TEXAS HEALTHCARE ASSOCIATED INFECTION (HAI) PLAN

April 2020

TEXAS
Health and Human Services

Texas Department of State Health Services

Background

Texas encompasses a total land area of approximately 268,000 square miles and is comprised of 254 counties. The Texas Department of State Health Services (DSHS) is divided into 8 public health regions (PHRs) and there are local health departments (LHDs) that operate at the county level or city level. For those areas that do not have their own LHD, the PHR serves as their local health department. Texas has multiple large intercontinental airports and shares 1,254 miles of common border with Mexico. Texas has more hospitals and nursing homes than any other state in the U.S. As of March 2019, there were approximately 640 acute care hospitals, 523 ambulatory surgery centers, 216 free standing emergency medical centers, 1,240 nursing homes, and 1,982 assisted living facilities.

Healthcare associated infections (HAI) and antibiotic resistance (AR) are internationally and nationally recognized by the scientific and medical communities as serious public health threats, and associated with increased morbidity and mortality, as well as increased healthcare costs. In the state of Texas, 3,253 carbapenem-resistant *Enterobacteriaceae* (CRE) cases and 3,128 multidrug-resistant *Acinetobacter* (MDR-A) cases have been reported between 2015-2017. In the ten-year period between 2007-2017, there were 25 cases of vancomycin-intermediate *Staphylococcus aureus* (VISA) reported in Texas. Some of these AR organisms reported involve individuals that became infected or colonized while traveling or receiving healthcare abroad, which has increased risk of acquiring and spreading bacteria that are not normally found in Texas. HAI and AR investigations are complex, and patients often receive healthcare services at multiple facilities in short periods of time. Onsite public health infection control assessments have proven to be a highly effective solution to train and provide education to healthcare workers about isolation and containment activities once an HAI or AR threat is identified.

The implementation of the Antibiotic Resistance Laboratory Network (ARLN) in 2017 increased the state's ability to identify novel or high concern AR organisms and corresponding resistant mechanisms. Improvements in detection methods have created awareness of the magnitude of the AR threat. These HAI and AR data are reviewed and analyzed to determine where resources should be allocated. In addition to the ARLN data, there are several other useful data sources that DSHS utilizes for action including the National Healthcare Safety Network (NHSN), Texas notifiable conditions, Infection Control Assessments and Response (ICAR), and Targeted Assessment for Prevention (TAP) assessments.

As of January 2020, chapter 98 of the Texas Health and Safety Code and Chapter 200 of the Texas Administrative Code requires Texas general hospitals and ambulatory surgery centers to report

1) Preventable Adverse Events (PAEs) for which Medicare will not provide additional payment to the facility and those events identified by the National Quality Forum
2) Healthcare Associated Infections (HAIs) that the Centers for Medicare and Medicaid Services requires of a facility participating in the Medicare program to report via NHSN

In 2016, Texas facilities reported 994 CLABSIs with 971,148 central line days, 953 CAUTIs with 883,522 urinary catheter days, and 2,841 SSIs with 176,986 total surgical procedures reported. Starting in March 2019, DSHS entered into a data use agreement (DUA) with the Centers for Disease Control and Prevention (CDC) to have access to Texas data from the NHSN that are not already obtained via mandatory reporting statute. These data will be used to develop state antibiograms, establish baselines and identify trends to inform future prevention and quality improvement activities.

DSHS is committed to increase Antibiotic Stewardship (AS) capacity in Texas. The Texas Antibiotic Stewardship Program (ASP) is a necessary adjunct to HAI and AR activities to provide long-term sustainable reduction in the selection and spread of antibiotic resistance. The implementation of ASPs across all spectrums of healthcare in tandem with coordinated, evidence-based surveillance, prevention, and response activities will increase the Texas DSHS' capacity to positively impact patient safety, patient outcomes, and healthcare expenditures.

DSHS maintains a Healthcare Safety Advisory Committee (Committee) to promote and stimulate public health, industry, and subject matter expert collaboration and coordination of healthcare safety activities. These activities include the promotion of evidence-based practices and policies to prevent and contain HAIs and preventable adverse events (PAE). The Committee is comprised of one non-voting member who is a DSHS employee representing the licensing of healthcare facilities and 12 voting members appointed by the DSHS Executive Commissioner. Voting members include: infection preventionists, healthcare facility administrators, healthcare safety professionals, consumer representatives, licensed pharmacist and board-certified licensed physicians with demonstrated expertise in the area(s) of quality improvement, healthcare safety, healthcare epidemiology, AR activities, or infection prevention. The Committee is tasked with reviewing this Texas HAI Plan annually to make updates and revisions that reflect newly identified or prioritized issues for the state.

List of Acronyms

Acronym	Full Name
AR	Antibiotic Resistance
ARLN	Antibiotic Resistance Laboratory Network
AS	Antibiotic Stewardship
ASP	Antibiotic Stewardship Program
CAUTI	Catheter Associated Urinary Tract Infection
CBIC	Certification Board of Infection Control and Epidemiology
CDC	Centers for Disease Control and Prevention
CIC	Certification in Infection Control and Prevention
CLABSI	Central Line Associated Bloodstream Infections
CRE	Carbapenem-Resistant *Enterobacteriaceae*
DSHS	Department of State Health Services
DUA	Data Use Agreement
HAI	Healthcare Associated Infection
ICAR	Infection Control Assessments and Response
LHDs	Local Health Departments
MDR-A	Multidrug-Resistant *Acinetobacter*
NHSN	National Healthcare Safety Network
PAE	Preventable Adverse Events
PHR	Public Health Region
SSI	Surgical Site Infection
TAP	Targeted Assessment for Prevention
VISA	Vancomycin-Intermediate *Staphylococcus aureus*

TEXAS HAI PLAN

Element	Implementation Activities
I. Sustain HAI/AR capacity to implement program	• The Texas HAI Coordinator will ensure the coordination of HAI, AR & AS programs and activities. The HAI Coordinator will be responsible for enhancing communication and information sharing between the Healthcare Safety Team (HAI Epidemiologists and AS Expert), Texas public health laboratories, local public health departments, the CDC, and the Healthcare Safety Advisory Committee. • Each Texas PHR will have a dedicated HAI Epidemiologist who is responsible for implementing epidemiological investigations related to HAI, AR, breaches in infection prevention, and unsafe injection practices. Each HAI Epidemiologist holds a Certification in Infection Control and Prevention (CIC) by the Certification Board of Infection Control and Epidemiology (CBIC). • The Texas AS expert will lead the state's efforts to improve antibiotic prescribing practices across the spectrum of care.
II. Convene HAI advisory committee.	• The Healthcare Safety Advisory Committee will meet at least three times a year to discuss priority healthcare safety topics. Subcommittees may be formed for special projects as needed. • The Committee will review and update the Texas HAI Plan annually based on ongoing analysis of data, response efforts, and prevention needs. The updated Texas HAI Plan will be sent for publication to the Texas HAI website as well as the CDC State HAI Plan website.
III. Support containment of novel or high-concern antibiotic-resistant organisms.	• A Texas ARLN Response Plan will be developed in collaboration with public health laboratories to solidify the Texas strategy for AR containment and to increase the state's capacity to respond rapidly. The plan will be reviewed and updated annually.

Element		Implementation Activities
IV.	**Support rapid response to control newly identified HAIs and AR risks.**	• Technical expertise will be provided to healthcare facilities when HAIs and AR threats are identified. Technical expertise can include onsite visits, phone consultations, resource sharing or training. • Laboratory results will be shared in a timely manner with affected healthcare facilities.
V.	**Conduct response-driven onsite infection control assessments and evaluations**	• Onsite infection control assessments will be conducted using a standardized tool at facilities where outbreaks have occurred and where targeted organisms or resistance mechanisms have been identified. • Recommendations for containment will be provided and assistance will continue until infection control gaps have been addressed.
VI.	**Enhance epidemiology-laboratory coordination**	• DSHS will facilitate connections between healthcare facilities, clinical laboratories and public health laboratories to ensure that appropriate isolates are forwarded to the regional AR laboratory for targeted surveillance activities. • DSHS will promote the packaging and shipping trainings offered by public health laboratories during routine presentations and communications with healthcare facilities and clinical laboratories. • DSHS will invite representatives from public health laboratories to attend and present at the Healthcare Safety Conference and Texas Public Health Conferences to share best practices and lessons learned related to specimen submission.
VII.	**Use data for action**	• DSHS will routinely validate and analyze data from NHSN, Texas notifiable conditions, and the ARLN to identify high-risk facilities where additional infection prevention or antibiotic stewardship support is needed. • Prevention efforts such as onsite assessments, trainings, TAP assessments and consultations will be directed to the identified high-risk facilities. • Results of the data analyses conducted will be used to define the Healthcare Safety Advisory Committee structure, membership, and priorities.

Element		Implementation Activities
III.	**Implement data-driven prevention strategies**	• DSHS will conduct proactive onsite infection control assessments and gap mitigation in healthcare facilities based on identified needs (e.g., poor infection prevention practices), with the goal to improve infection prevention practices and reduce transmission of AR organisms and HAIs. • Facilities with higher risk for AR transmission due to acuity and known HAI data will be prioritized.
IX.	**Implement antibiotic stewardship efforts**	• The AS expert is responsible for facilitating the implementation of the Texas AS Strategic Plan. • The AS expert will consult on AS/AR related public health interventions and promote appropriate antibiotic prescribing practices and policies. • The AS expert will create and share ASP assessment tools and education materials for healthcare professionals and the public. • DSHS will strengthen its collaborative partnerships and its capacity to identify, develop, and implement interventions to improve ASPs core element implementation.
X.	**Engage public health and healthcare providers**	• An inventory of Texas healthcare facilities will be updated annually to help guide HAI educational, containment, response, and prevention activities. • DSHS will provide ongoing educational and networking opportunities to healthcare facilities and health departments across Texas to enhance their infection prevention capacity as well as improve information sharing between facilities.
XI.	**Coordinate prevention activities with partners**	• HAI Epidemiologists will identify and engage with partners (e.g., healthcare systems, Texas Hospital Association, quality improvement programs such as quality improvement organizations, local health departments, regulatory/licensing entities and non-profit organizations) to collaborate on prevention activities.