



**TEXAS**

**Health and Human  
Services**

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**Texas Department of  
State Health Services**

# **2022 Antimicrobial Stewardship Report**

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**Prepared April 2023**

# Introduction

Antimicrobial Resistance (AR) is an ongoing global public health challenge that affects humans, animals, and the environment. The Centers for Disease Control and Prevention (CDC) report approximately 2,868,700 infections and 35,900 deaths result from antimicrobial-resistant bacteria and fungi. The CDC estimates that the United States spends more than \$4.6 billion annually on AR. According to the Centers for Medicare & Medicaid Services (CMS) Part D data, outpatient antimicrobial prescriptions are highest in the Southern U.S. and continue to rise. Nursing home or skilled nursing facility residents represent one of the most vulnerable populations to AR. The longer a patient remains at a facility increases the length of time the patient is on the antimicrobial. Increased antimicrobial exposure decreases the medicinal effect of the antimicrobial and leads to resistance. AR implications of include increased treatment failures, morbidity and mortality, hospitalization risk, and use of expensive and broad-spectrum antibiotics. Antimicrobial Stewardship (AS) refers to commitments and activities to optimize the treatment of infections, while reducing adverse events associated with antimicrobial use and promoting appropriate antimicrobial utilization.

The AS Team at Texas' Department of State Health Services (DSHS) promotes interventions to measure and improve antimicrobial use through the CDC's "five D's" and Core Elements of AS.

### **The 5 D's of AS:**

1. **Diagnosis:** the patient's diagnosis requires antibiotic therapy
2. **Drug choice:** the drug treats the organism that is present
3. **Dose:** the recommended dose is within the correct range
4. **Duration of therapy:** appropriate medication period
5. **De-escalation:** the organism is no longer present and drug therapy can be reduced or stopped, preventing excess antibiotic therapy

### **CDC's Core Elements of AS:**

1. **Leadership commitment:** Dedicating resources
2. **Accountability:** Single leader
3. **Drug expertise:** Single pharmacist leader
4. **Action:** Implementing at least one recommended action
5. **Tracking:** Monitoring antimicrobial prescribing and resistance patterns
6. **Reporting:** Regular AR and antimicrobial use reporting
7. **Education:** Informing clinicians about resistance, optimal prescribing

# Completed Projects

## **Antimicrobial Stewardship Webinar**

The AS Team hosted a three-day AS policy writing virtual workshop for nursing homes and skilled nursing facilities in June 2022. The main goal of the AS webinar was to educate long-term care facilities on AS policy implementation. Each day consisted of tools and approaches to writing an AS policy. An average of 200 professionals attended daily for continuing education credit. In Spring 2023, a post-webinar survey was sent to assess any post-webinar AS policy changes among attendees' facilities. The AS team received thirty survey responses.

## **Antimicrobial Stewardship Regional Advisory Committees**

As directed by [House Bill 1848](#), an AS Regional Advisory Committee (ASRAC) was established in each of Texas' eight public health regions. Each ASRAC has five voting members who applied to be on the ASRAC in January-April 2022. A review team of DSHS staff, regional staff, legal representatives, and government affairs representatives assessed the applications and chose candidates to recommend. The DSHS Commissioner, Dr. Jennifer Shuford, reviewed and approved the recommended candidates. Following appointment to their respective ASRACs, each committee member participated in state-required trainings on the [Public Information Act](#), the [Open Meetings Act](#), and the Advisory Committee Ethics.

## **U.S. Antimicrobial Awareness Week 2022**

The AS Team participates annually in the CDC's U.S. Antimicrobial Awareness Week. In 2022, the team promoted AR and AS awareness by participating in a global Twitter and Facebook "blast." To increase AS public engagement worldwide, curated social media content was posted on Twitter and Facebook websites at the same time across the world. AS listserv members, community and academic partners, and professional contacts also received multiple email updates during the week with CDC-approved AS content. Finally, the DSHS website was updated with current AS resources and tools.

# Upcoming Projects

## UT Dell Medical School Pilot Project

The overall goal of the UT Dell Medical collaboration pilot is to improve AR rates in Travis County long term facilities, with a focus on decreasing Urinary Tract Infections (UTIs) in nursing homes/skilled nursing facilities. Clinical and antimicrobial expertise will be provided by UT Dell via an Infectious Disease Physician to develop guidelines, best practices, and tools to improve UTI diagnosis, treatment, and antibiotic use tracking and reporting.

Objectives:

1. Improve tracking of AR data in Texas long term facilities.
2. Improve AS education in Texas long term facilities.
3. Reduce AR by implementing standard UTI treatment guidelines and diagnostic protocols in Texas long term facilities.

## Antimicrobial Stewardship Regional Advisory Committees

ASRAC Meetings will be held at least annually for each region. Introductory meetings were held in Spring and Summer 2023. A second round of meetings will be held in late 2023 and early 2024, during which each ASRAC will begin the AS projects and recommendations they discussed in their introductory meeting.

## Antimicrobial Use/AS Facility Assessments

Infection Control and Assessment Response (ICAR; CDC) assessments will be done at Texas hospitals and long-term care facilities to identify key gaps in antimicrobial use, implement AS strategies to mitigate gaps, and track antimicrobial use progress. The protocol is:

1. To identify any antibiotic prescribing disparities, data obtained during the COVID-19 response will be compared against NHSN hospital antimicrobial use option data, CDC's AR Patient Safety Portal Outpatient antimicrobial use data, Medicare Part D Public Use Files (outpatient settings), and antimicrobial use/AS Assessment data.
4. To determine any link between health disparities and antimicrobial use, the AS Team will collaborate to identify datasets with disparity-related variables
5. To identify factors contributing to antibiotic prescribing health disparities, the datasets will be assessed. Focused AS interventions will be established based on the results and the applicable healthcare settings.
6. The AS Lead, in conjunction with the Texas Healthcare Safety Network (TxHSN) Team, will use the results to add the antimicrobial use/AS Assessment tool in TXHSN 2.0. The tool will be used to implement AS Core

Elements in Texas healthcare facilities based on antimicrobial use evaluations. Integrating TXHSN 2.0 into the antimicrobial use/AS facility assessments will allow antimicrobial use trends to be examined and guide AS efforts in Texas.

## **Conclusion**

The AS team at Texas' DSHS will continue to promote the CDC's five D's and Core Elements of AS to improve antimicrobial use across Texas. To do so, our 2023 goals include integrating activities that address health disparities, increasing collaboration with regional and local health departments to promote AS, and continuing our ongoing projects, such as USAAW, the annual AS workshop, and the ASRACs.

For more resources on AS, please visit our [Resources Page](#).