, more CDC than NACCHO. They also used YouTube videos and other healthcare expert information to increase their knowledge and adapt content to their specific community needs. The CDC website was easy to navigate with culturally appropriate materials and guidance for healthcare facilities with COVID-19. However, some of the not engaged LHDs reported the information on the CDC had a more national focus rather than centered on community-level needs.

The not engaged LHDs reported having to spend time adapting the tools and brochures to be usable in their community. LHDs (KT, MN) commented that some messaging campaigns at the national level would not be received well at the local level in rural areas. This was exemplified in the statement, *"one of the things I see a lot is a lot of the rural targeted materials are really just a downsizing of something that was created for an urban community, and it doesn't work"* (KT).

## Addressing Perception & Roles

Perceptions of small, rural, and frontier health departments as compared to more urban health departments was perceived as skewed by the not engaged LHDs. This type of perception limited the opportunities for engagement on different programs but also resulted in the LHDs adapting tools to fit their needs with limited staffing and resources because the expertise was not aligned.

*"Each rural community has their own culture, [we] spend a lot of time thinking about our community's culture"* (KT).

*What's not helpful is thinking that rural is just little urban. That that you can't just downsize what you do in the system and think it's gonna work. . . And in each rural community has their own culture. . . spend a lot of time thinking about my community's culture.*

- Marcy Rein,  
Whitley County Health Department

In addition to not being asked to the table to participate, not engaged LHDs reported that clearer standards and agreements need to be in place especially because of limited resources. One method to assist with limited staff is the use of regional assets. As one LHD (TX-Milam) stated, *"I consider us a quasi-force multiplier in the region because they don't have to have staff out here, we're here, and they're a subject matter expert force multiplier for us."*

The not engaged LHD's thought that the best way for them to initiate engagement in HAI, AMR and AMS activities without additional funding was in messaging and education; however, this needed to be a direct ask from the local partners and/or regional/state offices. *"Our best role in this is sort of like the public education piece, and really talking with the community about what HAI is, what you know, antibiotic stewardship, all of it"* (KT).

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For the not engaged LHDs, COVID-19 demonstrated what collaborative relationships could achieve. Spring-boarding from the COVID-19 response, not engaged LHDs expressed the desire to continue to build these relationships, leverage resources, and realize that partnership building could be addressed across systems. One not engaged LHD (KT) stated, *“It’s just not about competing with each other all the time.”* However, it was noted that due to limited staff and multiple responsibilities, any initiative would have to be framed and communicated to LHD staff about how that initiative tied into the work they were already doing and had expertise in otherwise, HAI, AMR, AMS initiatives would be perceived as something new to do.

### Resources to Engage in HAI initiatives

Six (6) themes with corresponding sub-sections were identified in the not engaged LHDs’ discussion when asked about resources they needed to engage in HAI, AMR, AMS efforts.

- Training (11)
  - Communication tools & strategies (3)
  - Understanding funding streams (2)
  - Building relationships among stakeholders (2)
  - Initiating a new program – PH YouTube with interview strategies for various topics & disease
  - Provide national PH consistency for interview strategies
  - Tools, toolboxes, and strategies
  - PH campaigns
  - webinar for connecting resources
  - need coaching, mentorship, training series
- Identify needs of HC facilities
- Specific infrastructure needs (9)
  - Funding (4)
  - Staff (4)
  - Time (2)
  - Physical space
  - Prioritization
- Re-define LHD role (4)
- Joint training with partners (3)
  - Facilitated conversation with community partners – outside facilitation on how to work together, leverage training & resources
- Resources (3)
- Accessible contact person (1)

**There are things that we can do, if we just have the manpower in the, the time to, to dedicate to it...but like most small health departments we have to know everything about everything.**

**- Donna Wiegert, Langlade County Health Department, WI**

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Training was the not engaged LHDs' primary need to participate in HAI, AMR, and AMS initiatives. With training as a needed resource, communication tools and strategies were important. This included resources to connect to local doctors and providers to ensure they were "*on the same page*" (OH). Resources to build infrastructure was another support item for not engaged LHDs. Tools, toolboxes, and resources needed to be easy to access and contain a small, rural, or frontier focus. Staffing, funding, and time were the key infrastructure needs. Not engaged LHDs also identified the need for cross-agency training and facilitated conversations to define expectations and roles and leverage resources within their community. Some of the not engaged LHDs indicated that staff needed to be willing to participate in continual learning.

While webinar calls were attended when invited, small, rural, and frontier LHDs found it was more effective to get everyone in the same room and provide hands-on interactions. The perception was that this would not only build capacity, but also encourage the initiatives and motivate participants.

The not engaged LHDs wanted a point-of-contact or a knowledgeable resource they could reach out to and was accessible which would encourage HAI, AMR, AMS engagement. As small, rural, or frontier health departments, they reported being expected to have subject matter expertise on multitude of topics; for them, this meant having a point of contact as they did not have the bandwidth to know everything about all things HAI, AMR, and AMS. As one LHD (MN) stated, "*the phone a friend model*" was preferred as this person would be someone that they could call if they needed support.

### **Advice to CDC & NACCHO**

Not engaged LHDs responses were sorted into ten (10) themes as they discussed the advice, they would give CDC or NACCHO when considering an HAI, AMR, and AMS project/program involving rural, small, or frontier health departments. These included:

- Build partnerships (7)
- LHD role with state/regional model works well (6)
- Build communication methods/systems (5)
- Use existing/accessible resources to tailor to rural LHD community (5)
- Determine best model for LHD services/partnerships (5)
- Acquire funding specific to rural LHD needs (4)
- Establish relationship with CDC (3)
- Address perception of Public Health in community/partners (3)
- Prioritize LHD programs (2)
- Get training to build confidence (1)

When engaging in new initiatives, not engaged LHDs reported that CDC should consider one of necessities of HAI, AMR and AMS activities is building relationships for community

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collaboration. In small, rural, or frontier communities, the health department does not have the resources to do these activities and would rely on the partnerships heavily. Therefore, there must be some incentive for partners to participate. As TX-Milam stated this will *“help get better activity and buy-in from everybody and make the project easier to execute and be more productive in the end.”*

Not engaged LHDs identified the need to build communication methods and systems with CDC. Using COVID-19 for an example, not engaged LHDs explained the mechanism for information on updated guidelines and recommendations created confusion. In the future, giving a “heads up” on changes and providing a synopsis of changes along with full documentation would be more effective. Additionally, relying on states to disseminate CDC webinar information to local LHDs was not efficient as many did not receive the CDC information or webinar invites; CDC should consider disseminating the information directly to the local health departments via email.

One LHD (WI) asked for rural-specific communication toolkits. These toolkits would contain communications tools such as infographics specific for small, rural, and frontier jurisdictions which would be useful in reaching more people. Ensuring that resources can easily be edited or adapted to fit the needs of these populations was seen as important by all the not engaged LHDs.

If CDC or NACCHO were to engage with small, rural, and frontier health departments, it would be imperative to communicate clearly on project focus, expectation, LHD roles, and community partner roles. The not engaged LHDs explained there were diverse models for delivering public health services in small, rural, and frontier areas. The not engaged LHDs identified different models being used for providing public health services and programs in their jurisdictions for which CDC needed to be aware when considering an HAI, AMR, AMS program/project. A regional or state model was used by most of the not engaged LHDs, with the local LHD providing a supporting role for such tasks at specimen collection and shipping to the state lab.

Finally, funding algorithms should be adapted for small, rural, and frontier areas. Many of the not engaged LHDs reported that funding appears to be based on the number of cases within the population. They asked that more funding for low occurrences areas was needed because the expertise was not easily accessible. *“More support is needed to maintain competence in areas with low occurrences versus the city that see hundreds and hundreds of cases”* (KT).

## Conclusions

This analysis looked at HAI, AMR, and AMS topics from the perspective of LHD’s engaged and not engaged in a program or activities around the topics. The LHD’s self-selected their engagement level but through the in-depth interview it was noted that each site engaged in

**Rural HAI In-Depth Interviews Draft Report**

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some level of HAI, AMR, or AMS work although it might not have been initially realized by the interviewees.

When initiating a program with HAI, AMR, or AMS topics both engaged and not engaged LHDs, and organizations identified the importance of having a knowledgeable mentor or point-of-contact that knew the resources available and was accessible. These relationships would provide a support system, peer-to-peer consultation, and resources in the form of people, products, and processes. Having a point-of-contact was a critical need for not engaged small, rural, and frontier LHDs as their low incidence rates did not allow for gaining the knowledge, expertise, and experience in HAI, AMR, and AMS activities. The point-of-contact would help facilitate setting program goals and objectives and understand roles and responsibilities within the discipline at the local level.

Engaged organizations reported that personnel working in HAI must demonstrate a desire to learn and be open to being involved. Skillsets should include people and communication skills, technical skills, academic experiences, and a basic knowledge of epidemiology and infection control. Not engaged LHDs reported that personnel and the community must be motivated to initiate any program. To get motivation for HAI, AMR, and AMS initiatives, messaging and program campaigning should be framed and communicated to LHD staff on how it aligns with the work they are already being asked to do and the expertise they already have.

Funding, staff capacity, and resources to do the work are challenges for any public health program; HAI work takes a considerable amount of time and requires specialized continuous learning with a range of 1 month to 4 years to gain levels of competency. Building capacity required training and the use of other resources specific to HAI, AMS, and AMR. Training in small, rural, and frontier areas was perceived to be more effective in-person than in a virtual environment. The need for more hands-on training was identified by both engaged and not engaged LHDs. Experiential learning and the need for continual education were important to both in-depth interview organizations.

Funding algorithms based on case incidence puts small, rural, and frontier LHDs at a disadvantage. There was a need and desire to build infrastructure, capacity, and competencies but the lack of funding restricts these organizations' goals and participation in initiatives. Restrictive funding also did not allow for flexibility to pay for space to house staff or for activities necessary for building rapport and trust with partners which are outside grant deliverables. A specific funding budget item as travel associated costs limited small, rural, and frontier LHDs involvement in HAI, AMR, and AMS activities, as most rural areas were large geographically with major costs associated with travel.

Staff turnover and workforce development were significant challenges at some of the healthcare facilities (e.g., LTCF, hospitals) and at the public health organizations before and



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during the COVID-19 response. This was especially challenging at a small, rural, and frontier organizations because one staff performed multiple duties for multiple programs. To assist with competency for partners, engaged organizations utilized consistent communication strategies and performed redundant training sessions to ensure newly hired staff were trained appropriately.

Most LHDs and organizations did not have any formal agreements outside the reporting laws, so it was imperative to maintain good relationships with improved communications and building infrastructure by being available, credible, and providing expertise. One significant advantage of being a small, rural, or frontier health department was that when they worked with healthcare facilities, there was usually just one identified person who could get an issue resolved. Engaged organizations reported standardization was difficult across facilities, not only because of the facilities' capabilities, but also because internal policies and lack of supportive regulation prevented it.

The dynamics of the COVID-19 pandemic required more healthcare facilities to seek guidance from public health authorities such as the LHD's; this fostered new partnerships and strengthen existing ones. LHDs were able to gain additional competencies in infection control and HAI with the implementation of ICARs at the healthcare facilities. This service not only resulted in maintaining good infection control but correlated with decreased community morbidity and mortality at the LTCFs that benefited from the service. COVID-19 also highlighted how these healthcare-LHD collaborations could achieve success in controlling infectious diseases, build relationships, leverage resources, and recognize that HAI initiatives could be addressed across systems. The LHDs reported they plan to leverage these partnerships to continue public health work in other program areas.

Engaged LHDs also measured success by tracking the number of ICARS conducted, the number of investigations, and tracking of other outreach activities. Timely reporting of cases and outbreaks was a measure of success along with the level of engagement of partners in community activities, partnering for community outreach activities, and responding to surveys.

Training and specific guidance were the areas the organizations identified that CDC could do better as well as understanding that rural health is not the same as urban health. Both sets of interviewees reported that the small, rural, and frontier community culture required tailored, personalized strategies. Canned messaging could be easily edited to meet local needs would benefit these areas.

Frequently, small, rural, frontier LHDs and organizations were not directly invited to participate in training or initiatives; their perception was that they were too small to handle these opportunities. Small, rural, and frontier LHDs and organizations would not only like to be asked to the table to participate but require clearer standards and agreements in place

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especially because of their limited time, staff, and resources. The LHDs thought that the best way for them to initiate engagement in HAI, AMR and AMS activities without additional funding was in messaging and education but that it had to be a direct ask with support in the form of an accessible point-of-contact and tailored resources.

## Recommendations

Health Communications Consultants, Inc. (HCC, Inc.) recommends the following to initiate or maintain small, rural, and frontier local health departments and their community partners in HAI, AMR, and AMS activities.

### Building an HAI, AMR, AMS Program/Project

1. Frame program/project with how it fits into the work the small, rural, and frontier LHD is already doing; do not frame it as a “new” program/project.
2. Small, rural, and frontier LHDs rely heavily on their community partnerships. Therefore, the HAI, AMR, and AMS program/project must incorporate both the LHD and the community partners equally.
3. Communicate to small, rural, and frontier LHDs the future for HAI, AMR, and AMS programs and the plan for capacity building and sustainability after COVID-19.

### Understand the Needs of Small, Rural, and Frontier LHDs

1. Understand that there is no one size fits all; small, rural, and frontier LHDs have vastly unique needs, cultures, and structures.
2. Ensure a CDC and/or NACCHO point-of-contact for HAI, AMR and AMS initiatives, information, guidance, resources, facilitations, and training beyond the website content.
3. Small, rural, and frontier LHDs require face-to-face meetings and trainings.
4. Building capacity requires collaboration in the form of facilitation, training, and setting expectations, roles, and desired outcomes across agencies and partners within a small, rural, and frontier environment.
5. Small, rural, and frontier LHDs may not have dedicated communications staff.

### Funding and Resources

1. Funding should have special attention to mileage with lesser restrictions on grant criteria and physical space.
2. Improved methods and application protocols to allocate funding to small, rural, and frontier LHDs as low HAI, AMR, and AMS incidence does not represent the need to fund infrastructure, capacity, and KSAs nor the motivation to engage in these activities.
3. Data needs to be up-to-date and accessible as the local healthcare community and the state does not release data directly to small, rural, and frontier LHDs.

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4. Canned resources must be easily edited to meet the cultural needs of small, rural, and frontier communities.
  5. Tools, toolkits, messaging campaigns, etc. should not be downsized for small, rural, and frontier LHDs; it should be specifically tailored to their needs, cultures, and structures.
  6. Provide resources to facilitate conversations with community partners for strategic and action planning and relationship building.

### **Training and Technical Assistance**

1. Peer-to-peer coaching and mentoring programs would assist small, rural, and frontier LHDs to understand their roles and responsibilities as it relates to HAI, AMR, and AMS.
2. Direct engagement of small, rural, and frontier LHDs must involve personalization (e.g., direct invitation, training, messaging, etc.).
3. Specific training including NHSN, disease specific, hands-on, attention to using an infection control scope, basics of infection control geared to LHD, and communication skills.
4. Establish Public Health workforce development initiatives needs specific for increasing epidemiology capacity.
5. Establish small, nationally regional workgroups with HAI, AMR, and AMS coordinators to ensure accessibility and equity in guidance for small, rural, and frontier hospitals and other healthcare providers.

### **Tailored State Engagement**

1. States with engaged State HAI programs were more likely to have engagement at the local level. The State HAI program should personally reach out to small, rural, and frontier LHDs and ask how they can engage in these activities specifically.
2. State HAI Programs should have a mechanism for tiering the level of engagement for each small, rural, and frontier LHD.
3. Ensure a State and/or regional point-of-contact for HAI, AMR and AMS initiatives, information, guidance, resources, facilitations, and training.
4. Orientation/training to public health and public health programs especially for small, rural, and frontier needs and structures.

### **CDC & NACCHO Role**

1. Increase awareness and knowledge via tailored communications to small, rural, and frontier LHDs.
2. Websites should provide timely updates to guidance with alerts sent directly to small, rural, and frontier LHDs.
3. Ensure guidance from CDC aligns with all regulatory agencies.

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# Program Models & Descriptions

Public health governance structures vary from state to state as well as the relationship between state health agencies and the regional or local public health departments. This structure effects the delivery of essential public health services by defining roles, responsibilities, and authorities across the levels of government. CDC places governance health structures into seven (7) categories.

1. Centralized
2. Largely Centralized
3. Decentralized
4. Largely Decentralized
5. Mixed
6. Shared
7. Largely shared

In centralized and largely centralized structures, local health units are primarily led by employees of the state. In decentralized or largely decentralized structures, local health units are primarily led by employees of local governments. In a mixed structure, some local health units are led by employees of the state, and some are led by employees of local government. No single structure predominates. In shared or largely shared structures, local health units might be led by employees of the state or by employees of local government. If led by state employees, then local government has authority to make fiscal decisions or issue public health orders; if led by local employees, then the state has the authority. In the nine (9) states we interviewed as part of this project, six (6) are decentralized, one (1) is largely decentralized, and two (2) have a shared structure.

## Decentralized:

- Arizona
- Minnesota
- Montana
- North Dakota
- Ohio
- Wisconsin

## Largely Decentralized:

- Texas

## Shared:

- Florida
- Kentucky

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Understanding these structures is critical to identifying the frameworks, responsibilities, and roles of each of the interview participants. In this section of the report, we provide a description of each of the programs as it shared via interview. A visual representation is presented of the partner network of each program.

## Decentralized Structure

### Arizona

We interviewed Jill Bullock at the Arizona Center for Rural Health located in Tucson, Arizona. The Arizona Center for Rural Health is housed in the College of Public Health Mel & Enid Zuckerman College of Public Health at the University of Arizona. Jill is the Flex Coordinator.

The Flex Program is the Medicare Rural Hospital Flexibility (Flex) Program funded by the Health Resources and Services Administration (HRSA) Federal Office of Rural Health Policy (FORHP). The Flex program, which sits within the Arizona Center for Rural Health, was created to support critical access hospitals (CAHs) in quality improvement, quality reporting, performance improvement, and benchmarking; to assist facilities seeking designation as CAHs; and to create a program to establish or expand the provision of rural emergency medical services (EMS). The CAHs Antibiotic Stewardship Programs are required by FORHP as part of the eligibility to receive Flex funds. The aim of the Flex Program is to provide training and technical assistance to build capacity, support innovation, and promote sustainable improvement in the rural health care system. The overall goal of the Flex Program is to ensure that high quality health care is available in rural communities and aligned with community needs.

The Flex program consists of 16 critical access hospitals, 38 rural health clinics, and Tribal Health which includes, two Indian Health Service (IHS) critical access hospitals, two tribal 638 hospitals, and one 638 that is working on their designation as a critical access hospital. Tribal Contract or Compact Health Centers (commonly referred to as 638 contract or compact) are operated by tribes or tribal organizations and Urban Health Centers which are outpatient health care programs that specialize in caring for American Indians (Indigenous American) and Alaska natives. The Center for Rural Health does not work with CAHs on HAI but will support them when they need to connect to other CAHs or in the event, resources are needed. For this interview, Jill spoke about the Antibiotic Stewardship Program as well as some of the other work of the Flex Program.

The Flex program started at the Center for Rural Health after a CEO of a local hospital who came from a CAH in Washington State that was using the program. She wanted to be involved with the University of Washington Tele-Antimicrobial Stewardship Program (UWTASP). She partnered with the state Arizona Department of Health HAI representative who is an infection preventionist pharmacist that also works at the University of Arizona. They introduced the program via webinar to gauge interest from the hospitals and there was significant interest. The Center for Rural Health became one of five State Flex programs that participate in the University of Washington's UWTASP. The program aims to reduce asymptomatic bacterium and indiscriminate use of antibiotics. There are four hospitals in cohort 1 and three in cohort 2. UWTASP requires a quality improvement (QI) project this year for the Flex programs and after recruiting hospitals to participate in the cohorts, they have

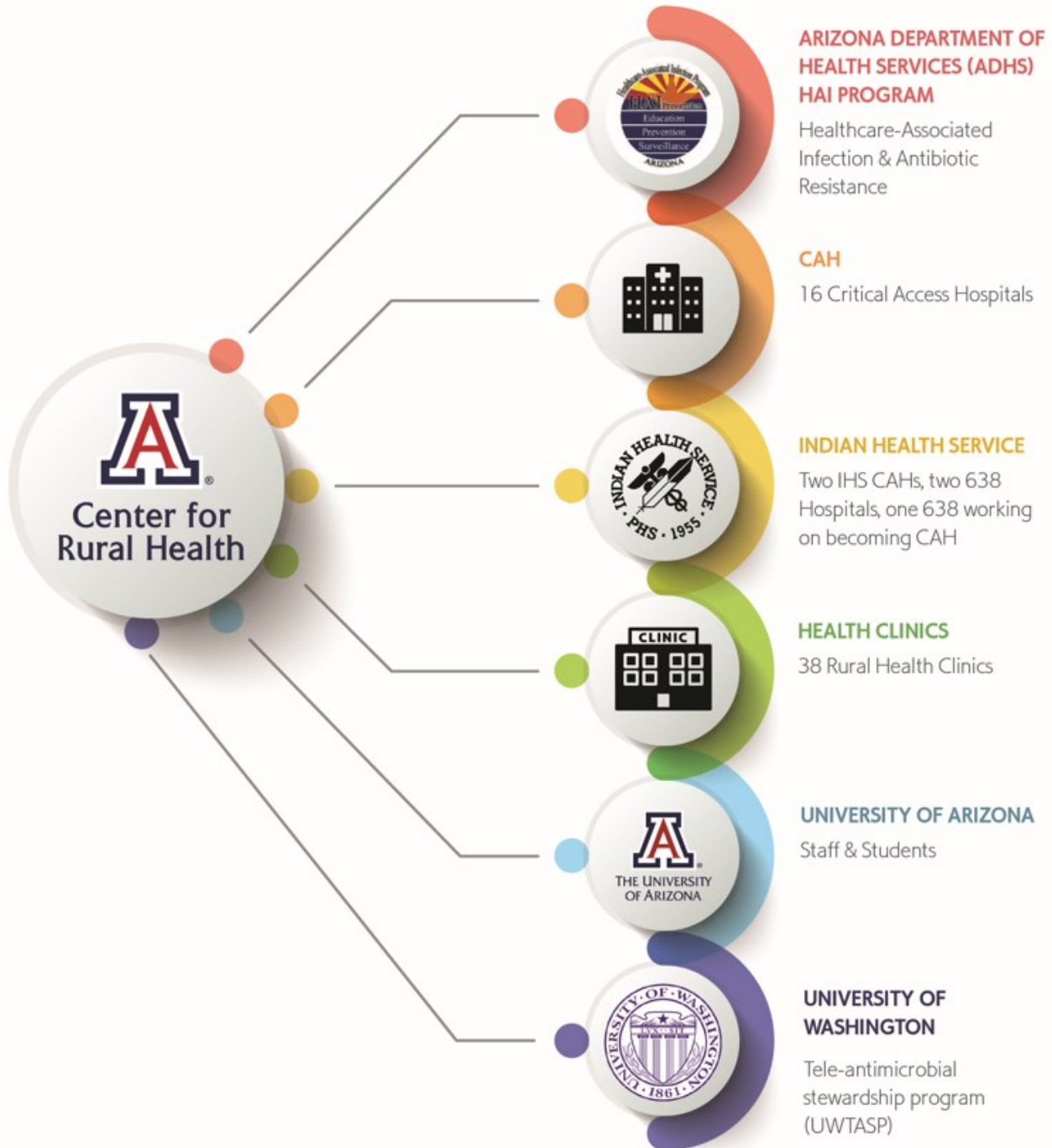
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provided one-on-one sessions with experts. The QI projects are varied and not all are around HAIs.

Jill does not work directly with individual rural or tribal health departments on HAI initiatives although the Center for Rural Health does collaborate with them on other programs. Instead, the Antibiotic Stewardship partnership is run with the Arizona Department of Health HAI program at the State level. The State will convene HAI meetings to review specific reports for awareness and advise how to use the data in the reports. Jill frequently attends these meetings. Additionally, there are several faculty and professors at the College of Public Health who are working on HAIs and the Center for Rural Health collaborates with them. The Center of Rural Health also partners with the Arizona Hospital and Healthcare Association (AHHA) on their “H-Quick” [Hospital Quality Improvement Contractor HCIC]. H-Quick activities include building relationships and infrastructure for reporting. AHHA also helps CAHs to improve their data and collaborates with them to improve their individual quality measures.

Jill advised that her major task is to help connect resources, especially bringing in experts as Flex program participants need them. The biggest part of her job is supporting training and understanding how to navigate the National Healthcare Safety Network (NHSN). For activities that involve NHSN, the Center of Rural Health contracts with an infection prevention expert and epidemiologists to support training and assistance to the hospitals. For entering antibiotic stewardship data, the Center for Rural Health, along with an expert, conduct a refresher webinar and sends monthly reminders of all the measures that are due, where they can be reported and where access resources for help. NHSN is the data source frequently used but the hospitals also pull information from their electronic health records (EHRs). Additionally, the Center for Rural Health will also provide coaching and mentoring when it is time to complete the survey for the Medicare Beneficiary Quality Improvement Program. The program has specific measures required by CAHs. The measure frequently changes, and the Center for Rural Health helps them get the information into NHSN. The Center for Rural Health maintains its communication using a Mailchimp, newsletter and listserv that is composed of chief nursing officer, and the quality and infection control personnel.

## ARIZONA CENTER FOR RURAL HEALTH PARTNERSHIPS



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## Minnesota

We conducted our interview with Grace Grinager, the Public Health Supervisor at Cook County Public Health and Human Services.

Cook County is in Northeast Minnesota on the Canadian border of Lake Superior and is a tourist destination. The county is a rural, remote community with a population of roughly 5,600 people. There is a tribal nation in the community which has an Indian Health Service (IHS)-affiliated clinic, Grand Portage Health Services. The Cook County Public Health Department collaborates with Grand Portage Health Services which has strong partnerships with the local healthcare facilities.

The Minnesota Department of Health (MDH) has a decentralized governance structure that is composed of 87 county and city local health departments. The Cook County Public Health and Human Services is composed of three people: Grace and two health education staff who have been predominantly COVID-focused for the past two years. During the COVID-19 pandemic, they provided logistical support and are now conducting some assessment and planning work and recently received a grant to do healthy housing work. The department has Primary Care Assistants (PCAs) who are contractors that provide in-home support for chores and basic homemaking throughout the county. Health services are not provided by the health department instead Cook County employs a contracting model in which all nursing functions are contracted out to the local hospital and the local Federally Qualified Health Center (FQHC-Sawtooth Mountain Clinic). There are only two healthcare organizations in the jurisdiction, Grand Portage Health Services and North Share Health. North Share is a hospital that has the only long-term care facility (LTCF) in the county, and they also run ambulance services. The LTCF and the FQHC are under the same roof. The FQHC implements public health services such as WIC, a home visit program, and nursing for vaccination events.

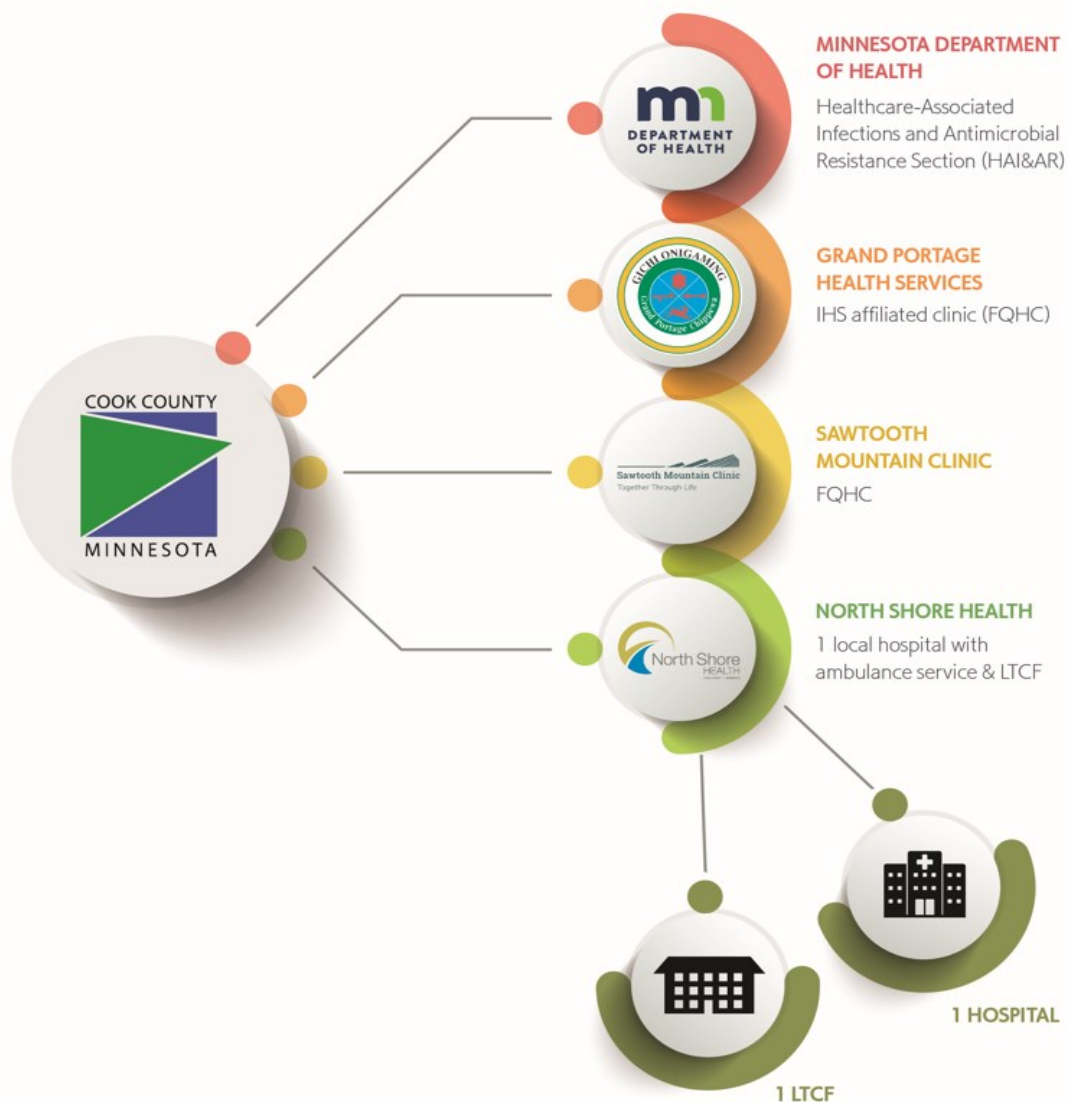
[Minnesota reportable disease lists MN rules 4605.7000 to 4605.7900](#) contains *Candida auris*, Carbapenem-resistant Enterobacteriaceae (CRE), vancomycin-intermediate Staphylococcus aureus [VISA], vancomycin-resistant Staphylococcus aureus [VRSA]. The state maintains a Healthcare-Associated Infections and Antimicrobial Resistance Section (HAI&AR) which is located in the Infectious Disease Epidemiology, Prevention and Control Division. The state has a sentinel surveillance system that does not capture reports across the entire state and is based on a patient's residence or the location of the healthcare facility. This sentinel system captures *Staphylococcus aureus*, *Candida spp.* (blood isolates only), Carbapenem-resistant *Acinetobacter spp.* (CRA) and *Pseudomonas aeruginosa* (CR-PA), *Clostridium difficile*, Respiratory syncytial virus (RSV) and Nontuberculous Mycobacteria (NTM), pulmonary and extrapulmonary. MDH is engaged with numerous partners in preventing HAI and its program is very robust including hosting one of CDC's Antibiotic Resistance Laboratory Network (ARLN) regional labs.



Cook County is not involved with HAI surveillance for local facilities and would only know of an outbreak if the State communicated it with them. When an outbreak occurs in a healthcare facility, the facility has the responsibility to report the occurrence and it is typically directly reported to the State. Cook County will assist the state by answering the facility's questions on reporting guidance and definitions, but the outbreak management is handled by the state's infections disease team. In some investigations, the State will involve Cook County but more as a community liaison to provide situational awareness.

Regional Infectious Disease epidemiologists conduct regional meetings with local health departments where they share disease trends across the State. HAIs have reportedly not been a topic during the meetings that Grace has attended. Grace notes that this model is helpful for a small county since the state has the material and personnel resources to manage and can standardize an outbreak response.

**COOK COUNTY PUBLIC HEALTH AND HUMAN SERVICES PARTNERSHIPS**



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## Montana

We interviewed Erika Baldry, MPH, CIC, an Infection Control and Prevention Healthcare-Associate Infections Section Supervisor at the Montana Department of Public Health and Human Services.

Montana's Department of Health follows a decentralized governance model. There are 55 counties, eight tribal jurisdictions, and one health district which includes several smaller populated counties. There are over 300 healthcare facilities in Montana which include 71 long-term care facilities (LTCF), 211 assisted living facilities (ALF), 49 critical access hospitals (CAH), 16 prospective payment system hospitals (PPS-larger hospital), one long-term acute care hospital, and one rehab hospital.

The local public health (LHD) has the authority to investigate a case of a communicable disease as well as communicable disease outbreaks under their state's administrative rule [Montana's Reportable Conditions \(ARM 37.114.203\)](#). This rule includes outbreaks of any communicable disease in an institutional or congregate setting. The Montana Infectious Disease Information System (MIDIS) is the state reporting system for reportable diseases and conditions but does not track outbreaks. This data is kept in a spreadsheet and data is input manually. CLABSI, CAUTI, and CDI for PPS hospitals data is gathered through the NHSN portal and shared via a listserv. Data is also shared via two HAI roundtable meetings with HAI partners held each year.

The Montana State HAI Section's mission is to investigate, mitigate and strengthen communicable disease surveillance in healthcare settings and provide tools to prevent and control the spread of communicable diseases in Montana's most vulnerable settings. The HAI Section is supported by CDC's Epidemiology and Laboratory Capacity Cooperative Agreement (ELC) and since its inception in 2012, the program has been staffed by only one 0.5 full-time employee (FTE) for the entire state. However, in December 2021, the need for expertise, coupled with funding expanded the program into a Section. In addition to Erika, the Section supervisor, the Section is composed of four other infection prevention specialists (IPs) and has a vacancy for an HAI epidemiologist. The State also holds a contract with an antimicrobial resistance expert (AMR) pharmacist through the University of Montana State School of Pharmacy. Additionally, throughout the state, the HAI Section supports congregate living coordinators (CLCs) at the county level; these CLCs primarily coordinate between healthcare settings, the county, and the State in responding to outbreaks in healthcare facilities. As the infection control expert consultants in the State, the Section frequently leads investigations on carbapenem-resistant organisms, carbapenemase-producing organisms, and other healthcare-associated infections especially when the outbreak consists of multi-drug resistant organisms or involves multiple facilities or across multiple jurisdictions. When the Section is not the lead, they assist local public health in the response. During the COVID-19 pandemic, the State HAI Section oversaw all COVID-19 outbreaks occurring in any healthcare setting in Montana.

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In addition to providing infection control expertise and consultants, the HAI Section conducts infection control assessments and response (ICARS), responds to outbreaks, and provides training. The HAI Section also offers one-hour training to facilities every Tuesday and hosts an infection prevention webinar on Thursdays that is open to any IP in the state of Montana as well as individuals from Wyoming, Washington, Idaho, and Alaska. Erika notes that ICARS, training, and responding to outbreaks are their biggest workload.

Formally, the Section funding supports improving the accuracy of HAI reporting to the NSHN database; coordinating and implementing HAI prevention activities; improving infection prevention breadth and scope at healthcare facilities; and facilitating the advisory group composed of physicians, infection preventionists, pharmacists, and leaders from Mountain Pacific Quality Health and Montana Hospital Association to create and implement the HAI State Plan, detect and mitigate outbreaks that occur in healthcare facilities, educate providers to prescribe antibiotics appropriately, and assist hospitals, and other healthcare facilities to have strong antibiotic stewardship programs.

In addition to the LHDs, hospitals, and other healthcare facilities partnerships, the HAI Section partners with the State's Mental Health Ombudsman Group which facilitates the public's access to mental health services. This partnership was developed during the COVID-19 pandemic to assist with communications, messaging, and support with regulation, and recommendations to the lay population. For example, when a recommendation was made to limit visitors to nursing facilities, there was often major discontent with this infection control strategy from the families of residents. The Ombudsman Group would meet with the State HAI Section to understand why these recommendations were being made and acted as advocates for the infection prevention and control recommendations.

The Section also works with hospital preparedness programs, public health emergency programs, the University of Montana State School Pharmacy, the Office of the Inspector General, State Survey, group homes, daycares, jails, and other congregate settings that may need infection control expertise or consultation.

The HAI section has an Antimicrobial Stewardship (AMS) program which is a part of the Montana Antimicrobial Stewardship Collaborative under Mountain Pacific Quality Health and incorporates a contract pharmacist. The program is run annually and is available to all healthcare facilities in Montana. So far in 2022, 30 facilities have enrolled. Facilities in the AMS program submits monthly *days of therapy* via an internal tracking tool; a resulting antibiogram is created and shared. The contract pharmacist has worked with five of the facilities and provides direct audit and feedback on their *days of therapy* to improve prescribing practices.

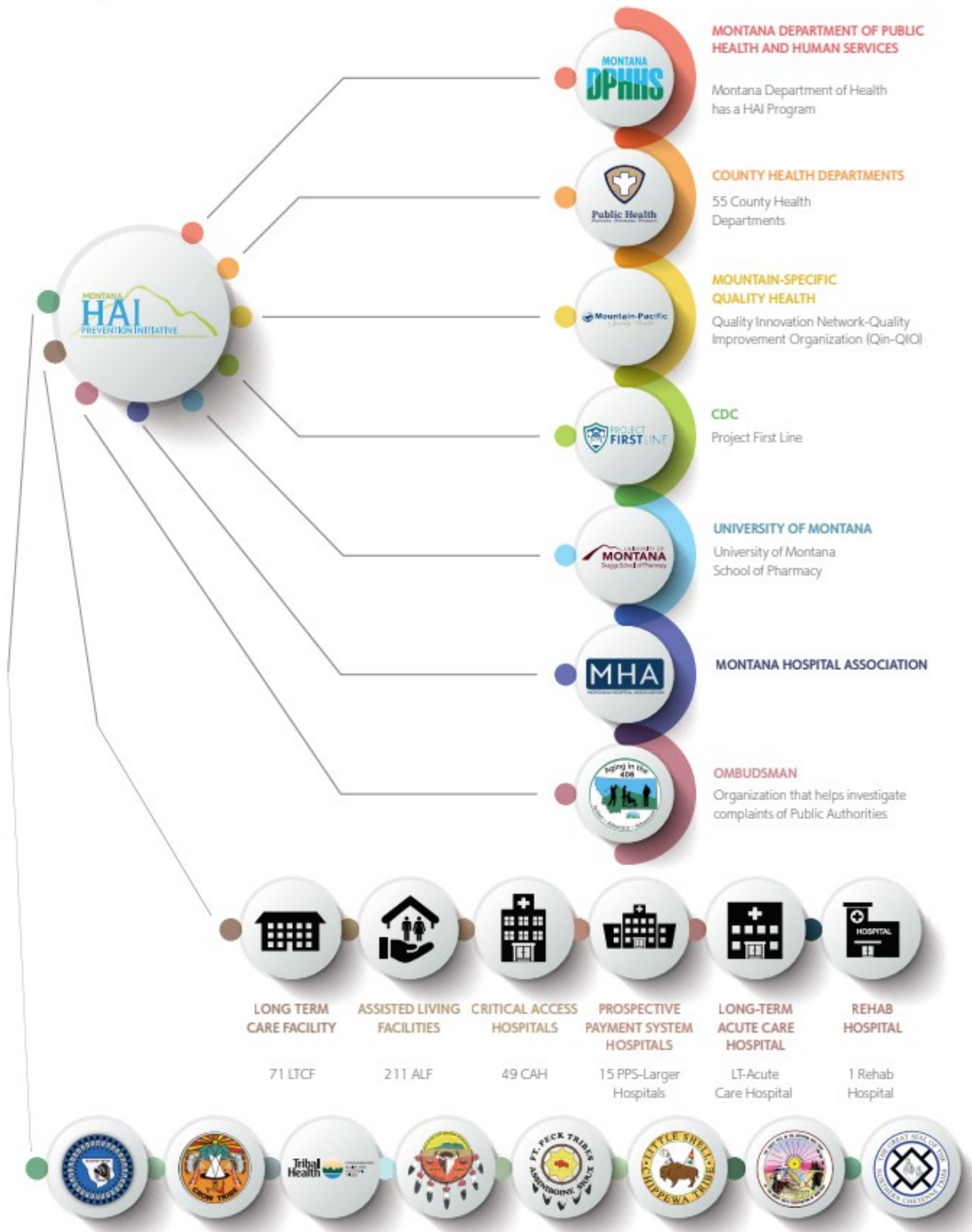
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Prior to COVID-19, Montana had a low burden of outbreaks and reporting challenges from facilities. COVID-19 changed the scope and relationships between the HAI Section and facilities. Since 2020, the HAI Section investigated 1,068 COVID-19-related outbreaks in ALF, CAH, LTCF, and state facilities. In 2021, prior to the program becoming a Section, Erika investigated 322 COVID-19 outbreaks in ALFs, LTCFs and CAHs.

Communication is a big part of the HAI Section's success. They publish weekly reports that include the number and types of facilities experiencing COVID-19 outbreaks and the epidemiology section of the report details outbreaks of other pathogens such as norovirus, and influenza.

The HAI Section has future plans to work with the University of Montana Public Health School to support their newly designed Masters of Infection Control program by way of speaking, teaching, and providing subject matter expertise. The Section also plans to implement data modernization tools for tracking outbreaks, offer an ICAR to every LTCF and ALF in the State, and develop an outbreak toolkit for LTCFs and ALFs that can be used as guides.

**MONTANA DEPARTMENT OF PUBLIC HEALTH AND HUMAN SERVICES HAI PROGRAM PARTNERSHIPS**



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## North Dakota

We conducted our interview with Majusta Kleven, RN, Administrator of the Towner County Public Health Department in North Dakota.

The North Dakota Department of Health operates under a decentralized governance model with 28 independent local public health units and local health districts, six tribal health governments, and other partners. The units are organized into single or multi-county health districts, city/county health departments, or city/county health districts. Towner County is a single county health district located in Cando, ND. The county does not have any group homes but has a treatment facility for opioids and alcoholism. The sole nursing home in Towner County is associated with the county's only hospital which has its own infection control program.

The Towner County Public Health District is a rural health district that serves a population of roughly 1600 people. The county is very small and everyone knows everyone. The health district services are divided into six major areas: Public Health, Home Health, Family Planning, WIC, Maternal Child Health, and Environmental Services. The office is composed of two full-time nurses, one of who is also the administrator. Prior to her appointment as the health department's administrator, this nurse worked at the only nursing home and hospital in Towner County. Her prior employment with the nursing home and hospital has facilitated a relationship between the health department and these two entities.

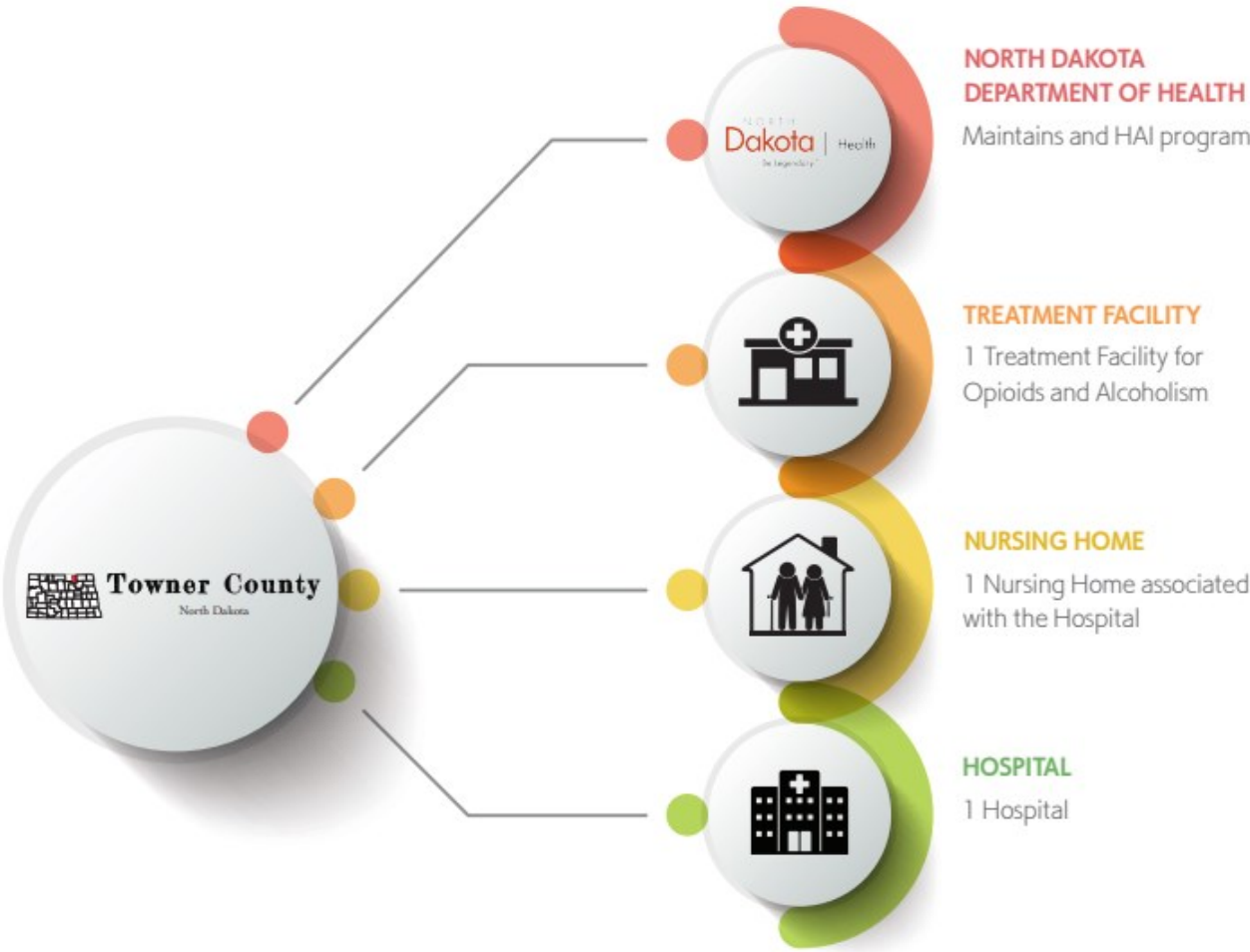
[North Dakota administrative code 33-06-01](#) mandates the reporting of certain infectious conditions including *Candida auris*; Carbapenem-resistant *Enterobacteriaceae* (CRE) and *pseudomonas aeruginosa* (CRPA); *vancomycin-intermediate* and *vancomycin-resistant Staphylococcus aureus* (VISA and VRSA, respectively); foodborne, waterborne, nosocomial, and scabies outbreaks including those that occur institutions; and a cluster(s) of severe or unexplained illnesses and deaths.

Though Towner County Public Health District does not have an HAI program they do respond to outbreaks that are associated with healthcare facilities. Other than COVID-19 cases and outbreaks, there have not been any projects or other outbreak responses with the county's healthcare facilities. There were two outbreaks in the county's nursing home and hospital where the Towner County Health Department responded with State-provided tools.

The North Dakota Department of Health has an HAI program that has staff and working groups that are dedicated to advancing infection prevention and control across the state. Though the state has an HAI program Majusta is not aware of their roles and responsibilities but has a relationship with a regional contact from the State to whom she reaches out for HAI questions or consultations. Majusta reflects that she is unsure of what she is supposed to do in the case of a healthcare-associated outbreak but if one were to occur, she would call the

state or other local health departments and ask for instructions as she has not had to manage these types of outbreaks before.

## TOWNER COUNTY HEALTH DEPARTMENT PARTNERSHIPS



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## Ohio

We conducted our interview with Allison “Allie” DeVore, BSN, RN, the Nursing Unit Manager at the Stark County Health Department located in North Canton, Ohio. Allie was joined by members of the Communicable Disease Team (CDT) in Stark County for the interview.

Stark County has a population of 371,000 people. The county is serviced by four health departments, three of which are the Canton, Massillon, and Alliance City Health Departments and the fourth is the Stark County Health Department which is responsible for 17 townships, 12 villages, and three cities which equates to 250,000 people or 71 percent of the Stark County population.

Stark County Health Department provides resources and education for several partners including three main hospitals’ infection control programs, 48 long-term care facilities (LTCF), 19 school districts, daycares, fire, police, emergency medical services (EMS), and a jail in Canton City. For daycares, the health department frequently educates on exclusions, cleaning, and disinfection procedures for communicable diseases. There are three service areas within the Stark County Health Department which include administration and support, environmental health, and nursing. The CDT falls under nursing services and conducts case investigations, follow-up, contact notification, implements infection prevention and control activities, performs public health surveillance, and educates the community on various communicable diseases. The nursing team also provides school nursing services for some schools within Stark County and oversees the following programs and services: Tuberculosis (TB) Control and Prevention, a home visiting program for children with medical handicaps, the “Baby & Me--Tobacco Free” smoking cessation program, Safe Sleep and Cribs for Kids, WIC, a Reproductive Health and Wellness Clinic, STDs, and child and adult immunizations.

The Ohio Department of Health (ODH) maintains a decentralized governance structure that is composed of 113 local health departments (LHD) in 88 counties. ODH maintains a Healthcare Associated Infections (HAI) program with several goals to prevent HAI including using antibiotics wisely via antimicrobial stewardship (AMS) and preventing antimicrobial resistance (AMR). Stark County has conducted tele-ICARs alongside the ODH. With recent NACCHO funding the health department plans to receive training from the CDC/NACCHO to perform the tele-ICARs on their own without ODH. The goal of the program is to be more proactive than reactive.

Allie advised that the CDT’s competency in HAI, AMR, and AMS is at a “novice” level and that HAIs are not reportable to the LHD, so their involvement is minimal. However, when asked specifically about CRE, a CDT member noted that CP-CREs are reportable and that the team receives these notifications. In a CP-CRE case, the health department would facilitate specimen kit drop-offs and send specimen(s) to the state lab for testing.



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[Rule 3701-3-02 of Ohio's Administrative Code](#) lists reportable diseases and conditions to include the following multi-drug resistant organisms and other organisms: *Candida auris*; Carbapenemase-producing *carbapenem-resistant Enterobacteriaceae* (CP-CRE) (*CP-CRE Enterobacter spp.*, *CP-CRE Escherichia coli*, *CP-CRE Klebsiella spp.*, and *CP-CRE other*); *Vancomycin-intermediate Staphylococcus aureus* (VISA); and *Vancomycin-resistant Staphylococcus aureus* (VRSA). The Administrative Code also mandates that outbreaks, unusual incidence, or an epidemic of other infectious diseases from the community, foodborne, healthcare-associated, institutional, waterborne, and zoonotic sources are reportable by the end of the next business day. If the outbreak, unusual incidence, or epidemic, including but not limited to, histoplasmosis, pediculosis, scabies, and staphylococcal infections, has an unexpected pattern of cases, suspected cases, deaths, or increased incidence of disease that is of a major public health concern then such an outbreak, unusual incidence, or epidemic shall be reported. LHDs use the Ohio Disease Reporting System (ODRS) integrated disease surveillance system to report and track reportable conditions across the state.

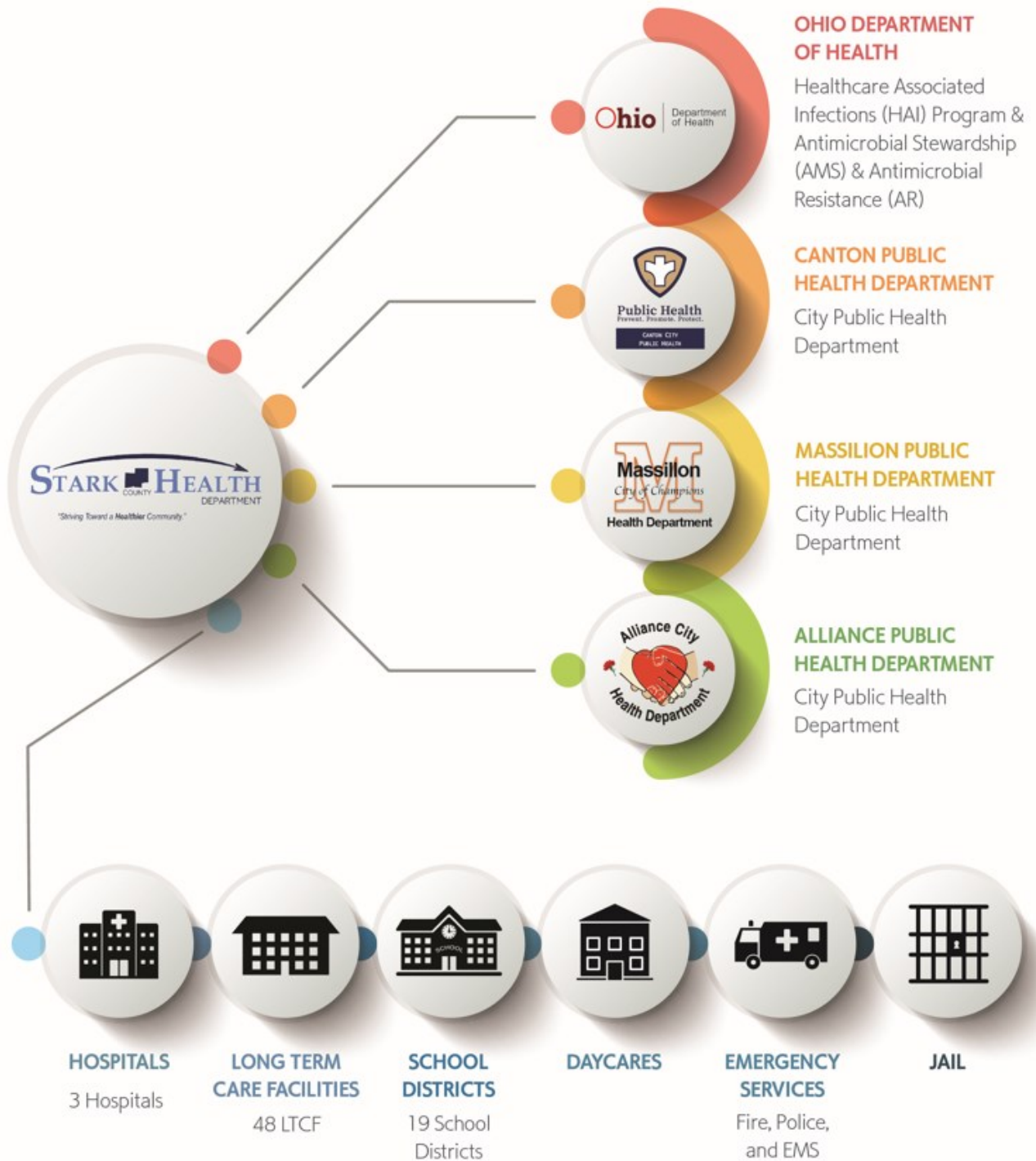
Outbreak management is conducted by the health department including for pathogens such as norovirus and influenza; the health department provides specimen kits and recommendations by following the Ohio Infectious Disease Control Manual (IDCM). Stark County frequently works with the State Infectious Disease Unit on outbreaks in which their protocol is to notify the Unit when they detect or are notified of an outbreak. The jurisdiction in which the facility or residence is located determines the response and roles and responsibilities. If a case or outbreak occurs in one of the three cities within Stark County, the city health departments will conduct the investigations. For cases that require an environmental health component (e.g., Legionella) the Stark County Health Department will partner with its Environmental Health team.

COVID-19 expanded the resources for infection control to include education on transmission-based precautions, PPE, communications, and cohorting residents and staff within LTCFs. Additionally, due to COVID, a communicable disease email inbox was initiated to facilitate reporting and inquiries from schools, LTCF, and daycares. This inbox has improved the efficiency and efficacy of Stark County Health Department's communications.

The Stark County Health Department communicates with local partners through various modalities. The department reviews various disease-specific topics with LTCFs and a School Nurse Support Group through monthly Long-term Pair Collaboration calls. They also host a monthly call to discuss disease trends within the community with its three city health departments, hospital infection control practitioners (ICPs), and a local infection disease doctor. Their health alert network (HAN) is used to reach out to medical providers via email and provide advice on disease-specific protocols. Additionally, newsletters are created and sent out weekly and include the number of disease cases and trends; the newsletter is also posted on the health department's website. This publication is also shared in the Stark

County Medical Society newsletter as well as at the Board of Health meetings that occur every month at the health department.

## STARK COUNTY HEALTH DEPARTMENT PARTNERSHIPS



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## Wisconsin

We conducted our interview with Donna Wiegert, RN, BSN, a Public Health Nurse at Langlade County Health Department.

Langlade County Health Department is in Antigo, Wisconsin. The county is mostly rural and has a population of roughly 19,000 people. There is one main hospital system, several health clinics, one long-term care facility (LTCF), and one skilled nursing facility.

The Wisconsin Department of Health Services (DHS) has 10 divisions, one of which is the Division of Public Health (DPH). DHS has a decentralized governance model composed of 72 local and 12 tribal public health partners. The state is divided into five Public Health Regions with Langlade County situated in the Northern Public Health Region. The Langlade Health Department provides Public Health, Environmental, Child and Family, and Community Health services. Public Health services include HIV/AIDS testing, blood pressure clinics, cardiovascular disease prevention, communicable disease prevention, immunization clinics, lead screening, sexually transmitted disease screening and treatment, a diaper bank, and the Wisconsin Well Woman Program (WWWP) for preventive health screenings (e.g., Pap tests, mammograms, multiple sclerosis testing for women with high-risk signs). Environmental services include the Healthy Homes program, human health hazard investigations, indoor air assessment, investigation and control of food and waterborne illness, rabies control, well water testing, and pest control. The Child and Family services offered are car seat checks, child health screenings, newborn visits, prenatal care coordination, WIC, and Students Against Destructive Decisions (SADD) Teen Peers program comprised of teens trained to teach others about HIV/AIDS, risky behaviors, and making good decisions. Lastly, the department has a Community Health services department that provides a community health guide for teens, community health improvement plans, school health promotion, tuberculosis skin tests, and worksite health promotion.

[Wisconsin disease reporting](#) requirements mandate that Carbapenem-producing carbapenem-resistant *Enterobacteriaceae* (CP-CRE) and vancomycin-intermediate and resistant *Staphylococcus aureus* (VISA and VRSA, respectively) must be reported immediately by telephone to the local health officer. Additionally, outbreaks of foodborne, waterborne, or occupationally related diseases and other acute illnesses must also be immediately reported. DPH maintains a statewide HAI Program and as of July 1, 2022, three multidrug-resistant organisms (MDROs) have become newly reportable which are carbapenemase-producing carbapenem-resistant *Acinetobacter baumannii*, carbapenemase-producing carbapenem-resistant *Pseudomonas aeruginosa*, and *Candida auris*. If an outbreak occurs in a healthcare facility, the Langlade County Health Department is notified, and they provide education to the facility, but no other response actions are taken. Donna admits that she did not receive sufficient training on HAI investigation and management processes due to COVID.

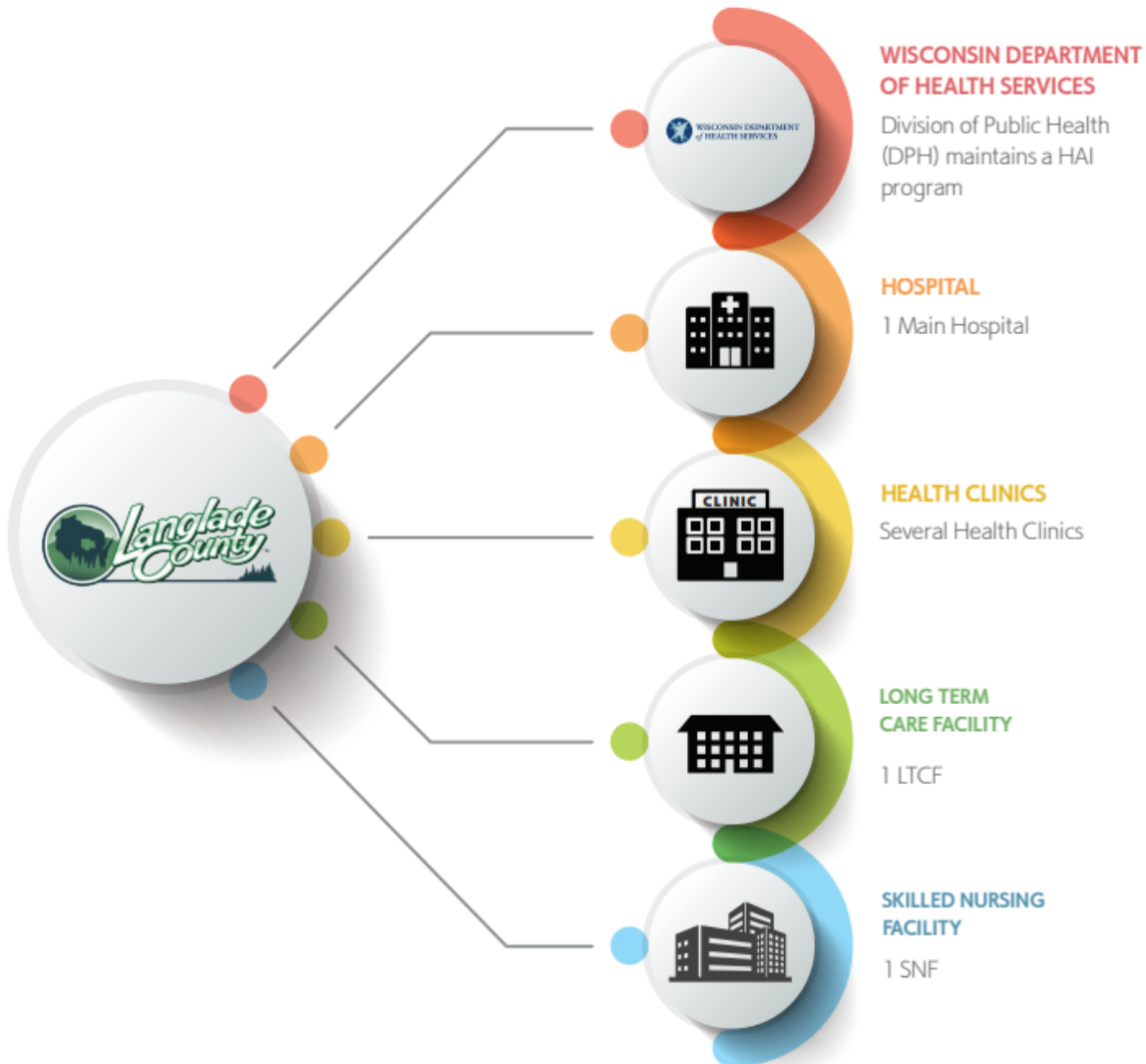
The burden of resistant infections in healthcare facilities in the county is one per year. Reviewing the CRE surveillance data, Donna noted there were none in 2021 but there were two in 2020. The health department has received notifications of influenza outbreaks at healthcare facilities and provided education to these facilities. If other cases are reported to Langlade County, they use algorithms in the communicable disease index, follow up on the case investigation, and then notify the State Health Department of the case. COVID cases

and outbreaks were reported to Langlade County Health Department who continues to conduct contact tracing for each case.

The one hospital in Langlade County has an infection control committee team where physicians, other hospital staff, and the health department participate. The committee meets quarterly and reports trends in catheter infections, skin infections, MRSA, VRSA, and other HAIs.

Donna worked at the county's sole long-term care facility which had an antibiotic stewardship program. She reflects that it would be ideal to become more involved in the community and have a program that could go into facilities and provide robust guidance.

### LANGLADE COUNTY HEALTH DEPARTMENT PARTNERSHIPS



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# Largely Decentralized Structure

## Texas

### **Williamson County and Cities Health District**

We interviewed Zulymar “Zully” Rios Velazquez, MPH, CIC, Epidemiologist III with the Epidemiology and Emergency Preparedness Department of the Williamson County and Cities Health District (WCCHD).

The Texas Department of State Health Services (DSHS) has a largely decentralized governance health structure. The state is divided into 171 local health departments, public health districts, and local health units. A local health department has county, city, or county/city jurisdiction. A public health district consists of two or more counties or municipalities; a county and one or more municipalities; or two or more counties and one or more municipalities. A local health unit is a division of a local municipal or county government that provides public health services, generally environmental services, but not to the level of a department or district. WCCHD is a public health district composed of 30 cities. It provides public health services at its centers and offices in Cedar Park, Georgetown, Round Rock, and Taylor, the latter two being more rural areas. WCCHD serves over half a million people of various races, ethnicities, and from differing countries. English, Spanish and Vietnamese are the primary languages spoken among the population WCCHD serves. WCCHD’s epidemiology program is divided by functions and is composed of four epidemiologists: one manages vaccine-preventable diseases, one manages zoonotic and foodborne diseases, another manages COVID-19, and the last manages the HAI program. Zully spoke to us about WCCHD’s HAI program in which she is the only person running the program.

Part of building the HAI program is understanding the role, resources, and guidance for a local HAI program. The HAI program works on the premise that the response must be actionable. These actionable responses include conducting case investigations of reportable conditions such as carbapenem resistance and outbreaks from healthcare facilities. With facility-acquired organisms, a comprehensive team consisting of epidemiologists and environmental health experts is assembled. The HAI Program also offers ICARs to their healthcare facilities. The ICAR tool is used to assess AMR and AMS activities at each facility as it aligns with the CDC’s core values of antibiotic stewardship. There are no other activities around AMR and AMS.

WCCHD’s HAI program communicates with its partners at the State HAI program as well as four major hospitals in the health district, 48 long-term care facilities (LTCF), one acute care facility, 13 nursing homes, one jail, and one Immigrations and Customs Enforcement (ICE) detention center. This communication is bilateral with information about trends shared at monthly IP meetings and with clinic contacts which is subsequently distributed accordingly. One of the major current focus areas for the HAI program is integrating influenza surveillance

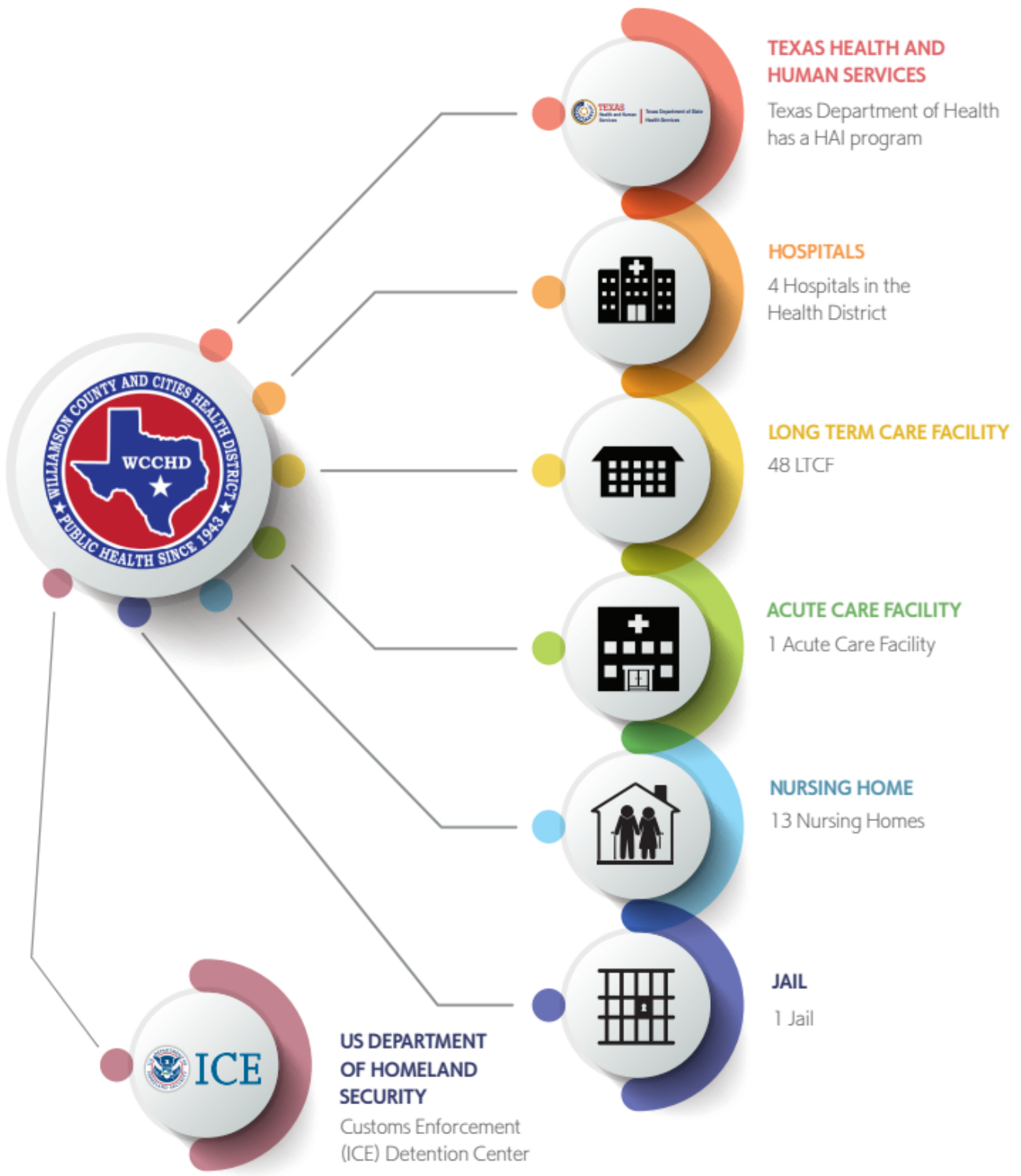
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at additional healthcare facilities with particular attention to nursing homes. The program is trying to leverage the relationships developed during COVID-19 to grow the program. The program's future goals include cross-training to avoid a single-point of failure during a response as well as developing a data use agreement with CDC with the intention to use the data in NHSN and constructing a county-wide antibiogram.

The state of Texas also has an HAI program that houses regional epidemiologists throughout the state. DSHS offered an HAI mentorship program specifically for HAI epidemiologists of which Zully was selected to be part of the program. Each mentee is assigned a mentor and given a developed curriculum; the two hold monthly meetings to review this curriculum.

The [Texas Reportable Conditions list](#) specifies that *Candida auris* and *Carbapenem-resistant enterobacteriales (CRE)* must be reported within one work day while *vancomycin-intermediate and resistant Staphylococcus aureus (VISA and VRSA, respectively)* are immediately notifiable. In addition to these notifiable conditions, any outbreak, exotic disease, or unusual group expression of disease that may be of public health concern should be reported expeditiously. The Texas DSHS Laboratory in Austin has been a part of the United States' Antibiotic Resistance Lab Network (ARLN) since 2017. The Texas DSHS Laboratory has the testing capacity to detect, support, respond to, and prevent antimicrobial-resistant threats. The laboratory conducts species identification, colonization screening, phenotypic and molecular characterization, and microbial susceptibility testing for select microorganisms ([Texas DSHS, 2022](#)). As part of the ARLN program requirement, the WCCHD must conduct facility assessments for tier 1 and tier 2 organisms. When an alert is received, the health facility conducts a 3-month retrospective surveillance study from the date of specimen collection and WCCHD helps to investigate and monitor passive prospective surveillance.

## WILLIAMSON COUNTY AND CITIES HEALTH DISTRICT PARTNERSHIPS



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## Chambers County Health Department

We conducted our interview with Lena Turner, LVN, Epidemiology Investigator, and Mary Beth Bess, MPH, MSN, APRN, Health Services Director at Chambers County Health Department.

Chambers County is in Southeast Texas to the immediate east of Harris County and has a population of roughly 35,000 people. The county is a part of the “Six-Five South” region which is composed of 16 counties. Twelve percent of the population in Chambers County is over the age of 65, 64 percent are non-Hispanic White, 25 percent are Hispanic, 8 percent are non-Hispanic black, and the remainder of the population is Asian. The county is predominantly rural with some suburban areas on the outskirts of Houston. There are two provider groups, and the other providers are based in hospitals. There are two hospitals, two long-term care facilities (LTCF), and several urgent care locations. The hospitals are small; one is a six-bed facility, and the other is a 10-12 bed facility.

The Chambers County Health Department is within the Texas Department of Health and Human Services (DSHS) which operates under a largely decentralized governance model. The state is divided into 171 local health departments, public health districts, and local health units. A local health department has county, city, or county/city jurisdiction. A public health district consists of two or more counties or municipalities; a county and one or more municipalities; or two or more counties and one or more municipalities. A local health unit is a division of a local municipal or county government that provides public health services, generally environmental services, but not to the level of a department or district. Chamber County Health Department is a local health department with county jurisdiction.

The health department offers various clinical services as well as public health emergency preparedness and response (PHEPR) services. The clinical services encompass those core public health areas such as TB and STD testing and treatment and the provision of childhood and adult immunizations through TVFC (Texas Vaccines for Children) and ASN (Adult Safety Net) programs. The PHEPR program includes disease surveillance and response, community resilience, countermeasures and mitigation, incident management, information management, and surge capacity management. PHEPR also includes the First Responder Immunization Program, a Communicable Disease Branch that is responsible for handling all reportable conditions, and a Community Health Branch that focuses on health promotion and disease prevention throughout the community with a primary focus on those who are disproportionately affected by acute and chronic health conditions. Currently, Chambers County Health Department has two epidemiologists and public health nursing staff who are available as surge capacity if needed. The epidemiologists investigate cases and respond to outbreaks as required under the Texas administrative code. Chambers County is very involved with its state and regional epidemiology programs.

The health department partners with environmental health services, school nurses, LTCFs, the jail, and some hospitals. Now that the county has acquired EMS services, they will work closely with their local EMS as it is also in the Office of Emergency Management. Reported areas for improvement include the department’s relationship with the hospitals as well as reporting from medical providers.

The [Texas Reportable Conditions list](#) specifies that *Candida auris* and *Carbapenem-resistant enterobacterales (CRE)* must be reported within one work day while *vancomycin-intermediate*



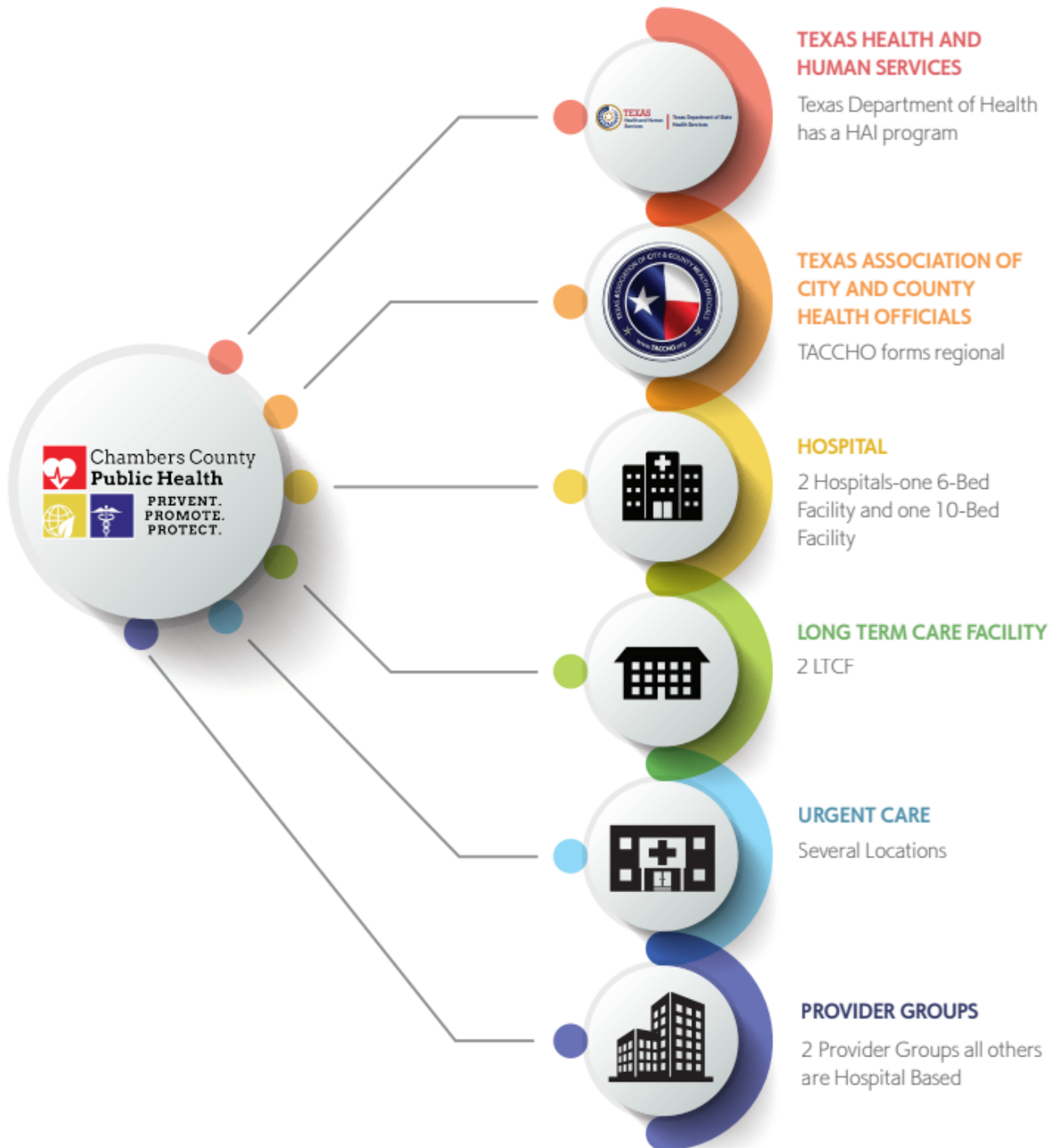
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*and -resistant Staphylococcus aureus (VISA and VRSA, respectively)* are immediately notifiable. In addition to these notifiable conditions, any outbreak, exotic disease, or unusual group expression of disease that may be of public health concern should be reported expeditiously. When a notifiable disease report is received via NEDS, the region, or via the lab through NNDSS, a case investigation is initiated. Most case investigations were done by the region before Chambers County started expanding their epidemiology program in 2016. COVID-19 response has provided the opportunity for Chambers County to grow into a larger department.

Texas initiated its Antibiotic Resistance Lab Network (ARLN) program in 2017 throughout the state. Texas also has a state HAI program that houses regional epidemiologists throughout the state.

Chambers County's HAI program was initiated with the acceptance of Lena into the State's HAI mentorship program. DSHS started offering an HAI mentorship program in August 2021 and specifically targets epidemiologists across the state. The program has a developed curriculum and assigns a mentor to each mentee who partakes in monthly meetings to review the curriculum. Lena applied for the program with the desire to gain more knowledge and experience in HAIs. Her vision is to take advantage of the lessons learned through the program to build and strengthen partnerships with local healthcare providers.

## CHAMBERS COUNTY HEALTH DEPARTMENT PARTNERSHIPS



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## Milam County Health Department

We conducted our interview with the Executive Director of Milam County Health Department, Robert Kirkpatrick, MS.

Milam County is a rural county with a population of roughly 25,000 people. It is located an hour northeast of Austin, about 30 to 45 minutes east of Temple and Bell Counties, and roughly an hour west/southwest of Brian College Station. Geographically, the county is located in the middle of the San Antonio, Dallas, and Houston triangle and is surrounded by large jurisdictions but is still a remote rural county. In December 2018, the only two hospitals in Milam County closed; now the closest hospital is about a one-hour drive away. The county is served by four medical provider offices, one of which is a Federally Qualified Health Center (FQHC) rural health clinic. The other three are provider clinics with local nurse practitioners who are affiliated with the hospitals that closed. There are three nursing homes that are also rehabilitation centers.

The Milam County Health Department is within the Texas Department of Health and Human Services (DSHS) which operates under a largely decentralized governance model. The state is divided into 171 local health departments, public health districts, and local health units. A local health department has county, city, or county/city jurisdiction. A public health district consists of two or more counties or municipalities; a county and one or more municipalities; or two or more counties and one or more municipalities. A local health unit is a division of a local municipal or county government that provides public health services, generally environmental services, but not to the level of a department or district. Milam County Health Department is a local health department with county jurisdiction.

Milam County Health Department offers clinical services for TB skin testing, Hepatitis C screening, blood pressure checks, sexually transmitted disease testing and treatment, B12 injections, anemia testing, blood sugar measurements, and offers immunizations. The immunization program is staffed with three FTEs: a nurse, two support staff, and a finance professional. The health department also supports a WIC program that has three full-time staff and a contract nutritionist who comes in to help 2-3 days a month. There are two contractors who work in an onsite sewer system facility program for the county as designated representatives. The health department also has a public health preparedness program and a disease control and prevention program. The public health preparedness program is run by one FTE who also doubles as the executive director of the health department. One nurse triple hats by running the HIV and STD testing, TB services, and serves as the epidemiologist. There is a contract pharmacist and a medical director who is part-time. With COVID-19 funding, the health department was able to hire two individuals to conduct COVID-19 testing, two days a week and one person to help with COVID-19 investigations. There are two nurses on the COVID-19 and Immunization Grant that has the capacity to hire PRN nurses for vaccination clinics or to backfill for staff who are on leave.

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Milam County Health Department works with other local health departments as well as their regional and state health departments through the Texas Association of City and County Health Officials (TACCHO). There is a Standing Delegation Order (SDO) that the health department uses if they need additional staff to support their operations. For instance, if the department is short-staffed and needs additional help, the state and/or regional health departments can send staff to support using the SDO.

The [Texas Reportable Conditions list](#) specifies that *Candida auris* and *Carbapenem-resistant enterobacteriales (CRE)* must be reported within one work day while *vancomycin-intermediate and -resistant Staphylococcus aureus (VISA and VRSA, respectively)* are immediately notifiable. In addition to these notifiable conditions, any outbreak, exotic disease, or unusual group expression of disease that may be of public health concern should be reported expeditiously. Milam County Health Department has been part of a pilot program with the State for the past five years that aims to view provisional disease case data at the county level in a timelier manner.

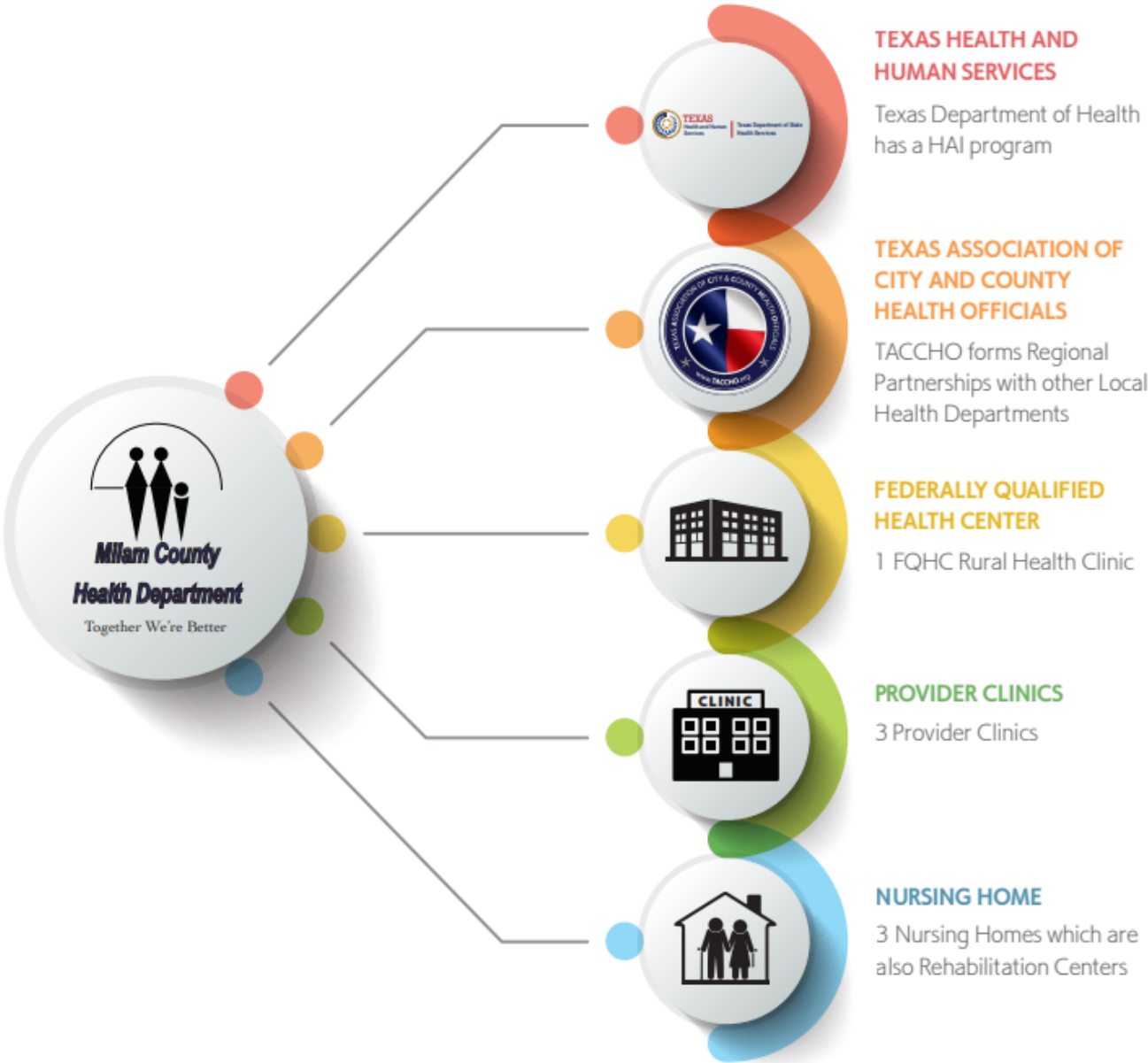
Milam County Health Department's epidemiology nurse manages reportable diseases and conditions. The process for disease/outbreaks investigations at the health department is as follows: the health department is notified of reportable disease or outbreak through direct calls from healthcare facilities, notifications from the National Electronic Disease Surveillance System (NEDS), or by the Health Services Region who will, in turn, contact them. If the etiological agent of the case/outbreak is a pathogen that the department is familiar with then the department will conduct the investigation without outside assistance. If the case/outbreak is caused by a pathogen that they are not familiar with, then the department will work with their regional health department to conduct the case/outbreak investigation. In the four years prior to the COVID-19 pandemic there was only one influenza outbreak in the three nursing homes. During this timeframe the epidemiology nurse was on extended leave and the health department had to hire an MPH student to backfill and manage the outbreak. There were reportedly no other outbreaks until the COVID-19 pandemic occurred. All three nursing homes have had COVID-19 outbreaks which were managed similarly to the influenza outbreak in 2016. Although the COVID-19 burden is relatively small, it has had a great impact on the health department because they do not have sufficient staff.

Milam County Health Department assists partners with understanding guidance given through CMS and CDC. During the COVID-19 response, the health department assisted nursing homes to enroll in the federal vaccination program. Robert noted that the health department plays a flexible role in the community, especially with sometimes differing philosophies and beliefs between the health department and the facilities as it pertains to the COVID-19 response.

The health department has a contract with an EMS service that provides three ambulances within the county. During the COVID-19 response, the EMS service would at times be down

to zero ambulances as the drive to the nearest hospital (one hour away) would typically result in a 2–3-hour trip encompassing the round-trip drive and offloading the person at the hospital. At times when the ambulance must refuel and restock, this could result in a 4–6-hour timeframe in which the ambulance is out of commission.

## MILAM COUNTY HEALTH DEPARTMENT PARTNERSHIPS



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# Shared Structure

## Florida

We interviewed the Epidemiology Program Manager for the Florida Department of Health in Polk and Hardee Counties, Greg Danyluk, PhD, MPH, MS.

Polk County's population is about 750,000 while Hardee County's is roughly 25,000 and very rural. Polk County has several LTCFs and five hospitals, three of which are part of the same hospital network. Hardee County has one hospital, Advent Health, and four LTCFs. The Florida Department of Health (FDOH) has a shared governance model that is composed of 67 local health departments. The Florida Department of Health in Polk County (DOH-Polk) staffs the epidemiology department for the Florida Department of Health in Hardee County (DOH-Hardee) in which DOH-Polk receives all notifiable disease case reports from both counties and investigates and manages the cases/outbreaks except for HIV/AIDS, STDs, and TB which is managed by another program at each health department. This is done through a cost-share relationship. The epidemiology staff at DOH-Polk consists of the Epidemiology Program Manager and three epidemiologists. One of the three is tasked with coordinating their COVID-19 response along with day-to-day operations. The other two epidemiologists manage the remaining reportable diseases and conditions for both counties. The Epidemiology Program also has three part-time staff and one full-time lead who only manages COVID-19 cases and responses in long-term care facilities (LTCF). HAI response is part of the department's epidemiology responsibilities and DOH-Polk has a NACCHO-funded HAI position; the person in this position has been conducting ICARs with another staff member.

The [Reportable Diseases/Condition in Florida Practitioner List](#) mandates that outbreaks of any disease, any case, cluster of cases, or exposure to an infectious or non-infectious disease, condition, or agent found in the general community or any defined setting (e.g., hospital, school, other institution) not listed that is of urgent public health significance must be reported immediately 24/7 by phone upon initial suspicion or laboratory test order. The list also states that vancomycin-intermediate or full resistance *Staphylococcus aureus* (VISA, VRSA) must be reported immediately 24/7 by phone.

FDOH has a State Healthcare-Associated Infections (HAI) program that DOH-Polk heavily relies on to provide staffing and other resources including training. The state has provided general training on HAIs as well as more specific training on conducting ICARs. Previously, the state housed an HAI epidemiologist at DOH-Polk who also assisted in investigations in Hardee, but that position is currently vacant.

The HAI program that services Polk and Hardee counties is driven by an outbreak response or by lab identification of antibiotic-resistant organisms. The response process for each county is pathogen specific. For example, if a scabies outbreak occurred at a health facility, the Director of Nursing at DOH-Hardee would manage it. In a small county like Hardee, they have much closer relationships and can get information and provide guidance quickly and DOH-Polk will assist if needed. If there is a Legionnaires disease at a facility, DOH-Polk would send an epidemiologist to Hardee County to assist. When an outbreak in either county occurs, the health departments will provide situational updates, general information, and

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guidance to their partners. DOH-Polk is available 24/7 to receive notifications of reportable diseases and conditions.

If the identification occurred at a healthcare facility, such as a LTCF, then DOH-Polk would investigate it. DOH-Polk can be notified in various ways including by direct phone call from the healthcare facility, via the State's electronic disease reporting system, Merlin, or by the State HAI program. DOH- Hardee has yet to have a reported case of antimicrobial-resistant organisms, but if one were to occur the main method of notification would be from the facility to the State's HAI program.

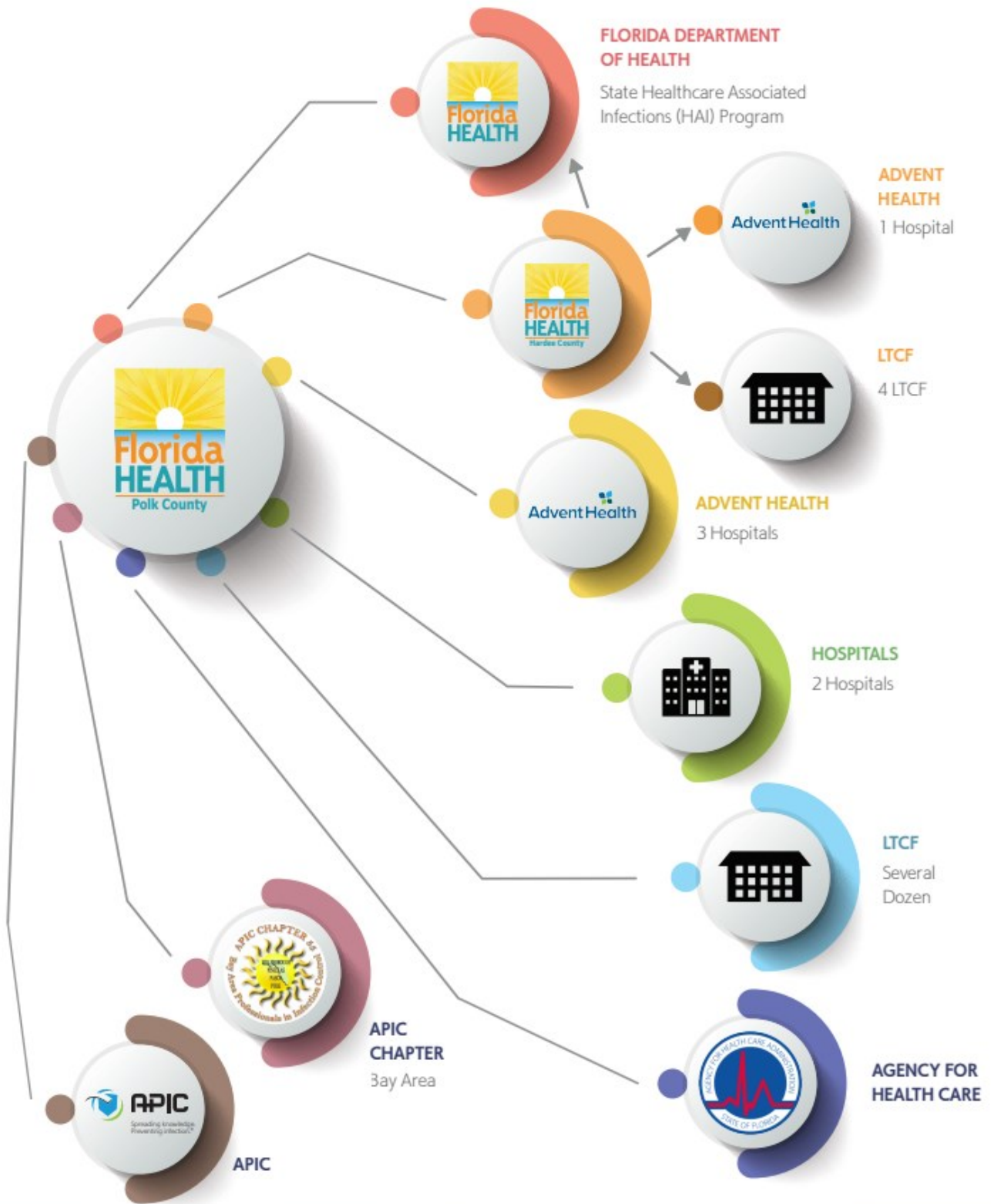
Prior to COVID-19, DOH-Polk would respond to an HAI case/outbreak with assistance from the State HAI program. Since COVID-19, the State HAI program has been providing more resources, including staff, to assist and lead HAI investigations as requested.

DOH-Polk has a limited antibiotic stewardship (AMS) program. In 2015, there was funding left over from the Ebola response and one FTE was staffed using these funds. The position was paired with the department's CDC Public Health Emergency Preparedness (PHEP) fellow; the pair went to LTCFs in the area to promote AMS using the CDC's Antibiotic Stewardship Guidance for LTCFs.

Greg reports that Polk County's large nonprofit hospital, Advent Health, which is the largest in the State, is very proactive with its AMS program. Advent Health hold regular meetings with two out-of-network hospitals' Infection Prevention program to ensure their AMS program is effective. The hospital in Hardee is also in the Advent Health network and has the same level of engagement with the large hospital's AMS program.

Should the requisite funding become available, DOH-Polk plans to continue ICARs and expand their antimicrobial resistance and stewardship programs as much as possible to include Hardee County.

**FLORIDA DEPARTMENT OF HEALTH IN POLK & HARDEE COUNTIES PARTNERSHIPS**





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## Kentucky

We conducted our interview with the Public Health Director at Whitley County Health Department, Marcy Rein, RN, MPH.

Whitley County Health Department (WCHD) is located in the rural southeast Appalachian region of Kentucky. The population is 36,712 with nearly 22 percent of residents living below the poverty line ([US Census Bureau, 2021](#)). The county's primary industry was coal but has since shifted to include a few automotive manufacturing factories. Within Whitley County, there is one regional hospital, three nursing homes, and some residential treatment facilities for substance use which are congregate living. There are no group homes or assisted living facilities within the county. Additionally, there are two Federally Qualified Health Centers (FQHCs) that serve the county but are not physically based in the county. Other healthcare providers are typically associated with the local Baptist Health hospital system. Connected to the Baptist hospital are behavioral health inpatient, sub-acute care, and wound clinic facilities. There is one pediatric provider in the county. Most of the population seeks medical care outside of the county.

WCHD provides home health as well as public health services including environmental health, public health emergency preparedness and response, communicable disease control, population health, harm reduction, and the Special Supplemental Nutrition Program for Women, Infants, and Children (WIC). The health department also provides a program called Health Access Nurturing and Development Services (HANDS) which is a home visiting service for new or expectant parents during critical development periods in a baby's first years of life. HANDS promotes positive child development and bonding by assisting first-time parents with parenting skills, health services, development, and other resources. WCHD staff consists of two health educators who conduct maternal and child health education within schools and the community. The health department has partnerships with FQHCs to provide cancer prevention and screening as well as family planning services. WCHD also collaborates with the University of Kentucky's Ryan White Program to provide HIV-related care for clients. Whitley refers clients to healthcare partners for substance use and other healthcare services while they request referrals for pregnant women for their HANDS and WIC programs. The health department educates its healthcare partners on their various program offerings and ways in which they can collaborate. Future plans for the health department include developing a sex education class, increasing treatment for target groups to reduce sexually transmitted disease (STD) rates, and performing program evaluations on interventions such as the naloxone teaching program in the jail.

The Kentucky Cabinet for Health and Family Services has 10 Departments and Agencies, one of which is the Department of Public Health (DPH). DPH participates in a shared governance model for their public health services with 61 local health departments (LHD). Within DPH is the Division of Epidemiology and Health Planning which houses an Infectious Disease Branch. Within this Branch lies a Healthcare Associated Infections (HAI) Prevention

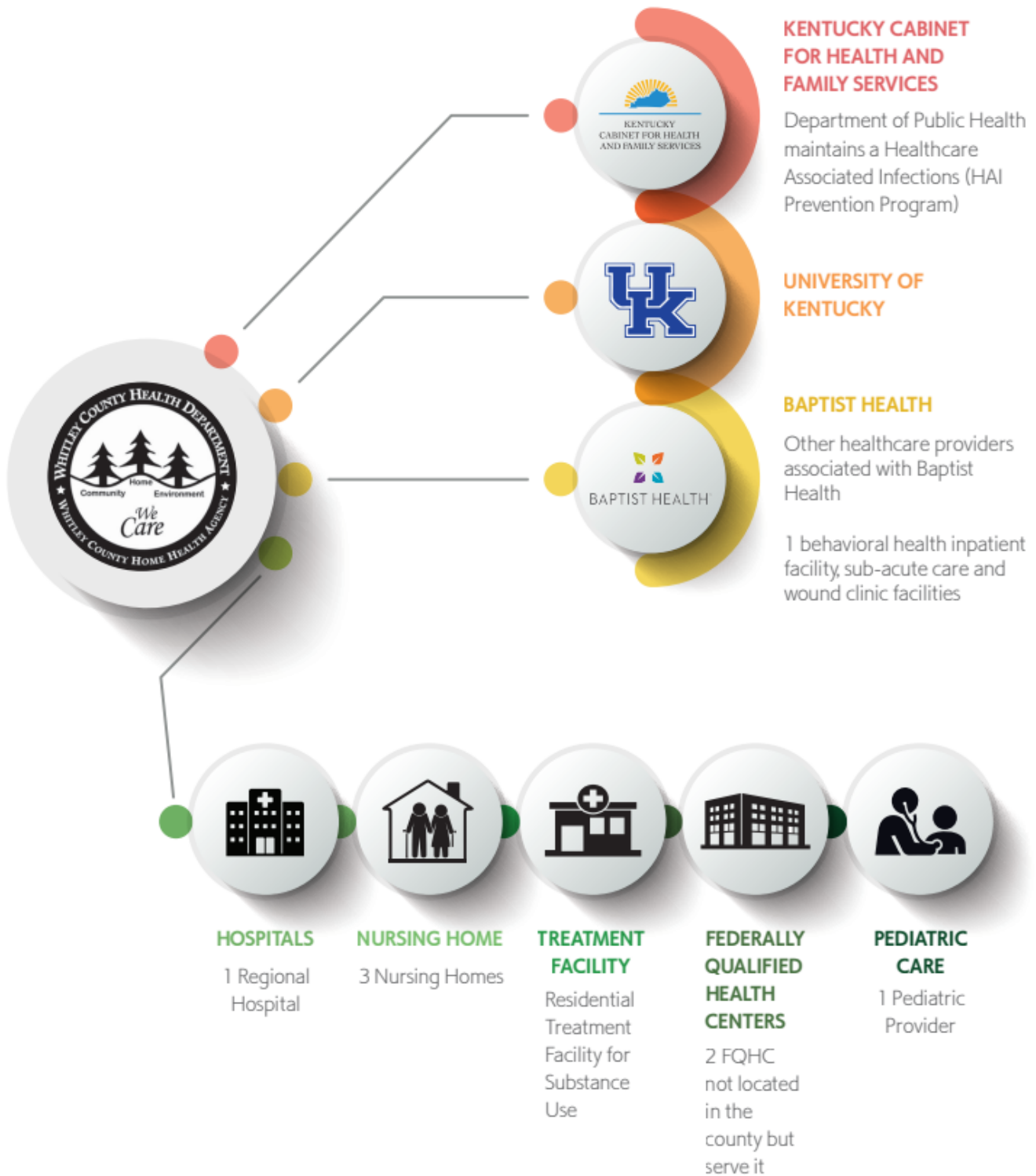
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Program. The [Kentucky Administrative Code for Reportable Disease Surveillance](#) establishes notification standards and specifies the following multi-drug resistant organisms and other organisms for priority reporting: *Candida auris*; *Carbapenem-resistant - Acinetobacter*, *Enterobacteriales (Enterobacteriaceae)* and *Pseudomonas*; *Vancomycin-intermediate Staphylococcus aureus (VISA)*; and *Vancomycin-resistant Staphylococcus aureus (VRSA)*. The code also indicates that an outbreak of a disease or condition that resulted in multiple hospitalizations or death and an unexpected pattern of cases, suspected cases or deaths that could indicate 1) a newly recognized infectious agent, 2) an outbreak, 3) an epidemic, 4) an emerging pathogen posing a public health danger, or 5) a non-infectious chemical, biological or radiological agent are immediately reportable by telephone to the local health department where the facility is located or where the health professional is practicing.

Marcy advised that the health department works on HAIs but not AMR or AMS. The HAI work primarily focuses on infection control practices during home health services including proper use of personal protective equipment (PPE) and ensuring safe practices such as appropriate caseloads and competency in practical nursing skills. Infection control practices are only taught to health department employees and not to those who are outside of the organization; the exception to this was during COVID-19 wherein WCHD provided technical assistance to nursing homes along with PPE and fit testing. The State also has a nurse who works with long-term care facilities to consult on infection prevention practices.

When medical facilities report HAIs, AMR, and AMS these reports go directly to the state office and not to the local health department. Whitley does not have an epidemiologist on staff, rather the State Regional Epidemiologist manages reportable diseases, conditions, and HAI-related issues. When there is an outbreak, the regional epidemiologist is the lead and may call on Whitley to play a supportive role.

## WHITLEY COUNTY HEALTH DEPARTMENT PARTNERSHIPS



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# Appendices

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## Appendix A - Email to Potential Engaged Participants

### **LHD Invitation Email for LHDs Currently Engaged in HAI, AMR, and AMS Activities NACCHO Invitation for In-depth Interview for LHDs Currently Engaged in HAI, AMR, and AMS Activities**

Thank you for your response to NACCHO's Exploratory Survey from March 2022. Your survey responses assisted NACCHO in understanding the opportunities and challenges in rural, frontier, and small Local Health Department settings as it relates to healthcare-associated infections, antimicrobial resistance, and antimicrobial stewardship activities and initiatives.

On the last question of the Exploratory Survey, you indicated that you were willing to participate in a more in-depth interview. NACCHO would love to hear your voice in their efforts to support and advocate for local health departments through this informative interview. The interviews are expected to take between 60-90 minutes by Zoom and will be conducted between May 5 through May 16, 2022. Health Communications Consultants, Inc., NACCHO's consultants on this project, have created a Doodle poll to schedule these interviews. You can access the Doodle poll [here](#). Please respond to this poll by **Wednesday, May 4, 2022**.

To show our appreciation for your dedication and time, NACCHO would like to offer you a scholarship to this year's NACCHO 360 Annual Conference for the completion of this informative interview. The 2022 NACCHO 360 Conference, [Looking to the Future: Reimagining the Public Health System](#), will be held July 19 – 22 at the Hyatt Regency Atlanta. NACCHO is planning for an in-person convening which will have a virtual component for those not able to attend in person. The scholarship will cover the cost of travel, hotels, and conference registration. Additional information regarding logistics will be obtained after the completion of the interview. Thank you for your consideration in participating in this interview.

If you have any questions about the contents of this email, please don't hesitate to contact me.

With regards,  
Dr. Sarah Matthews

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## Appendix B - Email to Potential Not Engaged Participants

### LHD Invitation Email for LHDs Currently NOT Engaged in Activities

### NACCHO Invitation for In-Depth Interview for LHDs Currently Not Engaged in HAI, AMR, AMS Activities

Thank you for your response to NACCHO's Exploratory Survey from March 2022. Your survey responses assisted NACCHO in understanding the opportunities and challenges in rural, frontier, and small Local Health Department settings as it relates to healthcare-associated infections, antimicrobial resistance, and antimicrobial stewardship activities and initiatives.

On the last question of the Exploratory Survey, you indicated that you were willing to participate in a more in-depth interview. NACCHO would love to hear your voice in their efforts to support and advocate for local health departments through this informative interview. The interviews are expected to take between 30-60 minutes by Zoom and will be conducted between May 5 through May 16, 2022. Health Communications Consultants, Inc., NACCHO's consultants on this project, have set up a Doodle poll to schedule these interviews. You can access the Doodle poll [here](#). Please respond to this poll by **Wednesday, May 4, 2022**.

To show our appreciation for your dedication and time, NACCHO would like to offer you a scholarship to this year's NACCHO 360 Annual Conference for the completion of this informative interview. The 2022 NACCHO 360 Conference, [Looking to the Future: Reimagining the Public Health System](#), will be held July 19 – 22 at the Hyatt Regency Atlanta. NACCHO is planning for an in-person convening which will have a virtual component for those not able to attend in person. The scholarship will cover the cost of travel, hotels, and conference registration. Additional information regarding logistics will be obtained after the completion of the interview. Thank you for your consideration in participating in this interview.

If you have any questions about the contents of this email, please don't hesitate to contact me.

With regards,  
Dr. Sarah Matthews

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## Appendix C - Potential Interview Participants

### Engaged in HAI Activities

Florida Department of Health in Polk County
Pima County Health Department
University of Arizona
Idaho Bureau of Rural Health & Primary Care
MT DPHHS
Williamson County & Cities Health District
Pierce County Public Health Department
Chambers County Public Health

### Not Engaged in HAI Activities

Whitley County Health Department
Towner County Public Health
Cook County Public Health and Human Services
Logan Health - Cut Bank
Milam County Health Department
Langlade County Health Department
Stark County Health Department

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## Appendix D - Interview Guide for LHD's Engaged in HAI Activities

### Interview Guide – LHD Engaged in HAI activities

#### Introduction

Thank you for taking the time to talk with us today. We are conducting interviews to better understand the rural local health department (LHD) partnerships in Healthcare Associated Infections (HAI), Antimicrobial Resistance (AMR) and Antimicrobial Stewardship (AMS). You may hear us refer to this as HAI partnerships going forward.

This phone interview will take between 60 to 90 minutes. We will ask you questions about your organization's HAI program and any partnerships you cultivated and maintained as part of the program. Please answer with regards to your organization or your program. We understand that your experience or knowledge may not reflect the official views of the organization, and that you are answering from your own perspective.

This phone interview will be recorded to help us focus on the conversation rather than taking notes. The recordings will be transcribed and used by the staff at HCC, Inc. and NACCHO. In addition, a series of case studies or other publications may be developed based on our conversation and associated research which will be shared with NACCHO. Do we have permission to use your name and the organization's name in the publications?

IF YES – continue

IF NO – We understand. What may or may not use? Please help us understand your comfort level of what could be used in future publications.

Do we have your permission to record this interview? (YES or NO)

IF YES – continue

IF NO – We understand. We will be taking notes instead of recording the interview. The interview will take slightly longer as we will be writing down your responses and may ask you to repeat your response so we can capture the information. There will also be moments of silence as we write down your responses.

This interview will follow a series of structured questions; at times, it may sound like we are asking about something you have already discussed. Please know this is because we are trying to ask the same questions in the same order for consistency. We encourage you to respond with as much detail as possible and will ask clarifying questions occasionally. If you need a question repeated or clarified, please ask.

Do you have any questions at this time?

At any time during our conversation, please ask questions or share any concerns.

Let's get started. We will turn on the recorder now and will ask you again for permission to record our conversation so that we have your consent documented.

On the phone is \*\*\*\*\*Name of person, Organization\*\*\*\*\*. It is \*\*\*\*\*Date/Time\*\*\*\*\*.

Do we have your permission to record this conversation?



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Do we have permission to use your name and the name of your organization for any publication that may result from this interview?

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**We will start by asking about HAIs in your community/jurisdictions.**

1. Please briefly describe the community you serve and the services you provide.
  2. Tell us about your HAI program/project – clients, burden, services, projects.
    - When your organization started the HAI program, what were its goals or objectives? Have those goals or objectives changed? How?
      - Why did you start the program? (Outbreak, funding, etc.)
    - What were some mandatory HAI initiatives that were implemented? What was voluntary?
    - What learning and support resources did your team have for the mandatory or voluntary initiatives?
    - Does your LHD maintain any type of ongoing coaching/mentoring for the HAI program/project?
    - Does your program include AMR and AMS activities?
    - Describe the process for the HAI, AMR, AMS activities.
    - How are you notified about HAI, AMR, AMS?
      - What data sources are used and how do you get the data?
      - How do you push out data?
        - Who do you push it out to? (Facilities, public, state, etc.)?
      - How do you respond?
      - What resources do you use (where, when how)?
        - (ICAR's; Training; Infection Control audits, etc.)
      - Please describe any ongoing costs to maintain the HAI program for small/rural/frontier LHDs in terms of people, products, processes?
  3. What are the most important decisions to make when starting the program/project?
    - What do you need to have ready/do before implementing an HAI program/project?
    - Did you do any type of needs assessment (success planning, set up planning, comprehensive training, etc.) prior to implementation?
  4. What have been the successes in your HAI program/project?
    - What were key milestones/deliverables?
    - What is key to successful implementation?
    - How do you measure success in your program/project?
  5. What are the barriers or challenges to HAI, AMR, AMS program/activities?
    - Biggest obstacle(s) to getting the program/project done?
- Next, we want to ask about resources, tools, trainings, etc. that you may use.**
6. Tell us about staffing, capacity, competency (training) for HAI/AMR/AMS
    - What is your current staff capacity?
    - What are challenges you face around staffing, capacity, etc.?
    - How do you train (self and/or partners)?
    - What is the process for onboarding staff to HAI program?
      - Knowledge, skills, capacity, training, resources
      - How do you build capacity?

- In general, how long does it take to develop a competent public health professional to work in the HAI program?
- What tools have been helpful in training staff? Not helpful.

7. Perceptions of CDC for HAI, AMR, AMS tools, resources, training
- What motivates them to look at CDC for these items?
  - What would motivate them further to have CDC be the go-to?

**Now let's talk more specifically about your partnerships.**

8. Please identify your key partnerships and/or /key stakeholders (local, regional, state, national) for HAI, AMR, AMS activities.
- How did you initially identify these partners?
  - How do you engage together on HAI, AMR, AMS activities?
    - Do you have a formal agreement? How is that set up?
    - How long have you been working together?
    - How often do you re-evaluate those roles?
9. Tell us about the collaboration you have with your HAI prevention partner(s).
- a. How/when did this collaboration(s) start? Do you know who initiated it and why? How has this collaboration adapted since its inception?
  - b. Is it a formal or informal collaboration(s)? How clear are the roles of each partner?
  - c. Do you have a memorandum of understanding (MOU) in place? (If yes) Is it for a specific time period, ongoing, or renewable?
  - d. Are roles and responsibilities shared between you and the partner(s)?
  - e. Which types of services are offered through the collaboration, for example outreach, training, treatment, surveillance, prevention?
  - f. How are these services (outreach, outbreak management, treatment, etc.) tracked? What metrics are used?
  - g. How have you planned for sustainability of activities and/or the partnership(s) between the partner(s) and your organization?
  - h. What infrastructure, policies, or plans are in place to ensure continued success of the partnership(s)?
10. What have been areas of success within this partnership(s)?
- a. What characteristics of the Local Health Department and/or the partner(s) have made this partnership(s) successful?
  - b. What metrics are you using to track success?
  - c. What has changed over the course of the partnership(s) to make it stronger or better?
  - d. What processes have been part of successes, for example SOPs, MOUs (Memorandum of Understanding), or formal agreements, having defined roles and responsibilities, funding, etc.?
  - e. What people have been part of the success? Has there been a champion, involvement of patients, leadership buy in, transference of KSA (practical application or training of other staff) of staff in the HAI program or other factors related to the people that have driven successes?
  - f. What successes have you seen related to HAI outcomes? Data?
  - g. How do you report out/share these successes or best practices?

- 
11. What areas have been challenging within the partnership(s)?
    - a. What were the potential sources/reasons for these challenges?
    - b. Were there any activities conducted together or characteristics of the organizations that posed a challenge?
    - c. Did you experience any staffing or funding challenges?

**Now, we are going to focus on some big picture questions.**

12. What are the lessons learned in implementing an HAI program in your local jurisdiction?
  - a. What resources were used?
    - i. What Knowledge, skills, and abilities were key?
    - ii. Who else was involved?
    - iii. How did you measure success?
  - b. What advice would you give to a Local Health Department considering implementing an HAI program/project?
  - c. What advice would you give to a LHD considering starting a partnership around HAI prevention?
    - i. What do you wish you had known when beginning a partnership(s)?
  - d. How has your organization's ability to address HAIs in your community changed since this partnership(s)?
  - e. What needs to happen for HAI prevention to be effectively, efficiently, and seamlessly delivered in your community?

**Thank you for your time and valuable information. Just 2 more questions.**

13. Do you have any other comments or reflections that we haven't addressed?
14. May we contact you again with further questions?

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Thank you so much for taking the time to talk with us today. The information you have provided informs us about how rural, frontier and small health departments can leverage partnerships to engage in HAI, AMR and AMS activities and initiatives. If, over the course of the next week, anything pops up that you wish you had mentioned or that you think of after we end our call, you are welcome to send any additional comments or reflections via email.

Our next steps are to transcribe this interview, review and combine your responses with other Local health departments and to draft some type of product from our conversation.

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## Appendix E - Interview Guide for LHD's NOT Engaged in HAI Activities

### Interview Guide – LHD Not Engaged in HAI activities

#### Introduction

Thank you for taking the time to talk with us today. We are conducting interviews to better understand the rural local health department (LHD) partnerships in Healthcare Associated Infections (HAI), Antimicrobial Resistance (AMR) and Antimicrobial Stewardship (AMS). You may hear us refer to this as HAI partnerships going forward.

This phone interview will take between 30 to 60 minutes. We will ask you questions about barriers to HAI, AMR, and AMS activities/initiatives in your organization. Please answer with regards to your organization. We understand that your experience or knowledge may not reflect the official views of the organization, and that you are answering from your own perspective.

This phone interview will be recorded to help us focus on the conversation rather than taking notes. The recordings will be transcribed and be used by the staff at HCC, Inc. and NACCHO. In addition, a series of case studies or other publications may be developed based on our conversation and associated research which will be shared with NACCHO.

Do we have permission to use your name and the organization's name in the publications?

IF YES – continue

IF NO – We understand. What may or may not use? Please help us understand your comfort level of what could be used in future publications.

Do we have your permission to record this interview? (YES or NO)

IF YES – continue

IF NO – We understand. We will be taking notes instead of recording the interview. The interview will take slightly longer as we will be writing down your responses and may ask you to repeat your response so we can capture the information. There will also be moments of silence as we write down your responses.

This interview will follow a series of structured questions; at times, it may sound like we are asking about something you have already discussed. Please know this is because we are trying to ask the same questions in the same order for consistency. We encourage you to respond with as much detail as possible and will ask clarifying questions occasionally. If you need a question repeated or clarified, please ask.

Do you have any questions at this time?

At any time during our conversation, please ask questions or share any concerns.

Let's get started. We will turn on the recorder now and will ask you again for permission to record our conversation so that we have your consent documented.

On the phone is \*\*\*\*\*Name of person, Organization\*\*\*\*\*. It is \*\*\*\*\*Date/Time\*\*\*\*\*.

Do we have your permission to record this conversation?

---

Do we have permission to use your name and the name of your organization for any publication that may result from this interview?

---

**We will start by asking about your LHD and community/jurisdictions.**

15. Please briefly describe the community you serve and the services you provide.
- a. Identify key partnerships in general for delivering your services (local, regional, state, national).
    - i. How do you engage in these services?
    - ii. Do you have a formal agreement? How did you set up the partnerships?
    - iii. How long have these partnerships been in place?
    - iv. How have these partnerships changed since inception?
    - v. How do you re-evaluate those roles?
    - vi. How do you train (self and/or partners)? (What, when, how?)
    - vii. What kind of Knowledge, skills, capacity, training, resources are needed in the partnerships?

**Next, we'd like to know more HAI, AMR, AMS in your community/jurisdiction.**

16. What is your awareness level or knowledge of HAI, AMR, AMS (novice, learning, expert)?
- Depending on respondent's answer, interviewers may describe some HAI, AMR, AMS activities for clarification. HAI, AMR and AMS activities or initiatives include implementing infection prevention and control efforts, improving the use of antibiotics, identifying antibiotic resistant infections, and reducing the transmission of resistant organisms, outbreak response or management in a nursing home/hospital, ICAR, infection control consultant, etc.
  - What activities/program address HAI, AMR, AMS? Note: May be doing this but not aware it is HAI, AMR, AMS. Example: Do you investigate norovirus outbreaks in nursing homes? Which program does that? Does your health department work with healthcare facilities? How? What does that relationship look like?
  - Do you know the burden of HAIs in your jurisdiction?
  - Where do you go to find this data?
17. Are you aware if anyone else is doing this work in your community/jurisdiction (state, etc.)?
- What is the LHD role in HAI/AMR/AMS?
  - What do you think the LHD role in HAI/AMR/AMS should be?
18. What are barriers or challenges to implementing HAI, AMR, AMS program/activities?
- What is the biggest obstacle to getting a program/project started?
  - Some barriers identified in the Exploratory Survey were insufficient staff, funding, time, training, and unawareness of LHD responsibility. Would you add any others?
19. How could we build capacity to engage in HAI, AMR, and AMS initiatives at your LHD?
- a. Perceptions of CDC for HAI, AMR, AMS tools, resources, training
  - b. What motivates them to look at CDC for these items?
  - c. What would motivate them further to have CDC be the go-to?

- 
- d. What resources do you use?
  - e. What resources have you found helpful vs not helpful?
20. What kind of learning or support resources could your LHD use to engage in HAI initiatives?
- Benefit from a coaching/mentoring program?
  - Weekly webinars, just-in-time training, etc.
  - TA (TECHNICAL ASSISTANCE)
  - Understanding funding streams
  - Communications tools and strategies
- If you were to initiate a new project, what are the most important considerations for a rural/frontier/small health department to make?

**We have three more questions.**

21. What advice would you give to CDC or organizations like NACCHO when considering a project/program involving rural/frontier/small health departments?
22. Do you have any other comments or reflections that we haven't addressed?
23. May we contact you again with further questions?

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Thank you so much for taking the time to talk with us today. The information you have provided informs us about the barriers to engaging in HAI, AMR and AMS activities and initiatives and ways to build capacity in rural, frontier, and small health departments. If, over the course of the next week, anything pops up that you wish you had mentioned or that you think of after we end our call, you are welcome to send any additional comments or reflections via email.

Our next steps are to transcribe this interview, review and combine your responses with other Local health departments and to draft some type of product from our conversation.

## Appendix F - Synthesized Interview Responses – LHD Engaged in HAI activities

Some of the analysis contained in Appendix F were removed in the shareable version of this document. If you wish to review this analysis of the survey data, please contact NACCHO at [infectiousdiseases@naccho.org](mailto:infectiousdiseases@naccho.org)

What are the most important decisions to make within the program/project?	
Themes	Responses
Value-Quality Care	<ul style="list-style-type: none"> <li>Do it because it is the right thing to do. It's the right thing to give the best quality care</li> </ul>
Access to Mentor/Knowledge	<ul style="list-style-type: none"> <li>For LHD's have access to their State HAI program</li> <li>The need for specific training (e.g. ICARs) and how to get it (e.g. shadowing, access)</li> <li>Establish mentorships or coaching especially for new programs. You will need it. Having people who have developed this program elsewhere and being able to share their knowledge and resources is really helpful.</li> <li>Have people with the right background and knowledge to reach out to.</li> <li>There are lots of resources out there but they are not in a place to find everything. Be prepared to do some separate research and having a person to reach out to help is important.</li> </ul>
Established goals/purpose/plan	<ul style="list-style-type: none"> <li>Establish your goals and purpose. In MT, our first priority was getting into the facilities to assist in infection control training.</li> <li>Understand your program's needs and align positions and position descriptions.</li> <li>Have an understanding of succession planning for your organization.</li> <li>Set what you will do and what you won't do.</li> </ul>
Developed trusted relationships	<ul style="list-style-type: none"> <li>For LHD's have access to their State HAI program</li> <li>Develop trustful relationships and communicate your intentions.</li> <li>Your partners can be valuable resources to help with training. For example, the hospital system helped with high level cleaning and critical and semi-critical equipment, disinfection and sterilization. These are things that we don't do at the health department.</li> </ul>
Openness to learn/Desire to be involved	<ul style="list-style-type: none"> <li>Wanting to be involved in the long-term care facilities and the hospitals infection control program processes.</li> <li>Be open to learn what you don't know.</li> </ul>
Funding/Capacity/Resources to do the work	<ul style="list-style-type: none"> <li>The need for specific training (e.g. ICARs) and how to get it (e.g. shadowing, access)</li> <li>Updated resources for the program. With AMS, there is only the CDC LTCF's guidance and that was out since 2005</li> <li>Have training resources and the capacity to do the work.</li> <li>Funding, always funding to develop those policies, procedures and foster relationships we have with our outside healthcare facilities.</li> </ul>
Understand policies	<ul style="list-style-type: none"> <li>Understand if the ARLN organisms are reportable in your State and how that will affect reporting for the organisms that are not reportable.</li> <li>COVID allowed us to understand our gaps in communication, reporting and other things regarding our long-term care facilities. Now is a good time for us to work on those gaps, implement new programs, and maybe work towards funding for future initiatives in our partnerships.</li> </ul>

- It's important to have a better understanding of each of the entities own established program, who they are governed by and knowing their capability to responding in house. How much help they will need, how we can facilitate that, etc.

### What have been the successes in your HAI program/project?

Themes	Responses
Collaboration	<ul style="list-style-type: none"> <li>• Provide 1:1 TA and coaching especially for the high turnover.</li> <li>• One thing in Montana is everyone knows who we are now.</li> <li>• Relationships built with local public health and with our healthcare facilities.</li> <li>• Increase in facilities enrolled in our antibiotic stewardship program.</li> <li>• We offer “Office hours” every week which is allows the facilities to talk to each other and get advice from each other.</li> <li>• Relationship building, peer to peer mentorship program for infection preventionists that are new.</li> <li>• Developing relationships with mentors.</li> <li>• NACCHO funding to do COVID-19 ICARs was great. It was an awesome training and it covered everything.</li> <li>• Resources in the form of APIC text subscription and CIC Course online that is self-paced to compliment any type of reading.</li> <li>• In the beginning it was hard because I didn't know what to do, but I got into the CSTE Peer to peer mentorship and then I knew I had support system.</li> <li>• CDC partnership with DSHS through a Project First Line initiative to provide scholarships for CIC and they prioritize local health departments.</li> </ul>
Stronger & trustful relationships	<ul style="list-style-type: none"> <li>• With HAI and due to COVID, we have gained much stronger relationships with the LTCF. They recognize we are not a regulatory agency; we are there to help them and provide assistance to make sure they don't have additional infections.</li> <li>• I'd like to take advantage of the strengthen relationship to now branch out into antibiotic stewardship</li> <li>• I'm finally getting yes to us coming into the site.</li> <li>• Making sure our Ip feel some level of they are supported. Network of individuals that they can talk to and rely on.</li> <li>• Our approaches are culturally aware and sensitive. People skills are important.</li> <li>•</li> </ul>
Improved processes	<ul style="list-style-type: none"> <li>• Successful that the pharmacists, infection preventionists and quality directors are usually very involved in the program and are really trying to move the needle with antibiotic stewardship programs.</li> <li>• Our program does not have any issues with turnover or capacity. Because we are affiliated with the University we have access to doctoral students to do awesome projects.</li> <li>• We have conducted 48 ICARs since 2021 and have been able to get into 17 ALFs, 17 LTCFs and 14 acute care hospitals.</li> <li>• Implementation of CLC (congregate living coordinator positions), dedicated position who works directly with the healthcare facilities.</li> <li>• Contract pharmacist works directly with 5 facilities and provides direct audits and feedback on their days of therapy to help improve their prescribing practices at their healthcare facilities.</li> <li>• Increased reporting by facilities.</li> <li>• Improved communications with facilities that never used to call us.</li> </ul>



	<ul style="list-style-type: none"> <li>• In rural counties they are notorious for having an epi program where its an additional duty of some other nurse, who is responsible for vaccines, and school health, etc., so for us we are able to assist Hardy County by providing them the staff they need for most types of situations.</li> <li>• Bilingual in our community. We have a need for Spanish but also Vietnamese. Our staff is representative of the community, so depending on the area, depends on which staff to help with the investigation. If we are in Waco, we have an epi, who is from there and he is a country rural boy and he is perfect for working with that population. If there is a Hispanic population, I will work with it.</li> <li>• Spent many years trying to get hospitals to report basic measures and the tribal hospitals, the sovereign nations do not want to publicly report. In the program we can individualize the reports and give it back to the participating hospitals to tailor to their needs.</li> </ul>
Satisfaction	<ul style="list-style-type: none"> <li>• One hospital just loves the program, she’s a champion of it. She expresses how much she has learned in changing common practices that providers make with antibiotics and learning how to communicate with providers</li> <li>• It's pretty satisfying being able to support rural and underserved areas, and I think you know all the staff in in in the center for real how feel the same way.</li> <li>• Starting the program and knowing that we are going somewhere. Higher level of thinking.</li> </ul>
Knowledge Gain	<ul style="list-style-type: none"> <li>• One hospital just loves the program, she’s a champion of it. She expresses how much she has learned in changing common practices that providers make with antibiotics and learning how to communicate with providers</li> <li>• We do many training events throughout the week.</li> <li>• Doing the ICARs have helped people to start to understand antimicrobial resistance.</li> <li>• We offer “Office hours” every week which is allows the facilities to talk to each other and get advice from each other.</li> <li>• Completing the State HAI mentorship program and applying for CIC exam.</li> <li>• Training on CDC is very good but very big and dense in the material. Then came Project First Line initiative which was nice. It was more live.</li> <li>• Our leadership is really supportive. For example, we encourage the CIC and provide staff with the resources and if they don’t get a scholarship for the exam, we make room in the budget for them to get as much qualification preparation as they want.</li> </ul>

## What are the barriers or challenges to HAI, AMR, AMS program/activities?

Themes	Responses
Perception of the health department	<ul style="list-style-type: none"> <li>• State gets lumped into the group of being a regulatory agency, and then people shut us down and don't want to talk to you.</li> <li>• Requires lots of relationship building to get people to understand what you do and that you are completely different than a regulatory agency.</li> <li>• Pushback from facilities as they don't understand how we can assist.</li> <li>• Implementing the HAI program in conjunction with facilities that give us pushback.</li> <li>• Hospitals and other departments have their own policies and guidelines which we don't fit in to.</li> </ul>
Turnover	<ul style="list-style-type: none"> <li>• Turnover with quality directors is so big and we have to start over.</li> <li>• Maintaining the relationships with LTCFs due to staff turnover at the facilities.</li> <li>• Turnover to Ips is high</li> <li>• Revolving door of staff. Not only with nursing but with administrative staff, managerial staff, and even the corporations themselves changed hands.</li> <li>• The facility that you have known as facility A, changed their name and have a completely different corporate ownership. Challenges with leadership and the contacts, and having to reestablish the relationship.</li> <li>• Maintaining relationships with staff turnover.</li> <li>• Public health challenges, funding and staff.</li> <li>• Turnover of staff and having to reteach. Having to start over with the facilities. It's kind of circular sometimes.</li> <li>• COVID left people tired and many people retired. So finding the right person to talk to was number 1 challenge.</li> </ul>
Funding	<ul style="list-style-type: none"> <li>• Public health challenges, funding and staff.</li> <li>• If I did not have the NACCHO funding, I would not be able to create a dedicated HAI epi position, it would just be another thing that our epi staff would have to do on their own.</li> <li>• Funding, historically we did not have the funding to support a full-time person.</li> <li>• If we don't give them the resources, they will never reach those milestones that we expect them to meet.</li> <li>• Funding</li> <li>• We have challenges with staffing, responding to HAIs is extremely time consuming</li> <li>• our population has grown immensely. It is sure to be well over the 600,000 people, and but our, the funding that we receive is from the State right now for Epis. They are only funding 2 epis for all of those people. So that ends in 2023 and then we have a vacant position that we are in in the process of posting and hiring.</li> <li>• Reporting demands and disease increase but funding doesn't.</li> </ul>
Inefficient data system	<ul style="list-style-type: none"> <li>• Data repository not in one place.</li> <li>• Not all states required to use NHSN.</li> <li>• NHSN is a convoluted system. Access to the system is a challenge and then the turnover at the hospital are big barriers.</li> </ul>

<p>HAI work requires lots of time</p>	<ul style="list-style-type: none"> <li>• HAI work takes an unordinary amount of time. It is not something that our county would be able to provide routinely. Its fine for a one off.</li> <li>• If we had multiple “CRE” cases, we couldn’t maintain that so definitely would need to have additional staff.</li> <li>• We appreciate having the State HAI program because the HAI work and coordination takes a significant amount of time.</li> <li>• HAI work is a significant amount of work not to have a full-time person on it.</li> <li>• Lack of time on the Ips to dedicate to infection control</li> <li>• Someone needs to be dedicated more than 5 hours to infection control.</li> <li>• Its been a lot of work and it takes a special type of person to be able to do this work especially in a pandemic.</li> <li>• We have challenges with staffing, responding to HAIs is extremely time consuming. It takes 2 epis to go out onsite of the facility and then environmental health team and specimen and water collection, chart reviews, case reviews etc. It’s a complete day. It is really difficult to devote much time.</li> <li>• Infection control is definitely a newer topic for us here in Montana and we have finally dedicated some time to it and historically have not been able to do that.</li> </ul>
<p>Lack of training/experience/knowledge/support system</p>	<ul style="list-style-type: none"> <li>• Number 2 challenge was training.</li> <li>• In the beginning, I did not know what the State needed from me, so I did not know what training I needed either.</li> <li>• Training on CDC is very good but very big and dense in the material.</li> <li>• Have not had the experience to have to initiate a coordinated HAI response.</li> <li>• Understanding who has the resources, who is better equipped and how to move forward.</li> <li>• Most people just step into the role and they have never been in the role before and they need resources.</li> <li>• Each day, you don’t know what you are going to get. HAI is not always checking boxes, there is not playbook, you have to learn a little bit about everything and it’s a continuous learning.</li> <li>• In my first year, I was like I’m not cut out for this. Nobody knows what it like, what’s supposed to do. I needed a support system</li> </ul>
<p>Competing responsibilities</p>	<ul style="list-style-type: none"> <li>• Lots of competing needs.</li> <li>• Competing responsibilities.</li> </ul>
<p>Lack of communication/doing the job</p>	<ul style="list-style-type: none"> <li>• Its been a process to get hospitals to report.</li> <li>• Difficult to standardize processes across facilities. I tried to have one form for patient transfers across facilities and this is impossible.</li> <li>• Patients move a lot in facilities and go far distances sometimes and the facility won’t know because they weren’t formally informed that the patient has an HAI and needs to be on transmission based precautions.</li> <li>• Intra and inter facilities communication is very poor and poorly documented.</li> </ul>

	<ul style="list-style-type: none"> <li>• Reporting is delayed. Sometimes I get reports 2 or even 3 months after the patient date of collection, which leaves you thinking what is my course of action now?</li> <li>• Even though we have big relationships, people are used to playing in their own world and doing their own response.</li> </ul>
Lack of supportive regulation	<ul style="list-style-type: none"> <li>• CMS regulations are loose on how much time to dedicated to infection control, so facilities don't get the benefit of that.</li> <li>• Facilities get a lot of push back from the community who might not understand and they have to deal with that. E.g. I want to see my dad right now, why can't I see my dad.</li> <li>• Lack of regulations to help support our healthcare facilities to provide the best care they can.</li> <li>• Difficult to standardize processes across facilities. I tried to have one form for patient transfers across facilities and this is impossible.</li> </ul>

Tell us about staffing, capacity, and competency?	
Themes	Responses
Insufficient capacity	<ul style="list-style-type: none"> <li>• COVID demonstrated our gaps. We had 3 employees dedicated to public health at the start of the pandemic, and now we have 21 dedicated to public health programs now.</li> <li>• We have challenges with staffing, responding to HAIs is extremely time consuming. If we had the staff, no problem to train them to do HAI work or AMS or AMR. Its really hard to work on an HAI when you know it will take a whole day.</li> </ul>
Rely on other resources	<ul style="list-style-type: none"> <li>• The antibiotic resistance piece we rely heavily on the State HAI program.</li> <li>• In our Flex program in AZ, I'm the main person and I have been here for 12 years. Because we are a university we have several staff funded under the program where other programs only have 1 person.</li> <li>• We do a lot of things in house because we have the capacity and expertise and don't have to use consultants.</li> <li>• We use experts from the UW task, an infection prevention person who is good at NHSN and I connect the hospitals with the experts and they bill me for their hours.</li> <li>• In rural counties they are notorious for having an epi program where its an additional duty of some other nurse, who is responsible for vaccines, and school health, etc., so for us we are able to assist Hardy County by providing them the staff they need for most types of situations.</li> </ul>
Training	<ul style="list-style-type: none"> <li>• Project First Line, we do a project first line training with public health staff to build capacity and then we do the same training in the facilities.</li> <li>• We train on NHSN for hospitals and healthcare facilities.</li> <li>• Infection Prevention webinar that is open to any IP in the state of Montana and we have opened it up to other states</li> <li>• We do a lot of similar or mirror training for local public health jurisdictions as well as for healthcare facilities. So we are teaching the same thing and they are hearing the same messages.</li> <li>• Regional office frequently sends out trainings and up-to date guidelines by email and several staff participate in the regional trainings.</li> <li>• No one trained in our LHD specifically in HAI, not to my knowledge.</li> </ul>
Hire Skills	<ul style="list-style-type: none"> <li>• 2 of our infection prevention specialist came from State Survey so they are familiar with infection control and providing assessments within healthcare</li> </ul>

	settings, so they brought their knowledge with them. The other 2 individuals are from public health backgrounds and worked COVID-19 outbreaks directly from the local public health level. They all do ICARs
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Tell us about staffing, capacity, and competency?	
Themes	Responses
Access to resources	<ul style="list-style-type: none"> <li>• The cohort members have access to the UW Task website which has all the toolkits and all kinds of resources.</li> <li>• Cohort have a lot of tools from the HQICs and the hospital association, with lots of training and webinars.</li> <li>• Receive my training from the National Rural Health Resources.</li> <li>• Rural Health policy contracts with Stratus Health to do the trainings for Flex coordinators.</li> <li>• I use Stratus Health all the time.</li> <li>• Many staff are put into the roles and have never been in the role before and they need training and resources.</li> </ul>
Access to Subject Matter Experts (SME)	<ul style="list-style-type: none"> <li>• We connect the cohort members with experts from the critical access hospitals, from UW or from the infection prevention person for NHSN.</li> <li>• I know who to reach out to and work with. Flex coordinators are not experts in the subject but we do build many relationships and can find out who to work with .</li> <li>• When the IP does her rounds, she is kind enough to share those investigations with me and I present them to my team.</li> </ul>
Access to Networks	<ul style="list-style-type: none"> <li>• We use listservs so the hospital staff can chime in on the subject and help everyone answer a question.</li> <li>• We hold office hours, which is an hour where they can ask us anything or we can do a Project First Line topic.</li> </ul>
Formal Certifications	<ul style="list-style-type: none"> <li>• We strongly encourage to have epi staff go through their CIC certification but there is so many aspects of the certification that do not necessarily apply to epi. Encouraging staff to get their CIC means they are qualified to work in a hospital which is dramatically more than working in a local health department, so in a sense we are shooting ourselves in the foot by encouraging staff to get CIC certification.</li> <li>• CIC is not a standard, but it is encouraged. We provide them with the resources including a scholarship for the exam.</li> </ul>
Scheduled collaborative training	<ul style="list-style-type: none"> <li>• We are a centralized health department and have an HAI program at the State which is tremendously helpful in providing training and specific training like the ICAR.</li> <li>• We have Training Tuesday from the State Office and those contain different topics, these were suspended during COVID, but the have topics that include HAI including specific diseases such as recently C. auris.</li> <li>• Every Friday we do training on APIC, internal training for program staff.</li> <li>• Cross training my Epi Team so we don't have a single point of failure at any point.</li> <li>• We do case studies presentations.</li> <li>• We include our Epi and preparedness divisions in our trainings, because they are backups.</li> </ul>

Hands On training and cross training	<ul style="list-style-type: none"> <li>• Learn by doing. Take staff on ICARs, show them than have them preform one. Mentor kind of program.</li> <li>• For hands-on training. I am going through the ICAR training with my team and then we will stage our first floor clinic as the facility and they will have a mock ICAR to preform on before we do into a real ICAR.</li> <li>• Cross training my Epi Team so we don't have a single point of failure at any point.</li> <li>• We include our Epi and preparedness divisions in our trainings, because they are backups.</li> </ul>
Hire the KSA	<ul style="list-style-type: none"> <li>• Many staff are put into the roles and have never been in the role before and they need training and resources.</li> <li>• We try to identify staff who are capable and you have a background or experience to be part of their role.</li> <li>• 2 of our infection prevention specialist came from State Survey so they are familiar with infection control and providing assessments within healthcare settings, so they brought their knowledge with them. The other 2 individuals are from public health backgrounds and worked COVID-19 outbreaks directly from the local public health level. They all do ICARs</li> </ul>
State/Federal Supported	<ul style="list-style-type: none"> <li>• Rural Health policy contracts with Stratus Health to do the trainings for Flex coordinators.</li> <li>• We are a centralized health department and have an HAI program at the State which is tremendously helpful in providing training and specific training like the ICAR.</li> </ul>

## What are the skills needed to work in an HAI program?

Themes	Responses
Technical Skills	<ul style="list-style-type: none"> <li>• Report writing skills. The ability to put together a cohesive report that can be used to communicate findings and make recommendations.</li> <li>• Ability to work with computers</li> <li>• Perform data analysis.</li> </ul>
Academic	<ul style="list-style-type: none"> <li>• An MPH in Epi is definitely preferable.</li> <li>• I have been impressed with the level of training that some of our DSPH people for the LTCF members. 3 of them have a DSPH from USF and have been well trained.</li> <li>• If you are going to be an IP, you have to have some sort of either biology or microbiology laboratory or clinical experience because you are going into healthcare facilities and you need to understand how things work.</li> <li>• AMS, I think it is vital to have a pharmacist to get questions answered, antimicrobial therapies, antibiotic prescribing, antibiotic use.</li> </ul>
People Skills	<ul style="list-style-type: none"> <li>• They have to consider who they are speaking with and make sure they are from a friendly manner non-threatening. Establish rapport.</li> <li>• Being able to identify the population your are speaking to and your audience and how to tailor your skills to be understood.</li> <li>• Need people skills first because you will be doing a lot of talking within and outside your organization.</li> <li>• People skills but being able to be culturally aware or sensitive. Having staff that is representative of your population.</li> </ul>
Communication skills	<ul style="list-style-type: none"> <li>• The ability to communicate. They can't go barging in saying I'm from the health department get out of my way.</li> <li>• Effective communicator or being able to talk to a variety of facility backgrounds.</li> <li>• Build trust and rapport.</li> </ul>
Foundation of infectious disease	<ul style="list-style-type: none"> <li>• A background in infectious diseases.</li> <li>• A good foundation of infectious disease, a reasonable understanding of infectious disease with basic epidemiology skills.</li> <li>• Track outbreaks or understand how outbreaks are spread, basic infection control.</li> </ul>
Epidemiologic Skills	<ul style="list-style-type: none"> <li>• basic epidemiology skills</li> <li>• Epi background, to think analytically and figure things out.</li> <li>• Track outbreaks or understand how outbreaks are spread, basic infection control.</li> <li>• Basic epidemiology principles.</li> </ul>
Prioritization/Continual learning	<ul style="list-style-type: none"> <li>• Being able to prioritize especially when you have multiple things coming at you at once.</li> <li>• Desire to learn.</li> </ul>

What resources do you use for training?	
Themes	Responses
CDC	<ul style="list-style-type: none"> <li>• I really like CDC resources for training as they are the gold standard. We use their NHSN training and their Project First Line training.</li> <li>• CDC has a really nice water management training. It has a whole water management tool to go with the water management assessment. We plan to share with our LTCF and nursing homes because it is a CMS requirement.</li> <li>• CDC through Train.org</li> <li>• Most of the information we reviewed was through teams and everything was from the CDC website. So CDC is definitely where most of the information will be learned or reviewed.</li> <li>• For the most part CDC is the go to resource in terms of finding guidance, information on ICARs,</li> </ul>
APIC	<ul style="list-style-type: none"> <li>• Use a lot of APIC training.</li> <li>• APIC course for the CIC preparation, it's a review course. This one has been fantastic in reviewing the really high points of basically everything. It is just not necessarily accessible to everyone, because it is a little bit pricing.</li> <li>• We used APIC for books and look things up</li> </ul>
SHEA/CORA	<ul style="list-style-type: none"> <li>• SHEA outbreaks as well as the CORA outbreak training</li> </ul>
Hands-On	<ul style="list-style-type: none"> <li>• Lots of hands-on learning, continually learning</li> <li>• We are just getting to doing tabletop exercises after the pandemic for training.</li> <li>• More hands-on training is needed. I was able to go to one shadowing and that was helpful. In the middle of COVID there were not that many opportunities to go through the program.</li> <li>• We train with mock interviews to gain skills in talking to different types of people.</li> </ul>
State HAI	<ul style="list-style-type: none"> <li>• Texas Train</li> <li>• but for specific training materials we rely on the State HAI program-specific pathogen training.</li> <li>• they [State] would send PowerPoints to us from them.</li> </ul>



What can CDC do better?	
Themes	Responses
Training-Pathogen Specific	<ul style="list-style-type: none"> <li>• The relationship that CDC has with our State HAI program has been very beneficial. But our pathogen specific trainings come from the State and maybe they are derived from CDC materials but they are mainly pushed down to us from our State HAI program.</li> <li>• Update disease specific guidance to include infection control guidance, definition of outbreaks, how long need transmission-based precautions, etc. and start with those that are commonly found in healthcare facilities.</li> <li>• Improving the AR guidance for like CRE and MRSA. Updating the containment of multidrug resistant organisms. I know they have different response levels and tiers but I think they should look at it again with an infection control scope.</li> </ul>
Training-Shadowing & Hand-ons	<ul style="list-style-type: none"> <li>• Need more shadowing and on-site trainings would be a great benefit.</li> </ul>
Training-Management	<ul style="list-style-type: none"> <li>• So I think you know, and one thing I communicated with CDC. Is, I would I would really love management training for these kinds of positions, because I feel like every HAI coordinator at a State level, is experiencing this of like we had really rapid growth and it was like, What's the what's the long term plan here like? What's the game plan moving forward? so our onboarding was a lot of Hey, welcome. We're gonna figure this out as we go but our programs growing just as you know, at a fast speed. I can't keep up with and so we've improved it over time. I think our last Ip. who just started 2 weeks ago, went a lot smoother. You know we had here's your training plan from HR, here's the training plan for the HAI program itself, and you know, kind of go going through that process.</li> <li>• The scope and role of the HAI coordinator has changed over the past 2 years.</li> </ul>
Training-IP/Hospital Specific	<ul style="list-style-type: none"> <li>• More education on things that are IP/Hospital specific like sterilization and reprocessing of medical devices, more education or tools related to that.</li> <li>• Look at the ICAR, and develop specific training on those sections (e.g. multidrug resistant organisms, antimicrobial stewardship), so when I am at a facilities I can provide the best guidance that I can.</li> </ul>
Guidance-AS	<ul style="list-style-type: none"> <li>• AS program is in its infancy. Nothing from CDC in particular other than the guidance from 2015 but nothing how to reach out to LTCF's starting from ground 0.</li> </ul>

What have been areas of success within this partnership(s)?	
Themes	Responses
Training together	<ul style="list-style-type: none"> <li>• We had a partner from county EMS that put together a training for everything, donning, doffing, hand hygiene. I helped her put that together and it was a big resource for us.</li> </ul>
Subject Matter Experts	<ul style="list-style-type: none"> <li>• We are looked at now as infection controller and infection prevention experts. Historically that was not the case.</li> <li>• We're kind of the subject matter experts when it comes to infection control or antimicrobial stewardship, or antimicrobial resistance for our local public health departments, so if they don't know how to respond or answer a question, we usually are going to be consulting with them we're trying, trying very hard to get our facilities to work directly through local public health anymore.</li> </ul>

	<ul style="list-style-type: none"> <li>• We're really a support system for health departments on answering very specific infection control or HAI related questions</li> </ul>
Guidance	<ul style="list-style-type: none"> <li>• When its time for sites to put in their data in the antibiotic stewardship, I will do a refresher training to have it on their radar to know what to do.</li> <li>• We also send out a monthly reminder of all of the measures that are due, where to report them on, and where to get resources for help.</li> <li>• Doing the ICARS with the LTCF and then pointing out their deficiencies and doing it in a critical, non-accusatory way. Being able to provide guidance.</li> <li>• Other agencies can reference each other, each other tools and share information across facilities.</li> <li>• Providing recommendations to the hospitals and they have taken them and implemented themselves.</li> </ul>
Improved Process	<ul style="list-style-type: none"> <li>• We built relationships where we are finally getting reporting on things like MRSA outbreak or CRE/CRP. I mean I did 1 MRSA outbreak in 5 years I was here, this year alone we have done 5 outbreaks.</li> <li>• Created a days of therapy tracking tool with Montana Hospital Association for our facilities to help with antimicrobial stewardship.</li> <li>• Reduce confusion at the facility level by message sharing, working together so we don't duplicate efforts.</li> <li>• Our CAH may not have a pharmacist onsite, and expertise is really difficult to meet, so our days of therapy tracking tool to help with data into NHSN.</li> <li>• Getting reports from them that we did not get before, particularly our acute care hospitals.</li> </ul>
Excellent Relationships	<ul style="list-style-type: none"> <li>• Pre-COVID we had an excellent relationship with our hospital infection preventionists. There were different areas of APIC dispersed throughout the State. I would attend those meetings, some meetings were just considered to be too far and so I would attend and bring information back to our sub-chapter.</li> <li>• Meeting with our APIC regularly, with no set agenda.</li> <li>• Although significant turnover at the LTCF, there has not been significant turnover at the hospitals in the other 3 hospitals, so that is great for us maintaining our relationships</li> <li>• No significant turnover in the hospital IP so we have been able to maintain those relationships.</li> <li>• We have lots of relationships within different areas of the AZ Department of Health and we have relationships with our CAH and clinics.</li> <li>• The LTCF partnerships have really been strengthened due to COVID and so has our partnership with ACHA. They know us and we know them.</li> <li>• We have ongoing relationships and robust provider email group that we share information that's impactful to know.</li> <li>• I think it's just these are are small enough communities so these are the same communities that we live in, we work in, our kids go to school in, we go to church in, and so I think that outside of work it's just having that constant interaction along with just, you know, giving them education and information on the services that we can provide.</li> <li>• Our leadership, our county officials have been really supportive and have allowed us to have buy in from other facilities.</li> </ul>
Building Relationships & Infrastructure	<ul style="list-style-type: none"> <li>• Meet partners face to face. If there is somebody new at the hospital, I'll set up an orientation to meet them in person. But with COVID this just didn't happen.</li> <li>• Face to face relationships help build not only the success of the program but also the infrastructure</li> </ul>

	<ul style="list-style-type: none"> <li>● We got one of the CDC health disparities Grants running through the center of the state to work with the rural areas, I was able to meet with the CEO of a hospital and let him know about this new resource. I don't necessarily go to these meetings as the Flex coordinator more as representing the Center for Rural Health.</li> <li>● With our relationship building, we have been able to raise awareness of HAI and explain the program</li> <li>● We developed a relationship with our Mountain Pacific Quality Health where we use the same platforms. So Thursday webinars, if they want to do a training on a topic, they can use that slot. We partner with them so our facilities aren't overwhelmed.</li> <li>● The facilities see all our agencies working together and we set an example for them to work together and work with us.</li> <li>● We have done a lot of outreaches even after COVID so that the facilities know there is more than infectious disease, its not just COVID.</li> <li>● One on one relationships can do more than other entities. Just because we are smaller, our hospitals are smaller and those key people make sure they are aware and get things done.</li> <li>● We have been very fortunate to receive several funding opportunities to help us build our relationships (e.g. workforce grant, health disparity grant, immunization grants). We were fortunate enough to hire a community health nurse this year, which we've never had before. her main roles and responsibilities between, besides linking people who've been disproportionately affected, is fostering those relationships, engaging the public, engaging and not just facilities but the public.</li> </ul>
Improved communications	<ul style="list-style-type: none"> <li>● Communications with Mountain Pacific so that that we are aligned with what guidance we are providing the facilities, so we are on the same page.</li> <li>● Reduce confusion at the facility level by message sharing, working together so we don't duplicate efforts.</li> <li>● On Thursdays, we have a Q &amp; A with the Quality Assurance Division and facilities come and ask questions there.</li> <li>● We don't have a local radio station, we don't have local news station. So our means of contact with providers is face to face</li> <li>● We maintain open dialogue with our partners to foster those relationships.</li> <li>● Information was coming out so quickly and it changed so quickly that is was difficult to wade through the information and try to just decipher what was important and we helped get that information out to our partners.</li> <li>● Listserv that is updated frequently.</li> <li>● When we see elevated activity (e.g. Norovirus) we do a call down to facilities and let them know and we push information out to the facilities via email or fax.</li> <li>● We communicate with partners as needed.</li> <li>● Communicating with partners is really important and reassuring them that we are partners not regulators in any way.</li> <li>● Being a good epidemiologist is having the connection in the community all over the place, schools, restaurants, associations Ips, agriculture. It's gotta be everywhere and know everybody, which is impossible, but you try your best to do that. So yeah, maintaining those communications. The challenge is trying to do that and balance everything else.</li> </ul>

## What have been challenging within the partnership(s)?

Themes	Responses
NHSN/Systems Barriers	<ul style="list-style-type: none"> <li>• The NHSN screens are not the same view for the facility as what I see. So when they call me for questions, I'm not able to see what they are seeing.</li> <li>• I have not received formal training on NHSN on how to pull reports or what the data means, how to use the data.</li> <li>• For IHS, I've been working really hard with the Federal office of rural health policy and the Federal IHS to really align measures because they're they have they some of they're doing some of these measures in different systems.</li> <li>• NHSN is a convoluted system and to get access is a challenge especially with the frequent turnover.</li> <li>• Trying to get systems aligned. We make them report on these things and they aren't in one place. Its not fair to duplicate the measure.</li> </ul>
Reporting	<ul style="list-style-type: none"> <li>• Right now critical hospitals are not required to report their quality measures.</li> <li>• Facilities lack of awareness, plain ignorance. They just don't know they need to contact us.</li> <li>• Reporting is not done quickly as it should and delays a case investigation or addressing the situation.</li> </ul>
Turnover	<ul style="list-style-type: none"> <li>• Revolving door on staff especially during COVID. Not just the nursing staff but even administrative staff, managerial staff, and for that even the corporations themselves changed hands at the LTCF.</li> <li>• Turnover is a nationwide problem.</li> </ul>
Insufficient Staffing	<ul style="list-style-type: none"> <li>• Hospitals don't necessarily have the staffing. It might be one person doing quality and infection prevention. So they don't have the dedicated staff. We try to support them with setting up dashboards, excel spreadsheet and other data visualizations.</li> </ul>
HAI work requires lots of time	<ul style="list-style-type: none"> <li>• I just can't stress this enough that it is not like doing a 15 minute only review with someone with campy. You can do the math, you can do 32 campy cases in a day but 1 legionella case in a facility will wipe out two of your staff. Its just very time consuming.</li> </ul>
Decreased engagement/competing responsibilities	<ul style="list-style-type: none"> <li>• Competing responsibilities.</li> <li>• So I think that over time, you know, that engagement, definitely kind of decreased over time just because people were extremely busy.</li> <li>• Trying to do that, maintain good communications and balance everything else.</li> <li>• Finding people that want to have a relationship with you.</li> </ul>
Trust	<ul style="list-style-type: none"> <li>• One of the hospitals, one of the tribal hospitals, is doing antibiotic stewardship. They are doing it and reporting and they're not so afraid of the transparency. We have one tribal 638, they will not publicly report. You can't really make them you know There They don't trust people. This sovereign nation doesn't trust white people. So sustainability with them, I'm not sure yet. I am working on it.</li> <li>• Building trust is a challenge.</li> <li>• Facilities are a little scared. They think we are a regulatory agency so they are hesitant to report things.</li> <li>• Facilities don't want to get in trouble, it is fear, that is why communication with them plays such an important role.</li> </ul>
Conflicting agendas	<ul style="list-style-type: none"> <li>• Different ownership of LTCF, sometimes staff are hindered by their corporate leadership. Get conflicting messages from the corporate side from us.</li> <li>• Some of us received funding for the same thing, so for example to do onsite infection control assessments. The assessments we do are the same and there are state directives for CMS. This was difficult for the facilities because we</li> </ul>

	<p>were duplicating work of State Survey. So we offered Mountain Pacific the opportunity to join us on the ICAR so that we are learning from each other and teaching the same thing.</p> <ul style="list-style-type: none"> <li>• Figuring out who is doing what and not being territorial about things and coordinate all the different activities that each of our partners are doing to not step on each other's toes.</li> </ul>
Lack of communication	<ul style="list-style-type: none"> <li>• Losing contact is a challenge.</li> <li>• Trying to do that, maintain good communications and balance everything else.</li> </ul>
Lack of knowledge	<ul style="list-style-type: none"> <li>• Providers are not educated on reporting conditions.</li> <li>• Facilities lack of awareness, plain ignorance. They just don't know they need to contact us.</li> <li>• Lack of education in general for people to know how to use their health department as a resource.</li> </ul>

## What are the lessons learned in implementing an HAI program in your local jurisdiction?

Themes	Responses
Build relationships with SME	<ul style="list-style-type: none"> <li>• Building relationships and working with experts.</li> <li>• AMS, I think it is vital to have a pharmacist to get questions answered, antimicrobial therapies, antibiotic prescribing, antibiotic use.</li> <li>• Use your mentor and relationship within the region to help with anything missing.</li> </ul>
Communication tools/process	<ul style="list-style-type: none"> <li>• Listserv is the most valuable tool for each of our groups. It helps the hospitals know here to go to get help.</li> <li>• Maintain the communications.</li> <li>• Ensure local public health is kept in the loop.</li> <li>• Partners need to know your face, your voice, so continued communication not just when there is an outbreak.</li> </ul>
Needs Assessment	<ul style="list-style-type: none"> <li>• Conduct a needs assessment to find out interest of partners.</li> </ul>
Small is mighty	<ul style="list-style-type: none"> <li>• Its really nice to have less CAH, some states have a lot and they just can't work with them all. We work with all ours in one capacity or another. Because we are small, we build relationships really well.</li> <li>• Hardy is different because it is smaller. With small towns comes small town sensibility. you know, this is the the director that you was the facility, is also the person that is shows up at the same PTA meetings that you show up, for example, or you know, did you bump into it at the grocery store all the time it's not that much of a stretch to do it, or not in a small LHD. In a larger area this is a challenge.</li> </ul>
Be available-expertise	<ul style="list-style-type: none"> <li>• Facilities are really appreciative of being available 24/7. My LTCF team all have cell phone, they have laptops, they can work remotely. That person is available to help with guidance, specimen collection, whatever they might need even on Saturday nights.</li> <li>• Have a multidisciplinary team. If you are going to be an IP, you have to have some sort of either biology or microbiology laboratory or clinical experience because you are going into healthcare facilities and you need to understand how things work.</li> <li>• Epi background, to think analytically and figure things out.</li> </ul>
Know the burden	<ul style="list-style-type: none"> <li>• In Florida, there is a significant number of bed-ridden elder population in the LTCF, we just have several dozen facilities not 2, or 3 or 4 like other grant participants. Hardy for even their size has 4 LTCF's</li> </ul>
Administrative & management processes	<ul style="list-style-type: none"> <li>• Contracts take a long time to do.</li> <li>• Learning how to delegate work and learning how to manage people, and learning how to run a program that was 0.5 FTE to one with different sections and different deliverables.</li> <li>• Leadership needs to be involved.</li> <li>• Leadership can give you good tips on how to engaged providers.</li> </ul>
Self-reliant & initiative	<ul style="list-style-type: none"> <li>• When I started, basically being told we really don't know what your position is, to working a specific role, you have to find your niche and navigate working across programs and agencies.</li> <li>• We were kindof thrown into this and did not know what our role was going to be. So understand what role you will play, how will you work with your facilities and have a basic understanding of this.</li> </ul>
Transparency	<ul style="list-style-type: none"> <li>• I think transparency and not being territorial with partners. Try to compliment each other instead of competing.</li> <li>• Communicate projects not keep them to yourself.</li> </ul>

	<ul style="list-style-type: none"> <li>• Assume everyone is ignorant to what they are doing, starting out like that, start out with the assumption that people don't know.</li> <li>• COVID allowed us to recognize many gaps in what services are being provided and how we can facilitate assistance to other facilities.</li> </ul>
Build relationships with training	<ul style="list-style-type: none"> <li>• Build relationships with training, summer institute training.</li> <li>• Peer to peer talking.</li> </ul>
Invest in staff	<ul style="list-style-type: none"> <li>• Staff needs to be representative of the population you are working with. Bilingual staff helps. Cultural awareness and sensitivity.</li> <li>• You can't learn too much about HAI and all the information on AMR or AMS, there is just so much information.</li> </ul>

What advice would you give a LHD considering implementing an HAI program/project?	
Themes	Responses
Find support with resources	<ul style="list-style-type: none"> <li>• If you have a hospital wanting to become a CAH, we have a manual for that and we work with them 1:1. If they want to become a rural health clinic, we have a manual for that and also work with them 1:1.</li> <li>• We support our programs with a feasibility study, so they know where to start.</li> <li>• Get into a CIC review to help understand the information and have an IP before even think about having an HAI program.</li> </ul>
Know who to reach out to	<ul style="list-style-type: none"> <li>• If they want to start a Flex program we reach out to other Flex programs to assist and if they want to start an HAI program we help them reach out the State Health Department experts.</li> <li>• Be able to access your State HAI program if it is available.</li> <li>• Navigating through the CDC website is difficult, its just so much information.</li> </ul>
Utilize your State HAI program	<ul style="list-style-type: none"> <li>• Have a person being available to us from the State HAI program, resources available outside the LHD.</li> <li>• Be able to access your State HAI program if it is available.</li> </ul>
Consider starting a consortium	<ul style="list-style-type: none"> <li>• Reach out to larger LHDs, form a consortium for smaller counties, share resources, share epidemiologists across 2 LHDs. HAI are labor intensive and even though the incidence are relatively infrequent.</li> </ul>
Separate staffing positions	<ul style="list-style-type: none"> <li>• It helps to have a separate person to respond to HAI because even though they are relatively infrequent, they do need some specialty to respond. If that person is in another LHD perhaps they are willing to loan that person out.</li> </ul>
Face to face meetings	<ul style="list-style-type: none"> <li>• People like to put a face with a name, people enjoy meeting you and getting to interact with you in person. So set up appointment with your stakeholders and take time out to meet them in person. This adds value and important to developing a relationship with them.</li> </ul>
Leverage existing partnerships	<ul style="list-style-type: none"> <li>• When you have a good relationship you can involved your partners into more things. Leverage the relationship.</li> </ul>

What needs to happen for HAI prevention to be effectively, efficiently and seamlessly delivered in your community?	
Themes	Responses
Champion	<ul style="list-style-type: none"> <li>• Depends on the setting. In the hospital you need to have a champion.</li> <li>• we are privileged that we have a little bit of resources, and our organization have been able to get those resources for me, but not everyone can. So people are resources, so people, resources, resources, and having someone that can provide knowledge and increase your your skills and provide mentorship.</li> </ul>
Professional IP	<ul style="list-style-type: none"> <li>• Stewardship is not at the facility but under a system. The take home is that the hospitals ensure to have a good IP, a professional IP and person you don't have to worry about because they have things under control.</li> </ul>
Good Relationships	<ul style="list-style-type: none"> <li>• At other facilities, other than hospitals its having good relationships.</li> </ul>
Staff (competent and additional)	<ul style="list-style-type: none"> <li>• We need to ensure we have properly trained people so that we are able to dive in and provide guidance to them.</li> <li>• We are very small, so its always helpful to have more people.</li> <li>• Problem is people are usually grant funded which is limited and time sensitive and its not attractive for people because it causes too much instability. Get more people on a stable line of budget.</li> <li>• More shadowing at facilities to facilitate learning.</li> </ul>
Availability and expertise	<ul style="list-style-type: none"> <li>• For LTCF's, that we are available to them if there is a problem or if we do a regular routine assessment that we are able to address their specific problems.</li> </ul>
Continued communications	<ul style="list-style-type: none"> <li>• Continued communication. Like at interfacility transfers.</li> </ul>
Less restrictive grant funding	<ul style="list-style-type: none"> <li>• Some grants are very restrictive and guidelines are a bit insane and the things to get our job done are not allowed by the grants.</li> </ul>
Education providers	<ul style="list-style-type: none"> <li>• Educating providers on the HAI program and what services the LHD offer. How they can engage with the LHD.</li> </ul>

## Costs

- there's no cost for the hospitals to be to participate in the HQIC, so they're funded, I believe, through the American Hospital Association to run those there.
- The cost for that UW task just it's it's like a monthly subscription, and so far I've been under the flex program have been able to support that with the 4 programs and last year with the cohort was I think it was \$31,000. So I won't have I, I have 3 of the hospitals using cohort 2 but I won't have any in cohort 1 it's gonna cost about the same amount of money. I budgeted that in our next work plan.
- In our flex program. I'm the I'm the main person, but we've got we've got some other staff that are funded under it. We're a university where we've got more people probably funding under flex programs, and some like others have just like one person. And then farm it all out. We do a lot of it we've got staff, and we do a lot of it internally, where we don't consultants or groups.
- We just kind of divide the salaries into it to put the dollars into that particular part.
- So I don't have specific I'm just the anti-microbial stewardship part, because I've got salaries in there, and then I've got budgeted amounts to work with UW task the the other I do work with another infection prevention person to who's really good with NHSN said, and I've kind of given her like carte blanche if somebody needs help, I will connect them to her and then she'll bill me that that she connected the the people with them, or she'll do a webinar on how to do this, and sometimes we just we draw on our the the experts at the critical access hospitals to share as well.



- [Costs] ICARs, trainings, travel. So yeah, we're at about 11 million dollars in the HAI program when historically Oh, I guess we got more. Oh, we got a little more than I thought so historically we were getting about 500,000 for ELC Core, and then I'll just let you know so ELC core about 500,000 and that supports my position, our contracted infection preventionist and our AR expert and that also, you know, supports travel for icars and that kind of thing. But a lot of that gets eaten up with salaries right like salaries. Just eat up money really quick. For sharp, and strike and this was actually decided upon by CDC, and we basically got a percentage of the total funding based on population size. So for sharp we got 2,749,000, for strike, we got 2,700,000 all the money and strike is going back to our healthcare facilities.
- [Equity in distribution] For strike, It's actually based on bed size. So based on bed size, you get a percentage of that. So we kind of took cdc's model. And then we applied that at the local level, and then Sharp is supporting my staff, so that Ips and our epidemiologist, project first line about a 1 million dollars that a lot of that's going to training. We're setting up like an IP Peer-to-peer mentorship program through our enhancing detection. So kind of we've got a lot of different things going on right now. I think if if we're you know talking moving forward for like priority areas of funding, I really look at what sharps giving us because sharp is what basically was able to expand our program without sharp funding I wouldn't have been able to expand our program beyond the point 5 ft that I was so. I think that's a more realistic amount for an HAI program, if we are continued to be expected to do infection control and antimicrobial stewardship and respond to antimicrobial resistant pathogens. So I think you know you've got HAI in the sense of you've got CLABSI, CAUTI, CDI all the infection prevention, training, infection prevention. I you know ICARs that kind of stuff then you've got your multi-drug resistant organisms where you're ARLN and antimicrobial resistance lab network kind of falls and then you've got AMS and so you kind of do have to have a lot of support staff to be able to do a lot of those activities. And then, like I said, you know our our Ips, we designated to certain regions. so every state or jurisdiction has an Ip contact now, and which historically, it was just me. So that was being spread pretty thin between every jurisdiction and every health care facility. So i'd say that's probably more realistic of where where programs need to be or be going for funding.

## Burden

- The critical access hospitals get so few cases of HAIs. They may get a you know they they don't do a lot of catheter or central lines, so they don't have the CLASBIs. They might get a a they may get C diff. but if if they do, it might be one a year if they don't get a lot.
- (MT)I mean, I definitely worked over 40 h every week, and I would do vector board after 5. So it was HAI 40 h a week and then vectorborne in the evening, so I could keep on top of things. So I mean I definitely have never been bored in this job. It was hard to. It was hard to say I think you know once again, like a carbapenemase producing organism once a year. We would have some kind of alerts where we had to work through it. But it ended up not being a carbapenemase producer, but it still took our time to respond to until we got lab testing back. You know kind of some random MRSA outbreaks. Couple a years. I would, I would say, like a dozen. But I got pulled in on a lot right so just because I wasn't the lead on a norovirus outbreak. I still assisted our Norovirus Epi, on the infection control side of things. So it was like I assisted with every outbreak as like a consult. So I see our role is really a supportive role to those other communicable disease epidemiologists is like I don't expect myself to be the subject matter expert when it comes to Norvirus or influenza, but I'm that infection control expert, and every disease has infection control related to it. Right. So I need to know what's the Environmental cleaning related to Norovirus, and tell the Epi that hey, you need to do bleach and mix up bleach every 24 h, and or influenza Here's The transmission based precautions that we need to get our our residents on. So it was like I consulted on every outbreak, so it'd be like hundreds you know every every year.
- (MT) investigation 322 COVID-19 outbreaks in ALF, LTCF and CAHs. COVID-19 changed the scope and relationships with facilities. Since 2020, they have investigated 1,068 COVID-19 related outbreaks in ALF, CAH, LTCF, and state facilities.

## Most important decisions to be made within the program

- Do it because it is the right thing to do. It's the right thing to give the best quality care

- For LHD's have access to their State HAI program
- The need for specific training (e.g. ICARs) and how to get it (e.g. shadowing, access)
- Updated resources for the program. With AMS, there is only the CDC LTCF's guidance and that was out since 2005
- Establish your goals and purpose. In MT, our first priority was getting into the facilities to assist in infection control training.
- Develop trustful relationships and communicate your intentions.
- Understand your program's needs and align positions and position descriptions.
- Have an understanding of succession planning for your organization.
- Understand if the ARLN organisms are reportable in your State and how that will effect reporting for the organisms that are not reportable.
- Set what you will do and what you won't do.
- Establish mentorships or coaching especially for new programs. You will need it. Having people who have developed this program elsewhere and being able to share their knowledge and resources is really helpful.
- Have people with the right background and knowledge to reach out to.
- There are lots of resources out there but they are not in a place to find everything. Be prepared to do some separate research and having a person to reach out to help is important.
- Your partners can be valuable resources to help with training. For example, the hospital system helped with high level cleaning and critical and semi-critical equipment, disinfection and sterilization. These are things that we don't do at the health department.
- COVID allowed us to understand our gaps in communication, reporting and other things regarding our long-term care facilities. Now is a good time for us to work on those gaps, implement new programs, and maybe work towards funding for future initiatives in our partnerships.
- Wanting to be involved in the long-term car facilities and the hospitals infection control program processes.
- Be open to learn what you don't know.
- Have training resources and the capacity to do the work.
- Funding, always funding to develop those policies, procedures and foster relationships we have with our outside healthcare facilities.
- Its important to have a better understanding of each of the entities own established program, who they are governed by and knowing their capability to responding in house. How much help they will need, how we can facilitate that, etc.

Themes: Value-Quality Care, Access to Mentor/Knowledge, Established goals/purpose/plan, Developed trusted relationships, Openness to learn/Desire to be involved, Funding/Capacity/Resources to do the work, Understand policies

## Formal Needs Assessment

- Yes, but still waiting on results. Initiated program without it.
- No, we did not do any assessments but we have a needs assessment for the county. One of the goals in the assessment was to conduct some type of outreach (e.g. visiting nursing homes). It's been difficult to do after the initial wave of COVID because they don't want us in there.
- Yeah, as part of Project First Line because it was required to do a learning needs assessment.
- No, it was basically, we are offering this opportunity in the HAI mentoring program, get your application in.

## Successes of Program

- One hospital just loves the program, she's a champion of it. She expresses how much she has learned in changing common practices that providers make with antibiotics and learning how to communicate with providers

- Spent many years trying to get hospitals to report basic measures and the tribal hospitals, the sovereign nations do not want to publicly report. In the program we can individualize the reports and give it back to the participating hospitals to tailor to their needs.
- Provide 1:1 TA and coaching especially for the high turnover.
- Successful that the pharmacists, infection preventionists and quality directors are usually very involved in the program and are really trying to move the needle with antibiotic stewardship programs.
- Our program does not have any issues with turnover or capacity. Because we are affiliated with the University we have access to doctoral students to do awesome projects.
- It's pretty satisfying being able to support rural and underserved areas, and I think you know all the staff in in in the center for real how feel the same way.
- With HAI and due to COVID, we have gained much stronger relationships with the LTCF. They recognize we are not a regulatory agency; we are there to help them and provide assistance to make sure they don't have additional infections.
- I'd like to take advantage of the strengthen relationship to now branch out into antibiotic stewardship
- We have conducted 48 ICARs since 2021 and have been able to get into 17 ALFs, 17 LTCFs and 14 acute care hospitals.
- I'm finally getting yes to us coming into the site.
- One thing in Montana is everyone knows who we are now.
- We do many training events throughout the week.
- Relationships built with local public health and with our healthcare facilities.
- Implementation of CLC (congregate living coordinator positions), dedicated position who works directly with the healthcare facilities.
- Increase in facilities enrolled in our antibiotic stewardship program.
- Contract pharmacist works directly with 5 facilities and provides direct audits and feedback on their days of therapy to help improve their prescribing practices at their healthcare facilities.
- Doing the ICARs have helped people to start to understand antimicrobial resistance.
- We offer "Office hours" every week which is allows the facilities to talk to each other and get advice from each other.
- Relationship building, peer to peer mentorship program for infection preventionists that are new.
- Making sure our Ip feel some level of they are supported. Network of individuals that they can talk to and rely on.
- Increased reporting by facilities.
- Improved communications with facilities that never used to call us.
- Completing the State HAI mentorship program and applying for CIC exam.
- Developing relationships with mentors.
- Starting the program and knowing that we are going somewhere. Higher level of thinking.
- Training on CDC is very good but very big and dense in the material. Then came Project First Line initiative which was nice. It was more live.
- NACCHO funding to do COVID-19 ICARs was great. It was an awesome training and it covered everything.
- Resources in the form of APIC text subscription and CIC Course online that is self-paced to compliment any type of reading.
- In rural counties they are notorious for having an epi program where its an additional duty of some other nurse, who is responsible for vaccines, and school health, etc., so for us we are able to assist Hardy County by providing them the staff they need for most types of situations.
- In the beginning it was hard because I didn't know what to do, but I got into the CSTE Peer to peer mentorship and then I knew I had support system.
- Our leadership is really supportive. For example, we encourage the CIC and provide staff with the resources and if they don't get a scholarship for the exam, we make room in the budget for them to get as much qualification preparation as they want.

- CDC partnership with DSHS through a Project First Line initiative to provide scholarships for CIC and they prioritize local health departments.
- Bilingual in our community. We have a need for Spanish but also Vietnamese. Our staff is representative of the community, so depending on the area, depends on which staff to help with the investigation. If we are in Waco, we have an epi, who is from there and he is a country rural boy and he is perfect for working with that population. If there is a Hispanic population, I will work with it.
- Our approaches are culturally aware and sensitive. People skills are important.

Themes: Collaboration opportunities, Stronger & trustful relationships, Improved processes,; Satisfaction; Knowledge gain

## Metrics for measuring success of program

- No baseline data and it was Flex coordinators trying to come up with measures and objectives and benchmarks. Used proxy data at first but now that able to get better data are seeing improvements in the cohort.
- Impact of ICARS in the facilities.
- COVID had a devastating impact on residents in LTCF's, so as ICARs rolled out the facilities became more appreciative of the need to strictly adhering to infection prevention guidance in implementing infection control and infection prevention guidance, those numbers ultimately dropped.
- Proportion of cases specifically linked to LTCF and fatalities were decreased comparatively after conducting ICARs and helping them maintain a good infection prevention program.
- Number of ICARS. So 17 out of the 211 ALF 17 out of the 70 long term care facilities, and then 14 out of the you know, 49 critical access hospital.
- Gap analysis based on infection control assessments. And then preform trainings on areas that require improvement.
- Tracking training and number of attendees
- Quarterly reports from NEDS for all diseases and all reports-send out mid-year and end of year report.

## Barriers or Challenges of Program

- Its been a process to get hospitals to report.
- Turnover with quality directors is so big and we have to start over.
- Maintaining the relationships with LTCFs due to staff turnover at the facilities.
- Turnover to Ips is high
- Data repository not in one place.
- Not all states required to use NHSN.
- NHSN is a convoluted system. Access to the system is a challenge and then the turnover at the hospital are big barriers.
- Revolving door of staff. Not only with nursing but with administrative staff, managerial staff, and even the corporations themselves changed hands.
- The facility that you have known as facility A, changed their name and have a completely different corporate ownership. Challenges with leadership and the contacts, and having to reestablish the relationship.
- Maintaining relationships with staff turnover.
- Public health challenges, funding and staff.
- If I did not have the NACCHO funding, I would not be able to create a dedicated HAI epi position, it would just be another thing that our epi staff would have to do on their own.
- HAI work takes an unordinary amount of time. It is not something that our county would be able to provide routinely. Its fine for a one off.
- If we had multiple "CRE" cases, we couldn't maintain that so definitely would need to have additional staff.

- We appreciate having the State HAI program because the HAI work and coordination takes a significant amount of time.
- Turnover of staff and having to retrain. Having to start over with the facilities. It's kind of circular sometimes.
- Funding, historically we did not have the funding to support a full-time person.
- HAI work is a significant amount of work not to have a full-time person on it.
- State gets lumped into the group of being a regulatory agency, and then people shut us down and don't want to talk to you.
- Requires lots of relationship building to get people to understand what you do and that you are completely different than a regulatory agency.
- Lack of time on the Ips to dedicate to infection control.
- CMS regulations are loose on how much time to dedicated to infection control, so facilities don't get the benefit of that.
- Facilities get a lot of push back from the community who might not understand and they have to deal with that. E.g. I want to see my dad right now, why can't I see my dad.
- Lack of regulations to help support our healthcare facilities to provide the best care they can.
- If we don't give them the resources, they will never reach those milestones that we expect them to meet.
- Someone needs to be dedicated more than 5 hours to infection control.
- Difficult to standardize processes across facilities. I tried to have one form for patient transfers across facilities and this is impossible.
- Patients move a lot in facilities and go far distances sometimes and the facility won't know because they weren't formally informed that the patient has an HAI and needs to be on transmission based precautions.
- Intra and inter facilities communication is very poor and poorly documented.
- Reporting is delayed. Sometimes I get reports 2 or even 3 months after the patient date of collection, which leaves you thinking what is my course of action now?
- COVID left people tired and many people retired. So finding the right person to talk to was number 1 challenge.
- Number 2 challenge was training.
- In the beginning, I did not know what the State needed from me, so I did not know what training I needed either.
- Training on CDC is very good but very big and dense in the material.
- Funding
- Even though we have big relationships, people are used to playing in their own world and doing their own response.
- Pushback from facilities as they don't understand how we can assist.
- Implementing the HAI program in conjunction with facilities that give us pushback.
- Have not had the experience to have to initiate a coordinated HAI response.
- Hospitals and other departments have their own policies and guidelines which we don't fit in to.
- Understanding who has the resources, who is better equipped and how to move forward.
- Its been a lot of work and it takes a special type of person to be able to do this work especially in a pandemic.
- Most people just step into the role and they have never been in the role before and they need resources.
- We have challenges with staffing, responding to HAIs is extremely time consuming. It takes 2 epis to go out onsite of the facility and then environmental health team and specimen and water collection, chart reviews, case reviews etc. It's a complete day. It is really difficult to devote much time.
- Each day, you don't know what you are going to get. HAI is not always checking boxes, there is not playbook, you have to learn a little bit about everything and it's a continuous learning.
- Infection control is definitely a newer topic for us here in Montana and we have finally dedicated some time to it and historically have not been able to do that.
- Lots of competing needs.

- In my first year, I was like I'm not cut out for this. Nobody knows what it like, what's supposed to do. I needed a support system.
- Competing responsibilities.
- our population has grown immensely. It is sure to be well over the 600,000 people, and but our, the funding that we receive is from the State right now for Epis. They are only funding 2 epis for all of those people. So that ends in 2023 and then we have a vacant position that we are in in the process of posting and hiring.
- Reporting demands and disease increase but funding doesn't.

Themes: Perception of the health department, turnover, funding, inefficient data system, HAI work requires lots of time, training/lack of experience/lack of knowledge/support system, competing responsibilities, lack of communication/doing job, lack of regulation.

### Overcome challenges

- I keep trying. For example, I keep trying to have them use a standardized form for transfers but it has not been successful but I will keep trying.
- I share my resources.
- We have to work on developing those relationships further in the future.
- We are going to have to find out about how to fit into their policies and guidelines.

### Staff Capacity

- COVID demonstrated our gaps. We had 3 employees dedicated to public health at the start of the pandemic, and now we have 21 dedicated to public health programs now.
- The antibiotic resistance piece we rely heavily on the State HAI program.
- In our Flex program in AZ, I'm the main person and I have been here for 12 years. Because we are a university we have several staff funded under the program where other programs only have 1 person.
- We do a lot of things in house because we have the capacity and expertise and don't have to use consultants.
- We use experts from the UW task, an infection prevention person who is good at NHSN and I connect the hospitals with the experts and they bill me for their hours.
- We have challenges with staffing, responding to HAIs is extremely time consuming. If we had the staff, no problem to train them to do HAI work or AMS or AMR. Its really hard to work on an HAI when you know it will take a whole day.
- In rural counties they are notorious for having an epi program where its an additional duty of some other nurse, who is responsible for vaccines, and school health, etc., so for us we are able to assist Hardy County by providing them the staff they need for most types of situations.
- Project First Line, we do a project first line training with public health staff to build capacity and then we do the same training in the facilities.
- We train on NHSN for hospitals and healthcare facilities.
- Infection Prevention webinar that is open to any IP in the state of Montana and we have opened it up to other states
- 2 of our infection prevention specialist came from State Survey so they are familiar with infection control and providing assessments within healthcare settings, so they brought their knowledge with them. The other 2 individuals are from public health backgrounds and worked COVID-19 outbreaks directly from the local public health level. They all do ICARs
- We do a lot of similar or mirror training for local public health jurisdictions as well as for healthcare facilities. So we are teaching the same thing and they are hearing the same messages.
- Regional office frequently sends out trainings and up-to date guidelines by email and several staff participate in the regional trainings.
- No one trained in our LHD specifically in HAI, not to my knowledge.

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## Staff Competency

- The cohort members have access to the UW Task website which has all the toolkits and all kinds of resources.
- We connect the cohort members with experts from the critical access hospitals, from UW or from the infection prevention person for NHSN.
- Cohort have a lot of tools from the HQICs and the hospital association, with lots of training and webinars.
- Receive my training from the National Rural Health Resources.
- Rural Health policy contracts with Stratus Health to do the trainings for Flex coordinators.
- I use Stratus Health all the time.
- I know who to reach out to and work with. Flex coordinators are not experts in the subject but we do build many relationships and can find out who to work with .
- We use listservs so the hospital staff can chime in on the subject and help everyone answer a question.
- Many staff are put into the roles and have never been in the role before and they need training and resources.
- We strongly encourage to have epi staff go through their CIC certification but there is so many aspects of the certification that do not necessarily apply to epi. Encouraging staff to get their CIC means they are qualified to work in a hospital which is dramatically more than working in a local health department, so in a sense we are shooting ourselves in the foot by encouraging staff to get CIC certification.
- We are a centralized health department and have an HAI program at the State which is tremendously helpful in providing training and specific training like the ICAR.
- We have Training Tuesday from the State Office and those contain different topics, these were suspended during COVID, but the have topics that include HAI including specific diseases such as recently C. auris.
- We hold office hours, which is an hour where they can ask us anything or we can do a Project First Line topic.
- Learn by doing. Take staff on ICARs, show them than have them preform one. Mentor kind of program.
- Every Friday we do training on APIC, internal training for program staff.
- Cross training my Epi Team so we don't have a single point of failure at any point.
- We do case studies presentations.
- When the IP does her rounds, she is kind enough to share those investigations with me and I present them to my team.
- For hands-on training. I am going through the ICAR training with my team and then we will stage our first floor clinic as the facility and they will have a mock ICAR to preform on before we do into a real ICAR.
- We include our Epi and preparedness divisions in our trainings, because they are backups.
- CIC is not a standard, but it is encouraged. We provide them with the resources including a scholarship for the exam.
- We try to identify staff who are capable and you have a background or experience to be part of their role.

## Training Resources

- I really like CDC resources for training as they are the gold standard. We use their NHSN training and their Project First Line training.
- Use a lot of APIC training.
- SHEA outbreaks as well as the CORA outbreak training
- Lots of hands-on learning, continually learning
- We are just getting to doing tabletop exercises after the pandemic for training.

- CDC has a really nice water management training. It has a whole water management tool to go with the water management assessment. We plan to share with our LTCF and nursing homes because it is a CMS requirement.
- CDC through Train.org
- APIC course for the CIC preparation, it's a review course. This one has been fantastic in reviewing the really high points of basically everything. It is just not necessarily accessible to everyone, because it is a little bit pricing.
- Texas Train
- Most of the information we reviewed was through teams and everything was from the CDC website. So CDC is definitely where most of the information will be learned or reviewed.
- More hands-on training is needed. I was able to go to one shadowing and that was helpful. In the middle of COVID there were not that many opportunities to go through the program.
- For the most part CDC is the go to resource in terms of finding guidance, information on ICARs, but for specific training materials we rely on the State HAI program-specific pathogen training.
- We used APIC for books and look things up and they [State] would send PowerPoints to us from them.
- We train with mock interviews to gain skills in talking to different types of people.

### How long to build competency?

- We learn as you go. Probably take 1-2 months to gain reasonable knowledge to deal with most of what you need to do.
- I would like to have 1 person exclusively devoted to HAI (such as this NACCHO funded position), then I can get that person trained up within 1-2 months with the basics and then take advantage of the other opportunities to become more knowledgeable.
- Personally, it took me 4 years to feel confident in this position. The first year, I relied on the CSTE Peer to Peer mentorship to help me know that I had a support system. Your first 6 months is critical for you to keep people in the position, its a lot for one person to do.
- For the CIC usually about 2 years' experience for that. Your first year you're gonna really just spend kind of understanding the program, and the different aspects of the program-an intro to understanding the program.
- I expect my Ips to do ICARS by 6 months within teams of two.
- There is a pretty large learning curve for any of these things, for example, the antimicrobial resistance, I'm still learning how to interpret the lab results.
- HAI investigations, just the investigation portion not very long to train for competency. But a big factor is people's interest, if you are interested, you'll take time to read and learn. So an interested person will take probably a month to learn the investigations portion and a less interested person will take longer.
- Building competency definitely depends on the person and how quickly they absorb information because it is a lot of information to retain and actually understand.

### Skills Needed

- A background in infectious diseases.
- An MPH in Epi is definitely preferable.
- I have been impressed with the level of training that some of our DSPH people for the LTCF members. 3 of them have a DSPH from USF and have been well trained. A good foundation of infectious disease, a reasonable understanding of infectious disease with basic epidemiology skills.
- The ability to communicate. They can't go barging in saying I'm from the health department get out of my way.
- They have to consider who they are speaking with and make sure they are from a friendly manner non-threatening. Establish rapport.
- Report writing skills. The ability to put together a cohesive report that can be used to communicate findings and make recommendations.
- Ability to work with computers



- If you are going to be an IP, you have to have some sort of either biology or microbiology laboratory or clinical experience because you are going into healthcare facilities and you need to understand how things work.
- AMS, I think it is vital to have a pharmacist to get questions answered, antimicrobial therapies, antibiotic prescribing, antibiotic use.
- Epi background, to think analytically and figure things out.
- Effective communicator or being able to talk to a variety of facility backgrounds.
- Being able to identify the population your are speaking to and your audience and how to tailor your skills to be understood.
- Being able to prioritize especially when you have multiple things coming at you at once.
- Track outbreaks or understand how outbreaks are spread, basic infection control.
- Perform data analysis.
- Build trust and rapport.
- Need people skills first because you will be doing a lot of talking within and outside your organization.
- Basic epidemiology principles.
- Desire to learn.
- People skills but being able to be culturally aware or sensitive. Having staff that is representative of your population.

### **Motivates to look at CDC tools**

- CDC has great resources. I forward information to my cohort from CDC.
- I go to CDC to look for the most recent antibiotic stewardship survey. I encourage our hospitals to use the paper tool to help with putting data into NHSN.
- When its time for sites to put in their data in the antibiotic stewardship, I will do a refresher training to have it on their radar to know what to do.
- For the most part CDC is the go to resource in terms of finding guidance, information on ICARs.
- CDC is a gold standard for public health professionals.
- In my curriculum there would be references and links to CMS guidelines and Joint Commission documents in PDF and I usually share those with my facilities or reference them.
- To use the ICAR tools or training or if there is an infection control audit.

### **NACCHO**

- I have never used any NACCHO tool or website.
- I don't have a person in NACCHO to reach out to that I would love to reach out. I would love to have a person I can reach out to and I will love to have a I'm really good at recognizing what I know what I don't know. So having a mentor there that has the knowledge and can guide us through, would be fabulous.

### **What can CDC do better?**

- The relationship that CDC has with our State HAI program has been very beneficial. But our pathogen specific trainings come from the State and maybe they are derived from CDC materials but they are mainly pushed down to us from our State HAI program.
- Need more shadowing and on-site trainings would be a great benefit.
- AS program is in its infancy. Nothing from CDC in particular other than the guidance from 2015 but nothing how to reach out to LTCF's starting from ground 0.
- So I think you know, and one thing I communicated with CDC. Is, I would I would really love management training for these kinds of positions, because I feel like every HAI coordinator at a State level, is experiencing this of like we had really rapid growth and it was like, What's the what's the long term plan here like? What's the game plan moving forward? so our onboarding was a lot of Hey, welcome. We're gonna figure this out as we go but our programs growing just as you know, at a fast speed. I can't keep up with and so we've improved it over time. I think our last Ip. who just started 2

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weeks ago, went a lot smoother. You know we had here's your training plan from HR, here's the training plan for the HAI program itself, and you know, kind of go going through that process.

- The scope and role of the HAI coordinator has changed over the past 2 years.
- Update disease specific guidance to include infection control guidance, definition of outbreaks, how long need transmission-based precautions, etc. and start with those that are commonly found in healthcare facilities.
- Improving the AR guidance for like CRE and MRSA. Updating the containment of multidrug resistant organisms. I know they have different response levels and tiers but I think they should look at it again with an infection control scope.
- More education on things that are IP/Hospital specific like sterilization and reprocessing of medical devices, more education or tools related to that.
- Look at the ICAR, and develop specific training on those sections (e.g. multidrug resistant organisms, antimicrobial stewardship), so when I am at a facilities I can provide the best guidance that I can.

### Identify Key partnerships

- ACHA is a group we work with a lot. (FL)
- LTCF partnerships, we maintain those relationships.
- In Hardy County, we have the DON (FL)
- Great partnerships with hospital. (FL)
- Critical Access Hospitals
- Local Health Departments (MT)
- Arizona Department of Health
- University of Arizona College of Pharmacy
- Tribal Health Departments (AZ, MT)
- State Survey (MT)
- Hospitals
- Ombudsman (MT)
- University of Montana State School Pharmacy
- Long-Term Care Association
- EVH
- School Nurses
- Jail
- EMS

### Formal Agreements

- We are certainly by law by public health emergencies with public health response. We obviously have jurisdiction to respond and investigate and provide guidance and make recommendations and identify hazards.
- No. Investigations, so investigations we don't really need that they're covered under TAC, I think, 20-95 97 for Texas notifiables, and so that's what we will use agreements with them. We don't, however, the county has some type of agreement with the St. David system that I'm not privy to and I don't do.
- Pharmacy is contracted as the AR experts for our HAI program with a formal agreement.
- Enrollment letter for facilities that participate in the Montana AMS program.
- No formal agreements.

### Areas of success for partnerships

- We had a partner from county EMS that put together a training for everything, donning, doffing, hand hygiene. I helped her put that together and it was a big resource for us.
- We are looked at now as infection controller and infection prevention experts. Historically that was not the case.

- When its time for sites to put in their data in the antibiotic stewardship, I will do a refresher training to have it on their radar to know what to do.
- We also send out a monthly reminder of all of the measures that are due, where to report them on, and where to get resources for help.
- We're kind of the subject matter experts when it comes to infection control or antimicrobial stewardship, or antimicrobial resistance for our local public health departments, so if they don't know how to respond or answer a question, we usually are going to be consulting with them we're trying, trying very hard to get our facilities to work directly through local public health anymore.
- We're really a support system for health departments on answering very specific infection control or HAI related questions
- We built relationships where we are finally getting reporting on things like MRSA outbreak or CRE/CRP. I mean I did 1 MRSA outbreak in 5 years I was here, this year alone we have done 5 outbreaks.
- Pre-COVID we had an excellent relationship with our hospital infection preventionists. There were different areas of APIC dispersed throughout the State. I would attend those meetings, some meetings were just considered to be too far and so I would attend and bring information back to our sub-chapter.
- Meeting with our APIC regularly, with no set agenda.
- Although significant turnover at the LTCF, there has not been significant turnover at the hospitals in the other 3 hospitals, so that is great for us maintaining our relationships
- No significant turnover in the hospital IP so we have been able to maintain those relationships.
- Doing the ICARS with the LTCF and then pointing out their deficiencies and doing it in a critical, non-accusatory way. Being able to provide guidance.
- We have lots of relationships within different areas of the AZ Department of Health and we have relationships with our CAH and clinics.
- Meet partners face to face. If there is somebody new at the hospital, I'll set up an orientation to meet them in person. But with COVID this just didn't happen.
- Face to face relationships help build not only the success of the program but also the infrastructure
- We got one of the CDC health disparities Grants running through the center of the state to work with the rural areas, I was able to meet with the CEO of a hospital and let him know about this new resource. I don't necessarily go to these meetings as the Flex coordinator more as representing the Center for Rural Health.
- The LTCF partnerships have really been strengthened due to COVID and so has our partnership with ACHA. They know us and we know them.
- With our relationship building, we have been able to raise awareness of HAI and explain the program.
- We developed a relationship with our Mountain Pacific Quality Health where we use the same platforms. So Thursday webinars, if they want to do a training on a topic, they can use that slot. We partner with them so our facilities aren't overwhelmed.
- Communications with Mountain Pacific so that that we are aligned with what guidance we are providing the facilities, so we are on the same page.
- Reduce confusion at the facility level by message sharing, working together so we don't duplicate efforts.
- Created a days of therapy tracking tool with Montana Hospital Association for our facilities to help with antimicrobial stewardship.
- Our CAH may not have a pharmacist onsite, and expertise is really difficult to meet, so our days of therapy tracking tool to help with data into NHSN.
- Other agencies can reference each other, each other tools and share information across facilities.
- On Thursdays, we have a Q & A with the Quality Assurance Division and facilities come and ask questions there.
- The facilities see all our agencies working together and we set an example for them to work together and work with us.
- Getting reports from them that we did not get before, particularly our acute care hospitals.

- Providing recommendations to the hospitals and they have taken them and implemented themselves.
- We have done a lot of outreaches even after COVID so that the facilities know there is more than infectious disease, its not just COVID.
- We have ongoing relationships and robust provider email group that we share information that's impactful to know.
- We don't have a local radio station, we don't have local news station. So our means of contact with providers is face to face
- We maintain open dialogue with our partners to foster those relationships.
- One on one relationships can do more than other entities. Just because we are smaller, our hospitals are smaller and those key people make sure they are aware and get things done.
- Information was coming out so quickly and it changed so quickly that is was difficult to wade through the information and try to just decipher what was important and we helped get that information out to our partners.
- I think it's just these are are small enough communities so these are the same communities that we live in, we work in, our kids go to school in, we go to church in, and so I think that outside of work it's just having that constant interaction along with just, you know, giving them education and information on the services that we can provide.
- We have been very fortunate to receive several funding opportunities to help us build our relationships (e.g. workforce grant, health disparity grant, immunization grants). We were fortunate enough to hire a community health nurse this year, which we've never had before. her main roles and responsibilities between, besides linking people who've been disproportionately affected, is fostering those relationships, engaging the public, engaging and not just facilities but the public.
- Our leadership, our county officials have been really supportive and have allowed us to have buy in from other facilities.

### **Metrics to measure success**

- Track ICARS we investigated and other outreach.
- NACCHO position has activities that must be tracked. Keep in a log.
- I track all my activities.
- Timely reporting
- Level of engagement in community activities and partnering for community outreach activities.
- Level of engagement when send out surveys.

### **Processes for success**

- Meet the hospitals personally to meet the CEO, CFO and CNO and their quality director to build trust and build a relationship. So much changes when you meet them personally.
- They love all the resources that we have.
- Success is knowing they can come to the Flex programs for the resources that they need.
- If I have set up a relationship already, I try to pass it on to another person to work with the hospitals.
- Constant contact, constant communications.
- Being in touch periodically, even if you have not heard from them, making sure they know we still exist.

### **Challenges in the partnerships**

- The NHSN screens are not the same view for the facility as what I see. So when they call me for questions, I'm not able to see what they are seeing.
- I have not received formal training on NHSN on how to pull reports or what the data means, how to use the data.
- Right now critical hospitals are not required to report their quality measures.
- Revolving door on staff especially during COVID. Not just the nursing staff but even administrative staff, managerial staff, and for that even the corporations themselves changed hands at the LTCF.

- I just can't stress this enough that it is not like doing a 15 minute only review with someone with campy. You can do the math, you can do 32 campy cases in a day but 1 legionella case in a facility will wipe out two of your staff. Its just very time consuming.
- Competing responsibilities.
- For IHS, I've been working really hard with the Federal office of rural health policy and the Federal IHS to really align measures because they're they have they some of they're doing some of these measures in different systems.
- One of the hospitals, one of the tribal hospitals, is doing antibiotic stewardship. They are doing it and reporting and they're not so afraid of the transparency. We have one tribal 638, they will not publicly report. You can't really make them you know There They don't trust people. This sovereign nation doesn't trust white people. So sustainability with them, I'm not sure yet. I am working on it.
- So I think that over time, you know, that engagement, definitely kind of decreased over time just because people were extremely busy.
- NHSN is a convoluted system and to get access is a challenge especially with the frequent turnover.
- Turnover is a nationwide problem.
- Hospitals don't necessarily have the staffing. It might be one person doing quality and infection prevention. So they don't have the dedicated staff. We try to support them with setting up dashboards, excel spreadsheet and other data visualizations.
- Trying to get systems aligned. We make them report on these things and they aren't in one place. Its not fair to duplicate the measure.
- Building trust is a challenge.
- Different ownership of LTCF, sometimes staff are hindered by their corporate leadership. Get conflicting messages from the corporate side from us.
- Losing contact is a challenge.
- Trying to do that, maintain good communications and balance everything else.
- Some of us received funding for the same thing, so for example to do onsite infection control assessments. The assessments we do are the same and there are state directives for CMS. This was difficult for the facilities because we were duplicating work of State Survey. So we offered Mountain Pacific the opportunity to join us on the ICAR so that we are learning from each other and teaching the same thing.
- Figuring out who is doing what and not being territorial about things and coordinate all the different activities that each of our partners are doing to not step on each other's toes.
- Facilities are a little scared. They think we are a regulatory agency so they are hesitant to report things.
- Facilities don't want to get in trouble, it is fear, that is why communication with them plays such an important role.
- Facilities lack of awareness, plain ignorance. They just don't know they need to contact us.
- Finding people that want to have a relationship with you.
- Reporting is not done quickly as it should and delays a case investigation or addressing the situation.
- Providers are not educated on reporting conditions.
- Lack of education in general for people to know how to use their health department as a resource.

## Sustainability

- Sustainability, is getting our hospitals to not only report the data but use it.
- We recently had the State HAI strategic plan shared with us and there were aspects that we were just made aware of, and in theory it sounds good but again it comes down to funding and staffing.
- We are trying to cross training everyone for a single point failures
- Give people flexibility to take time off, so no one gets burned out.

## Communication across partnerships

- Listserv that is updated frequently.

- When we see elevated activity (e.g. Norovirus) we do a call down to facilities and let them know and we push information out to the facilities via email or fax.
- We communicate with partners as needed.
- Communicating with partners is really important and reassuring them that we are partners not regulators in any way.
- Being a good epidemiologist is having the connection in the community all over the place, schools, restaurants, associations Ips, agriculture. It's gotta be everywhere and know everybody, which is impossible, but you try your best to do that. So yeah, maintaining those communications. The challenge is trying to do that and balance everything else.

## LHD role in HAI Program

- I'm not really sure what can be our role.

## Lessons Learned

- Building relationships and working with experts.
- Listserv is the most valuable tool for each of our groups. It helps the hospitals know here to go to get help.
- Conduct a needs assessment to find out interest of partners.
- It's really nice to have less CAH, some states have a lot and they just can't work with them all. We work with all ours in one capacity or another. Because we are small, we build relationships really well.
- Maintain the communications.
- Facilities are really appreciative of being available 24/7. My LTCF team all have cell phone, they have laptops, they can work remotely. That person is available to help with guidance, specimen collection, whatever they might need even on Saturday nights.
- Hardy is different because it is smaller. With small towns comes small town sensibility. you know, this is the the director that you was the facility, is also the person that is shows up at the same PTA meetings that you show up, for example, or you know, did you bump into it at the grocery store all the time it's not that much of a stretch to do it, or not in a small LHD. In a larger area this is a challenge.
- In Florida, there is a significant number of bed-ridden elder population in the LTCF, we just have several dozen facilities not 2, or 3 or 4 like other grant participants. Hardy for even their size has 4 LTCF's
- Contracts take a long time to do.
- When I started, basically being told we really don't know what your position is, to working a specific role, you have to find your niche and navigate working across programs and agencies.
- Learning how to delegate work and learning how to manage people, and learning how to run a program that was 0.5 FTE to one with different sections and different deliverables.
- Have a multidisciplinary team. If you are going to be an IP, you have to have some sort of either biology or microbiology laboratory or clinical experience because you are going into healthcare facilities and you need to understand how things work.
- AMS, I think it is vital to have a pharmacist to get questions answered, antimicrobial therapies, antibiotic prescribing, antibiotic use.
- Epi background, to think analytically and figure things out.
- I think transparency and not being territorial with partners. Try to compliment each other instead of competing.
- Communicate projects not keep them to yourself.
- Ensure local public health is kept in the loop.
- Partners need to know your face, your voice, so continued communication not just when there is an outbreak.
- Build relationships with training, summer institute training.
- Peer to peer talking.
- Assume everyone is ignorant to what they are doing, starting out like that, start out with the assumption that people don't know.

- Leadership needs to be involved.
- Leadership can give you good tips on how to engaged providers.
- Staff needs to be representative of the population you are working with. Bilingual staff helps. Cultural awareness and sensitivity.
- You can't learn too much about HAI and all the information on AMR or AMS, there is just so much information.
- We were kindof thrown into this and did not know what our role was going to be. So understand what role you will play, how will you work with your facilities and have a basic understanding of this.
- COVID allowed us to recognize many gaps in what services are being provided and how we can facilitate assistance to other facilities.
- Use your mentor and relationship within the region to help with anything missing.

## Advice

- If you have a hospital wanting to become a CAH, we have a manual for that and we work with them 1:1. If they want to become a rural health clinic, we have a manual for that and also work with them 1:1.
- We support our programs with a feasibility study, so they know where to start.
- If they want to start a Flex program we reach out to other Flex programs to assist and if they want to start an HAI program we help them reach out the State Health Department experts.
- Be able to access your State HAI program if it is available.
- Have a person being available to us from the State HAI program, resources available outside the LHD.
- Reach out to larger LHDs, form a consortium for smaller counties, share resources, share epidemiologists across 2 LHDs. HAI are labor intensive and even though the incidence are relatively infrequent.
- It helps to have a separate person to respond to HAI because even though they are relatively infrequent, they do need some specialty to respond. If that person is in another LHD perhaps they are willing to loan that person out.
- People like to put a face with a name, people enjoy meeting you and getting to interact with you in person. So set up appointment with your stakeholders and take time out to meet them in person. This adds value and important to developing a relationship with them.
- When you have a good relationship you can involved your partners into more things. Leverage the relationship.
- Get into a CIC review to help understand the information and have an IP before even think about having an HAI program.
- Navigating through the CDC website is difficult, its just so much information.

## What needs to happen?

- Depends on the setting. In the hospital you need to have a champion.
- Stewardship is not at the facility but under a system. The take home is that the hospitals ensure to have a good IP, a professional IP and person you don't have to worry about because they have things under control.
- At other facilities its having good relationships.
- We need to ensure we have properly trained people so that we are able to dive in and provide guidance to them.
- For LTCF's, that we are available to them if there is a problem or if we do a regular routine assessment that we are able to address their specific problems.
- Continued communication. Like at interfacility transfers.
- We are very small, so its always helpful to have more people.
- Problem is people are usually grant funded which is limited and time sensitive and its not attractive for people because it causes too much instability. Get more people on a stable line of budget.
- Some grants are very restrictive and guidelines are a bit insane and the things to get our job done are not allowed by the grants.

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- we are privileged that we have a little bit of resources, and our organization have been able to get those resources for me, but not everyone can. So people are resources, so people, resources, resources, and having someone that can provide knowledge and increase your your skills and provide mentorship.
  - Educating providers on the HAI program and what services the LHD offer. How they can engage with the LHD.
  - More shadowing at facilities to facilitate learning.

### **Plans going forward**

- Cross train staff (Williamson, TX)
- Continue outreach to our facilities particularly nursing homes (Williamson, TX)
- Implement ICARS (Chambers, TX)

### **Other thoughts/comments**



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## Appendix G - Synthesized Interview Responses – LHD *Not Engaged* in HAI activities

Some of the analysis contained in Appendix G were removed in the shareable version of this document. If you wish to review this analysis of the survey data, please contact NACCHO at [infectiousdiseases@naccho.org](mailto:infectiousdiseases@naccho.org)

### **Thematic Analyses: Interview Responses – LHD *Not Engaged* in HAI activities**

#### **Awareness level or knowledge of HAI, AMR, AMS (novice, learning, expert)**

##### LEVEL:

- Novice x 6
- Can practice
- Growing & learning X 2
- Self-educated
- academic learning only no practical experience

##### HAI, AMR, AMS Reportable:

- HAI not reportable
- Lack of knowledge about outbreaks being reportable
- Some outbreaks are reportable
- Outbreaks are reportable depending on disease and location
- LHD trusts the clinics know what is reportable

##### Data Access:

- LHD does not get data
- Know where to get answers
- Able to access provisional data at county level – pilot project with State
- Data is at regional level
- Takes 3 -5 years for county data
- Need timely data
- Pilot project for provisional data is evolving
- LHD has to call state for data
- Hospital monitors data
- Not aware of the NHSN
- Lack of awareness on how to find data
- HC facilities are to report to LHD but don't always
- County data is out of date and not relevant
- Data comes from regional epidemiologist every other month
- Regional epidemiologist knows the region and is responsive

##### Information/Resources access:

- Know where to get answers
- Have resources

- Established POC since COVID
- Get guidance from Regional via conference call
- Reach out to Regional for education via conference call

#### Role:

- Focus on epidemiological response and not HAI
- Do not perform ICARs
- Do not know about ICAR
- Do not perform ICARs
- Worked on HAI for COVID at nursing homes (Epi only)
- No Legionella
- Infectious disease process - facility notifies LHD or lab notification through NEDs or Regional is contact who then contacts LHD
- Regional HAI program – Not aware of role
- Outbreaks are in state Health & Safety code
- State infectious disease person who provides information & guidance
- No HAI work – only COVID
- Lack of awareness if there is a state HAI program
- Want to be more involved in community via a program for prevention
- LTC facility does AMS
- Do contact tracing for COVID outbreak in HC facilities
- LTC facility does outbreak reporting
- LHD defines outbreak to LTC
- LHD helped with COVID reporting – did case investigation & contact tracing
- State-local partnership model – state takes lead and involves LHD for informational purposes
- Not aware if there is state HAI program
- Clinics do the reporting of AMRs as they have more knowledge
- State notifies LHD for informational purposes
- LHD has no role
- Not involved in surveillance due to State-Local model
- State has the expertise
- LHD does not have expertise in HAI because do not encounter
- Hospital & Home care program has IC

#### BARRIERS:

- calling the regional or state to get information & guidance.
- Lack of knowledge about AMRs being reportable
- Reactive as “juggle” burden
- Need time to develop program

#### AWARENESS OF BURDEN:

- Aware of burden of COVID
- Not aware of burden of HAIs
- Aware of burden of HAIs
- Aware of burden of HAIs
- Not aware if regional is also the HAI person

#### TRAINING:

- Hospital education coordinator did on-demand training on IC practices

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- Hospital provided IC training to all contracted in-home visit via virtual

## **Awareness of Others Doing HAI, AMR, AMS work in Community/jurisdiction**

### **PARTNERS:**

- Partner with hospitals, LTC, Schools, Daycare, Jail, etc.
- COVID strengthened the partnerships
- School nursing is contracted
- Partner with NACCHO & CDC for tele-ICARs
- Have monthly calls with other county HDs, infectious disease Dr
- Partnership with FQHCs with state collaborative agreement
- Wound care partner with FQHC
- Partner with UK for HIV-related care (Ryan White program)
- Increased partnership with jail for education & outreach

### **FORMAL AGREEMENTS:**

- Not formal agreements
- no formal agreement
- State has agreements with FQHCs
- No formal agreements with nursing homes, schools, residential facilities

### **LHD ROLE:**

- Role is to provide resources & education
- Tele-ICARs with Ohio DOH
- Work with Ohio DOH Epi & IPC on outbreaks
- Collect samples & ship to Ohio DOH
- Work with LTC
- Provide materials, collect, & send to State
- Provide follow up via Environmental Health
- ICARs with State for COVID
- Hospitals do AMS
- Not involved in hospital IP meetings
- No clear role in HAI, AMR, AMS
- Want to be proactive rather than reactive
- Technical assistance with HC providers on COVID
- Referrals for Hepatitis C
- Go out of county for HIV +
- Some women transferred out of county for delivery
- Site test for STDs at residential treatment
- Follow-up a problem with STDs
- LHD role primarily around HAI with home health
- Good job on wound care & nursing skills
- OK job in clinical services
- Not sure of role in AMS
- Larger LHDs work with HAIs
- Regional provides guidance to rural LHS
- LHD has no role
- Only lab is at hospital & they deal with AMRs

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- Hospital has HAI program
  - Not aware of other programs
  - Realized HAIs are PH issue
  - LHD should have role in assisted living & skilled nursing facility even if just for resources
  - Health clinic had IC coordinator
  - LHD role is information
  - LHD connects local HC facilities to state

#### OUTREACH:

- Cleaning & disinfecting in daycares
- Provide education & kits
- School nurse support group – education, meetings
- Do some outbreak interviews
- Referrals to Harm Reduction program, substance use
- Promote referrals via HANDs program
- Provide training & referral resources
- Provide WIC referrals
- Partner with nursing homes for resources & education
- Starting a traveling education program for STDs
- Community lacks knowledge & awareness about STDs
- Education in Middle/High school – Positive Potential – sex education
- Saw a community need for education & information
- Expand outreach to residential treatment facilities
- Adapted a booklet from another HD
- Provide video to inmates
- Provide support to jail about harm reduction
- Provide packet to inmates at intake

#### TRAINING:

- No training with partners
- LTC collaborative call
- Use Ohio Infectious Disease Control Manual for protocol
- Provide targeted training with staff
- Train staff on PPE
- Not actively engaged in teaching others outside own agency
- No joint training exercises due to COVID
- LHD reaches out to regional for guidance, assistance in order to “do it right”
- Health clinic provide knowledge & training to other independent providers
- LHD reviewed training content State takes active role and provides standardized materials & resources

#### DATA:

- ORBIT – state system
- Reach out to state for specific EPIs
- State provides data
- Get reportable disease data from Ohio DOH
- Report to ORBIT
- Not aware of HAI data
- Hospitals do not share data with LHD

- 
- Do not get data
  - HC facilities report to state not LHD

**BARRIERS:**

- Barrier is staffing
- If have staffing – role is to check the HC facility’s process & procedures and work to improve those
- No doing PDSA cycle – evaluation piece

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## Barriers or challenges to implementing HAI, AMR, AMS program/activities

### LIMITED TIME:

- Get things done in a timely manner
- Time X 3
- Lack of staff time
- Limited time

### STAFFING CONCERNS:

- Increased staff size
- Staff FTE
- Lack of motivation
- Hard to get staff

### LACK OF INFRASTRUCTURE:

- Infrastructure – workforce, partners
- Infrastructure – IT, workforce support
- LHD too small to be HAI experts

### POOR COMMUNICATION:

- Don't get all of the info reported to them
- No reporting to LHD from hospital
- Communication issues
- Can't get info to do follow up on people who go outside county for care
- Lack of communication
- Out of county do not provide info to LHD
- No info because they are a small LHD
- Obstacle of multiple HC systems not providing info to small LHD
- No communication or asking rural LHD for info

### LIMITED RESOURCES:

- Resources
- Small, not enough resources
- People have to go outside of county for care
- Limited resources

### LACK OF FUNDING/REVENUE:

- Have Grants – immunization, reproductive health, wellness
- Pay for salaries, supplies, time
- Staff funding
- Facility funding – space, rent.
- Rural community does not have office spaces
- LHD wants reimbursement

### LACK or ACCESS TO DATA:

- Have to look or reach out for data

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#### LIMITED LHD ROLE:

- Send test to facility, collect and ship to State
- Want more of a role in epi – outbreak response & monitoring
- State can provide resources & assistance if LHD asks
- LHD is not a natural fit for HAI services
- Other HC need to take lead with State
- LHD provides situational, community awareness
- LHD good at local messaging

#### LACK OF CAPACITY:

- Obstacle to implementation – no capacity
- Spend a lot of time trying to get info and “clean up” for out of county HC

#### LHD LIMITED EXPERIENCE/KNOWLEDGE:

- Obstacle moving from novice to expert for HAI due to limited experience
- Not enough incidence to justify a position or program
- Lack of awareness
- Other LHD experience
- Lack of knowledge X 2
- LHD does not have opportunities to practice in order to be good at HAIs

#### TRAINING:

- Training
- Opportunity of education but no resources

#### PRIORITIZATION OF LHD TASKS/PROGRAMS:

- Prioritization
- Prioritization of programs
- Prioritization of PH issues
- LHD wants to know expectations & time commitment

#### COMMUNITY CONCERNS:

- Older population

### **Building capacity to engage in HAI, AMR, and AMS initiatives**

#### TRAINING – SPECIFIC SKILLS:

- Training & resources
- Communication skills
- Relationship building skills
- Ability to demonstrate positive intent
- Training & tools on formal agreements – how to develop, how to implement
- Program evaluation
- Quality Improvement
- Assessment, planning, evaluation (PDCA)
- Difficult to do monitoring & investigation at local level

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- Ensure regional epi leader has leadership training & skills
  - Team skill building
  - Coalition building
  - Building motivation for involvement
  - Training
  - Technical assistance to HC facilities
  - Starting from scratch
  - Need training
  - Need tools to build confidence
  - Defined expectations
  - Defined processes & protocols

#### BUILDING PARTNER RELATIONSHIPS:

- Close relationship with leadership (Board, Director, Health Commissioner)
- Work with other HD partners in county
- Overlap with some facilities with other HD partners in county
- Nurturing partnership
- Build relationship with region
- Symbiotic relationship with regional & Central office
- Regional & Central Office provides guidance
- Reach out to other LHDs to get information from more experienced PH nurses
- Can call any LHD in North Dakota for recommendations
- State defines role with local partners
- Resources to share with HC partners as they implement changes
- CDC and State often aligned
- State had provider line for assistance
- Dental offices needed support & resources on infection control specific to their practice

#### IMPROVE COMMUNICATION:

- trouble getting information
- Cannot get information easily
- Need to do a better job at educating people

#### OTHER CAPACITY CONCERNS:

- Maintain good communication system by being accessible
- Lack of value in evaluation – biggest gap

#### FUNDING/REVENUE:

- Funding
- Conduct research for grant applications before taking to Board for approval to proceed
- Money

#### PUBLIC PERCEPTIONS OF PUBLIC HEALTH:

- Negative perceptions of Health Department

#### USE OF CDC/NACCHO RESOURCES:

- Use CDC resources
- Use CDC resources daily
- Pull CDC resources and adapt to community needs/culture



- Use NACCHO website for resources
- Use canned stuff but adapt because it is too “big city”
- Using other resources saves time & effort.
- Rural is not urban – can’t downsize it and think it will work
- Need to spend time thinking about community culture when using resources
- Downsizing urban resources for rural community does not work
- State re-labeled CDC tools
- CDC tools provide knowledge that makes LHD more credible
- Do research to get information
- Generalized protocols are helpful
- Use CDC website for COVID recommendations
- Have not used CDC website for HAI, AMR, AMS
- Use YouTube, statistics, disease information
- NACCHO website – premium membership to get city pages
- CDC website provides in depth information
- CDC website is easy to navigate
- CDC website has more culturally appropriate materials
- Use NACCHO website because engaged in their projects
- Provide information from CDC website when asked
- CDC COVID information was hard to “suss out and make sense” – at national level rather than community level
- CDC guidance for HC facilities on COVID was good
- CDC guidance on COVID was general and not HC facility specific

#### LACK OF UP-TO-DATE DATA:

- Do not have up-to-date data
- Up-to-data is difficult to find

#### TIME:

- Time

#### INCREASED STAFFING:

- Staff
- Staff turnover
- Do not have communication person

#### INCREASE/IMPROVE LHD ROLE:

- Role in public education – communicating with community about HAI, AMS
- Advantage is familiarity with community
- Regional concept is good as has clearer standards & agreements
- Have a “team” with regional in name only – do not know regional epi person (credentials, never met, etc.)
- Regional “team” in concept only due to COVID and staff turnover
- SME at regional level
- Gain knowledge & guidance from regional
- Ability to coexist with regional
- Trusted member of community to lead PH projects
- LHD was “translator role” for CDC resources
- State provides HAI information via chat
- LHD connects facility with state expert

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## Learning or Support Resources to Engage in HAI Initiatives

### TRAINING:

- Do training with state office
- Open to coaching & mentoring
- Include hospitals and community health partners in trainings and exercises
- Include all partners in healthcare system in training & education
- Develop relationships to leverage resources
- Do trainings to recognize issue occurs across systems
- Want technical assistance, webinars, and coaching
- Want everyone in the same room versus a webinar
- Informal conversations with cross-agency partnerships
- Considerations for rural LHDs for new projects – condensed information & protocol
- Webinar or conference
- Coaching & mentoring
- Technical Assistance
- One-on-one coaching & mentoring

### SPECIFIC TRAINING TOPICS:

- Understanding funding streams
- Communication tools & strategies
- Tie training into staff expertise to develop further
- Build on what already doing
- Initiating a new program – PH YouTube with interview strategies for various topics & disease
- Provide national PH consistency for interview strategies
- Understanding funding streams
- Communication tools & strategies
- building relationships among stakeholders
- Tools, toolboxes, and strategies
- PH campaigns
- Building partnerships
- Most effective communication & messaging
- webinar for connecting resources
- If more than situational awareness, need coaching, mentorship, training series
- Identify needs of HC facilities

### OUTSIDE FACILITATION FOR PARTNERSHIP BUILDING:

- Facilitated conversation with community partners – outside facilitation on how to work together, leverage training & resources

### RESOURCES:

- Use Ohio Infectious Disease Control manual (links to CDC)
- Resources to connect local doctors & facilities for community education
- Better utilize resources

### RE-DEFINED LHD ROLE:

- Trying to be more independent for training

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- Communicate with state to ensure doing the right thing
  - Do the most with what you have to make the greatest impact
  - Replace the competitor mentality with practice together

#### ACCESSIBLE CONTACT PERSON:

- Want POC that is accessible

#### INFRASTRUCTURE NEEDS:

- Time, staff, & money to get the most with the least
- Barrier is physical space for staff
- Staff
- Prioritization
- Knowledge
- Time

#### FUNDING:

- CDC/NACCHO provide funding for understanding revenue streams
- Considerations for rural LHDs for new projects – turn around time for grant applications impacts ability of rural LHD to apply

#### STAFFING:

- Difficult to find staff to do new projects
- Staff difficult to find

### **Advice to CDC or organizations like NACCHO when considering a project/program involving rural/frontier/small health departments**

#### LHD PRIORITIZATION

- Do the most with the least.

#### TRAINING

- Have training to develop confidence in what doing

#### TIME

- Have time to help people in vulnerable populations

#### COMMUNICATION SYSTEMS

- Mechanism for information or communication on updated guidelines & recommendations
- Have a “heads up” on changes
- Provide a synopsis of changes along with full document
- Send info to HD via email as weren’t on webinars from CDC
- Want CDC to communicate clearly with rural LHD on project focus, expectation, roles, partner roles

#### RESOURCES

- Rely on CDC website but state giving different information (COVID)
- Provide resources to do a good job effectively

- 
- Easily accessible information
  - No time to develop own campaigns
  - Toolkits have information tailored to rural community

#### LHD ROLE

- Recognition there are different models of delivering PH
- Diversity among rural LHDs in terms of needs, services, community
- Determine who is best to provide what service – local, regional, state
- LHD model uses services that align with fit between LHD, FQHC, etc.
- Use other HC facilities to provide services that align with their staff and community needs

#### CDC ROLE

- CDC's role is a funder, materials, training
- One-on-one visits to see needs & size of rural LHD

#### FUNDING SPECIFIC TO RURAL LHDs

- Important with funding to recognize not to allocate based on # of cases or population size for rural counties
- Small counties need more funding as need to build expertise and competence – don't see 100s or cases like in a larger county
- Funding for time, people, training, tools
- Small county=small funding – equation is wrong

#### ADDRESS PERCEPTIONS OF PH IN COMMUNITY

- Local perception of LHD being big government
- Need to overcome stigma of government
- Message PH is a partner

#### BUILD RELATIONSHIPS

- Relationship building
- Raising awareness with partners
- Obtaining buy-in
- Program easy to implement
- Show results & outcomes
- Use data to show a need
- Avoid forcing HC facilities to comply with state protocols – adapt to community

#### **Other Comments**

##### RELATIONSHIP BUILDING

State and LHD work well together – worked on building that relationship

##### LHD ROLE

Regional epidemiologist knows about HAI versus LHD

LHD does not have direct experience with HAI

State can provide resources

State involvement takes pressure off LHD

State-local model works well



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## Appendix H - Collated Interview Responses – LHD *Engaged* in HAI activities

Collated interview responses for LHD engaged in HAI activities were removed in the shareable version of this document. If you wish to review this analysis of the survey data, please contact NACCHO at [infectiousdiseases@naccho.org](mailto:infectiousdiseases@naccho.org)

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## Appendix I - Collated Interview Responses – LHD *Not Engaged* in HAI activities

Collated interview responses for LHD not engaged in HAI activities were removed in the shareable version of this document. If you wish to review this analysis of the survey data, please contact NACCHO at [infectiousdiseases@naccho.org](mailto:infectiousdiseases@naccho.org)

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## Appendix J - Interview Transcripts

Interview Transcripts were removed in the shareable version of this document. If you wish to review the interview transcripts of the survey, please contact NACCHO at [infectiousdiseases@naccho.org](mailto:infectiousdiseases@naccho.org)