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**Texas Department of State
Health Services**

2022 Finalized NEDSS Infectious Diseases Data 2023 Data Quality Assurance

EAIDU Data Analytics Team

Disease Surveillance and Epidemiology Section

Office of the Chief State Epidemiologist

Texas Department of State Health Services

February 16, 2024

Discussion Topics



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- 2022 Finalized NEDSS Infectious Diseases Data Summary
 - Trends, Counts, and Rates for 2022 Notifiable Infectious Diseases by Selected Factors
- 2023 Data Quality Assurance (QA): Overview, Tips & Tricks
 - MMWR Week and Year Entry
 - Event Date Description and Guidance
 - Overview of our Standard QA Checks
 - Most Recent Changes to our Standard QA



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2022 Finalized NEDSS Infectious Diseases Data Summary

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EAIDU Data Analytics Team

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2022 Finalized NEDSS Infectious Diseases Data



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- Each year, the Centers for Disease Control (CDC) collaborates across all States to ensure that nationally notifiable disease counts are reconciled with the States' counts.
- This culminates in both National and State datasets being finalized and locked at the same time.
- Texas 2022 National Electronic Disease Surveillance System (NEDSS) data were finalized on 8/24/2023.

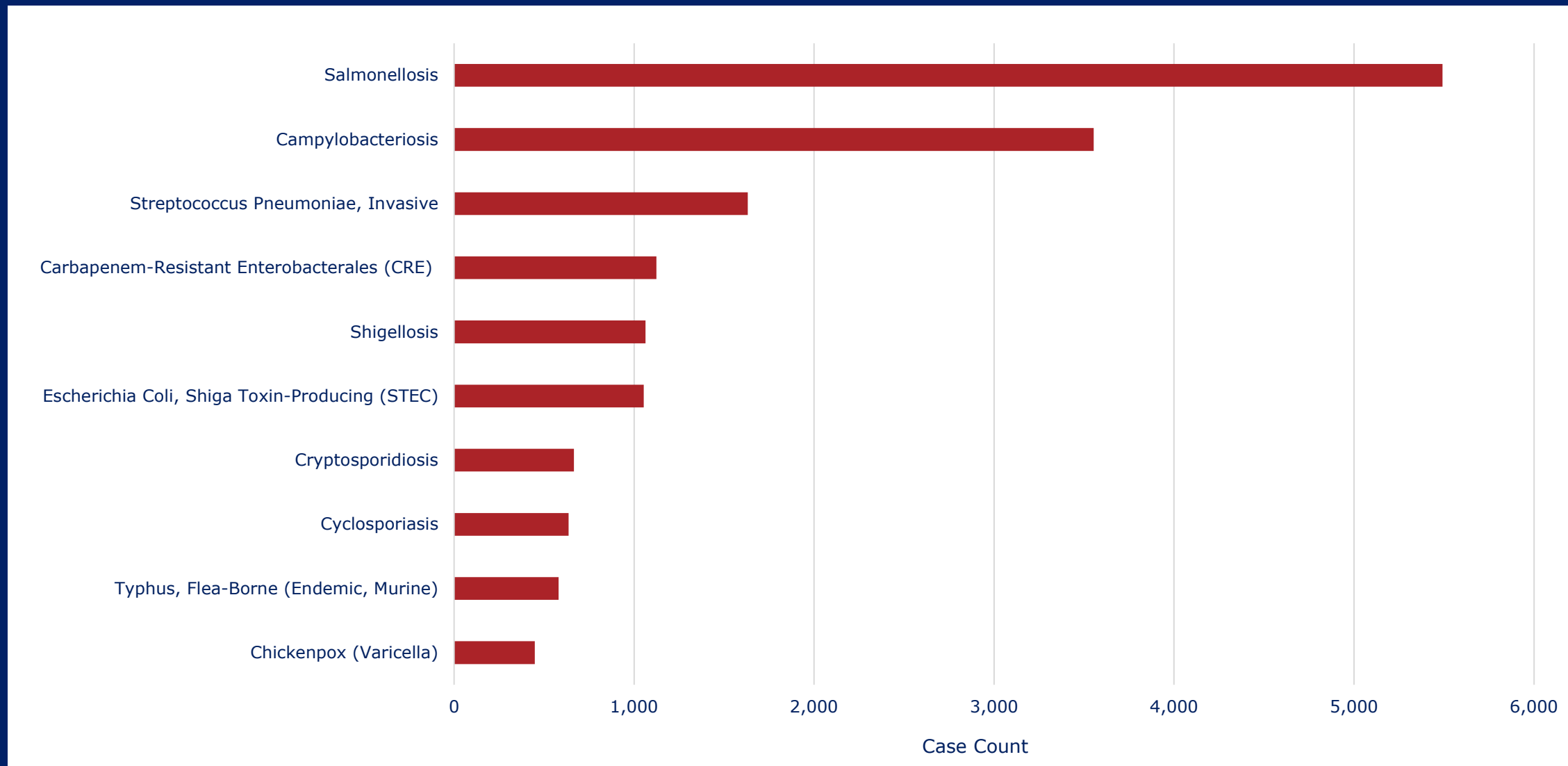


2022 Annual Report

- The 2022 annual report encompasses counts of reportable infectious diseases from three Department of State Health Services (DSHS) branches/units:
 - Emerging and Acute Infectious Disease Unit (EAIDU)
 - Zoonosis Control Branch (ZCB)
 - Healthcare Safety Unit (HSU)
- The report can be found [here](#).

The screenshot shows the Texas Department of State Health Services website. The top navigation bar includes the DSHS logo and links for Services, Health & Wellness, Diseases & Conditions, Business & Compliance, and Data & Case Reporting. The breadcrumb trail reads: Home / Disease Surveillance and Epidemiology Section / Disease Surveillance and Epidemiology Data and Statistics / Texas Annual Reports / Texas Annual Reports 2020s / 2022 Annual Report. The main content area features the title "2022 Annual Report" and "Texas Emerging and Acute Infectious Diseases 2022 Annual Report". Below the title, there are two bullet points: "Table I. Reported Diseases 2013-2022" and "Table II. Reported Disease Rates 2013-2022", both with external link icons. On the left side of the page, there is a sidebar menu with links for "Disease Surveillance and Epidemiology Section", "Texas Annual Reports 2020s", "2022 Annual Report", "2021 Annual Report", and "2020 Annual Report".

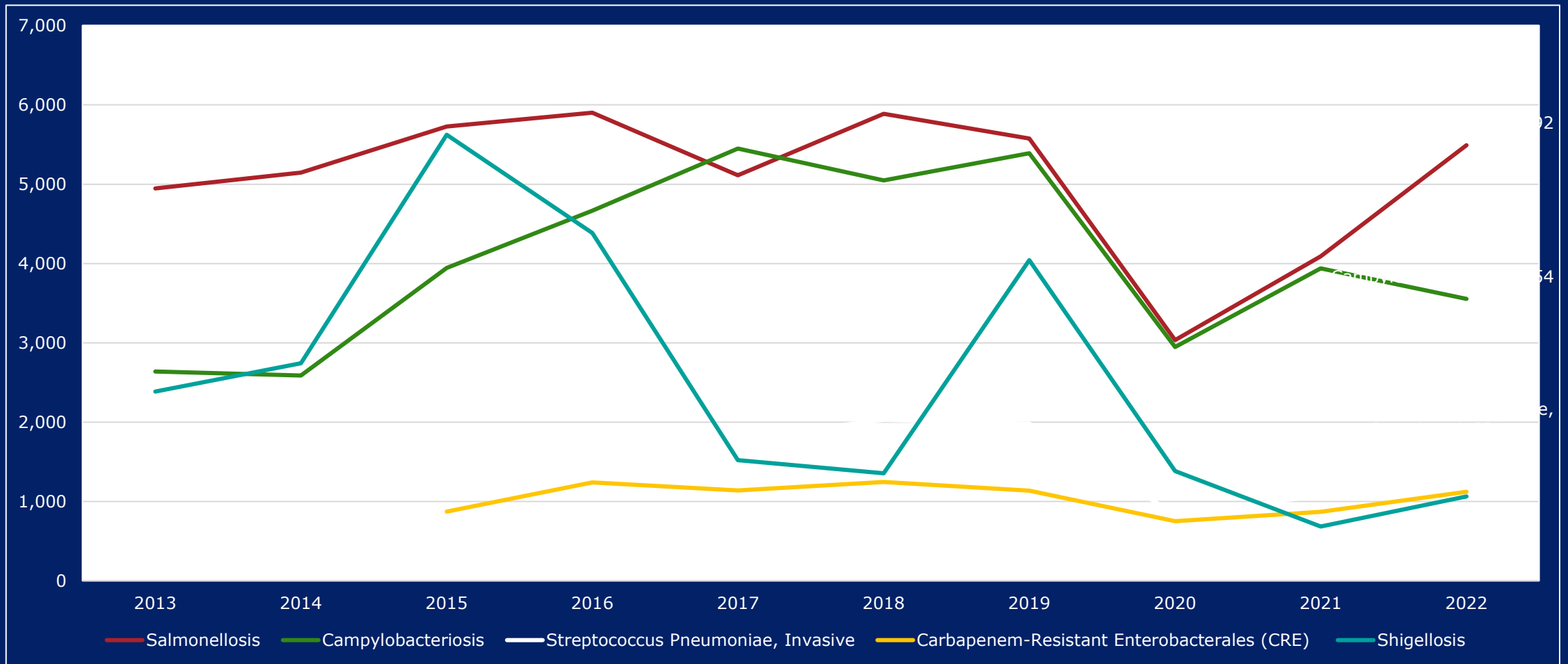
Top 10 Conditions 2022 Annual Report



2022 Finalized NEDSS Data, Texas Residents. Summaries available on the [DSHS Texas DSE Annual Report](#).
Produced by Texas DSHS, EAIDU, Data Analytics

Trends for the Top Five Conditions

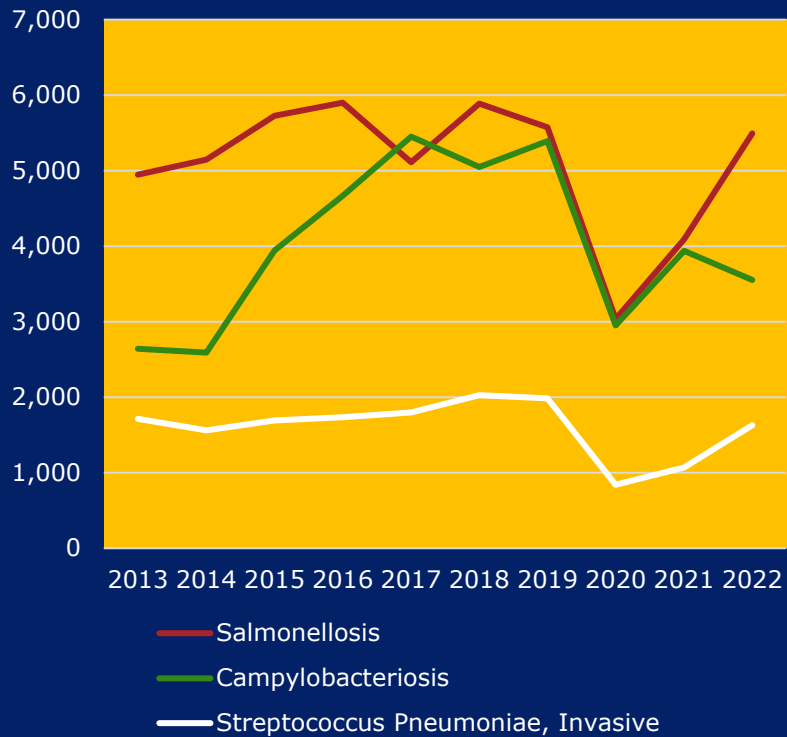
2022 Annual Report



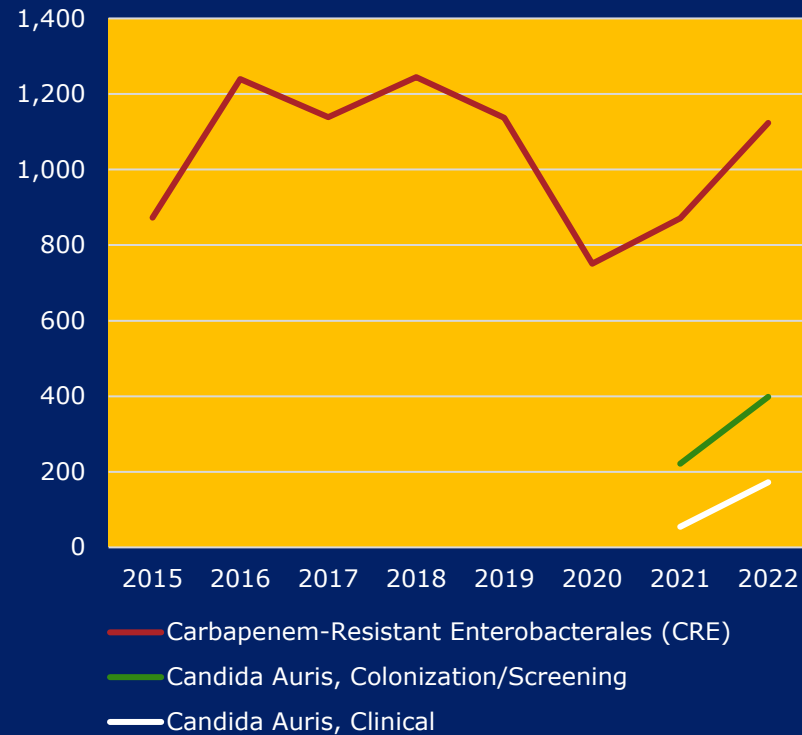
2013-2022 Finalized NEDSS Data, Texas Residents. Summaries available on the [DSHS Texas DSE Annual Report](#).
 Top 10 Most Commonly Reported Cases, 2022
 Produced by Texas DSHS, EAIDU, Data Analytics

Trends for the Top 3 Conditions by Unit, 2022 Annual Report

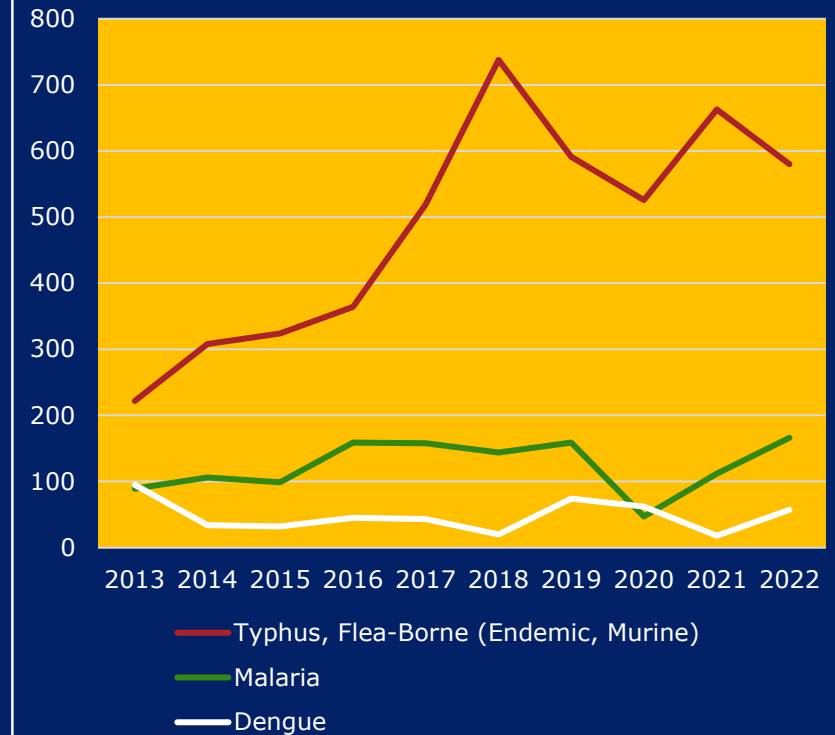
EAIDU



HSU



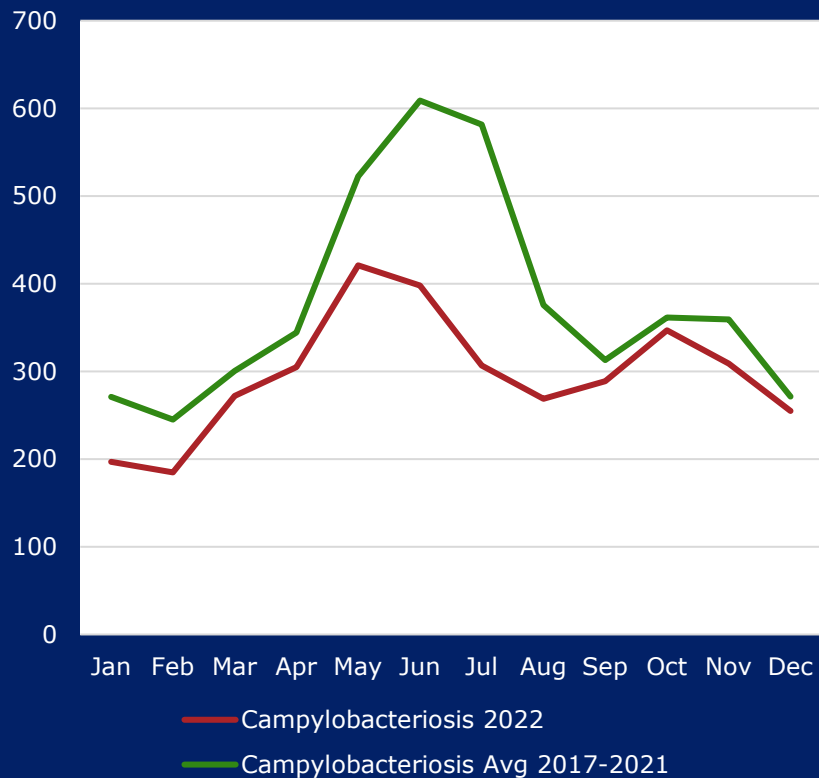
ZCB



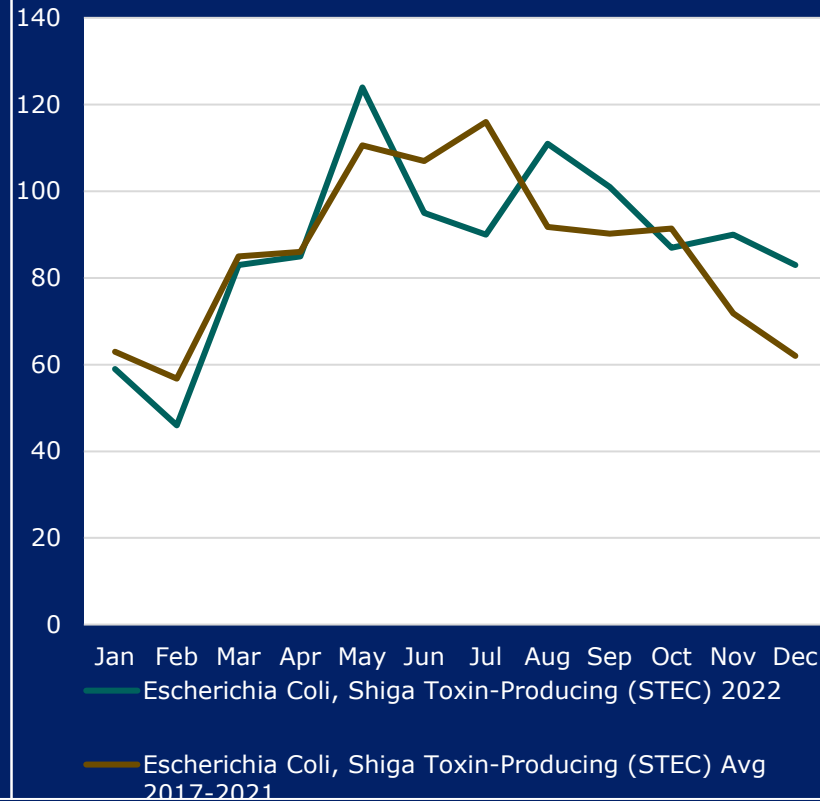
2013-2022 Finalized NEDSS Data, Texas Residents. Summaries available on the [DSHS Texas DSE Annual Report](#).
 Top 3 Most Commonly Reported Cases, 2022, by DSHS Unit (EAIDU, HSU, ZCB)
 Produced by Texas DSHS, EAIDU, Data Analytics

EAIDU Conditions' Cases by Month, 2022 versus Earlier

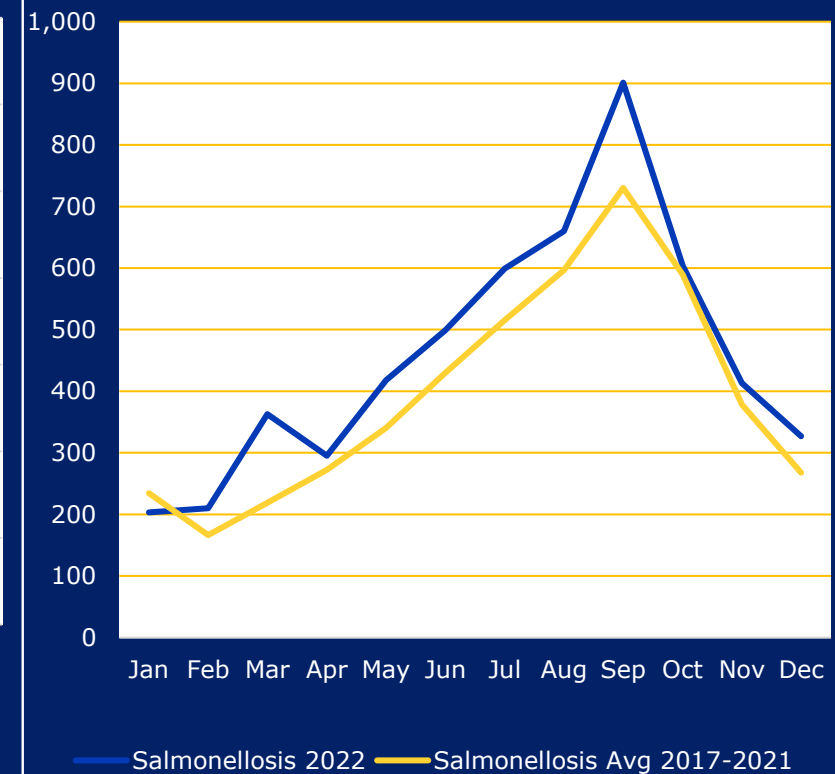
Campylobacteriosis Cases



STEC Cases



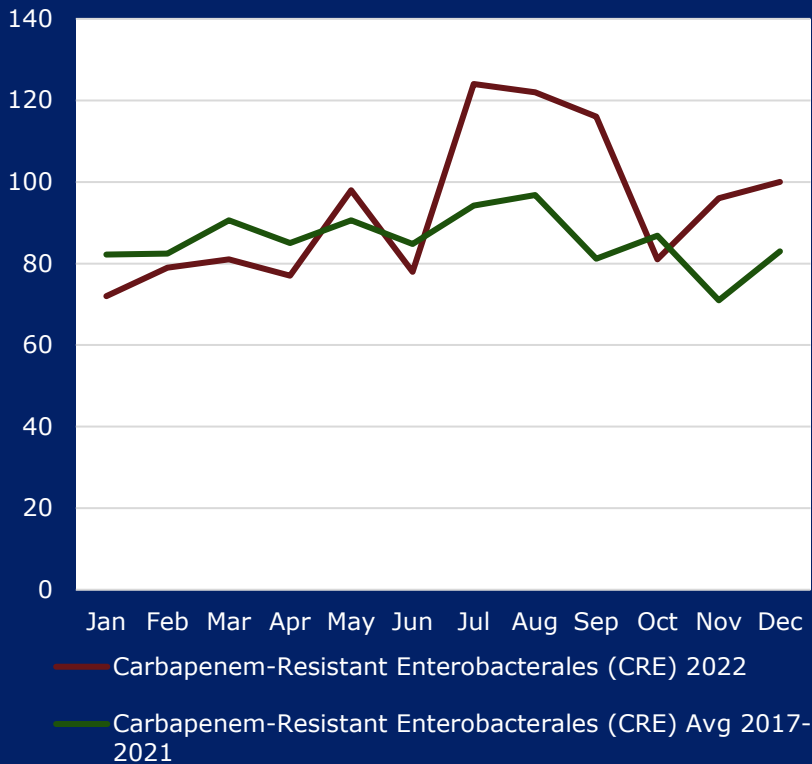
Salmonellosis Cases



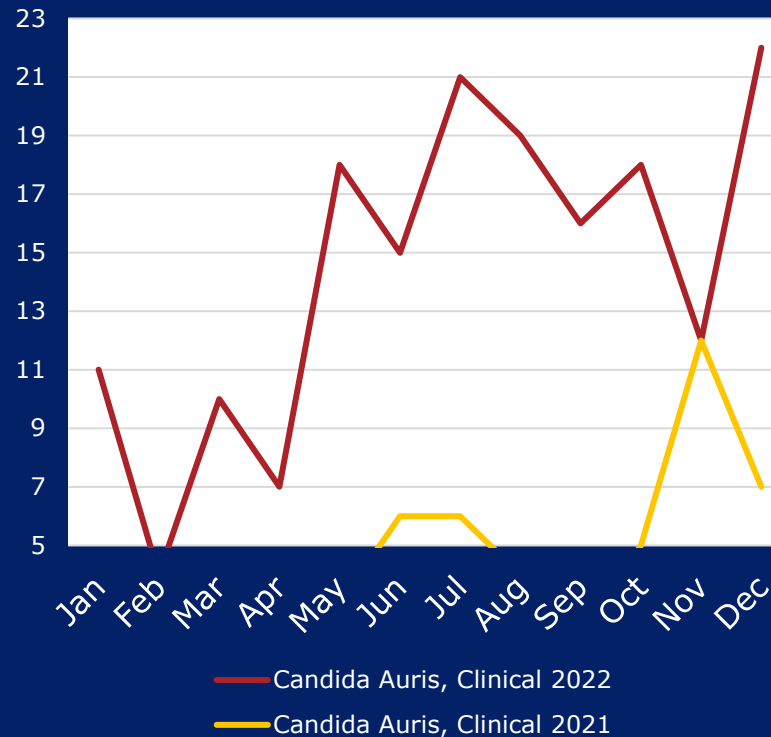
2013-2022 Finalized NEDSS Data, Texas Residents. Summaries available on the [DSHS Texas DSE Annual Report](#).
 Top 3 Most Commonly Reported Cases, 2022, for EAIDU
 Produced by Texas DSHS, EAIDU, Data Analytics

HSU Conditions' Cases by Month, 2022 versus Earlier

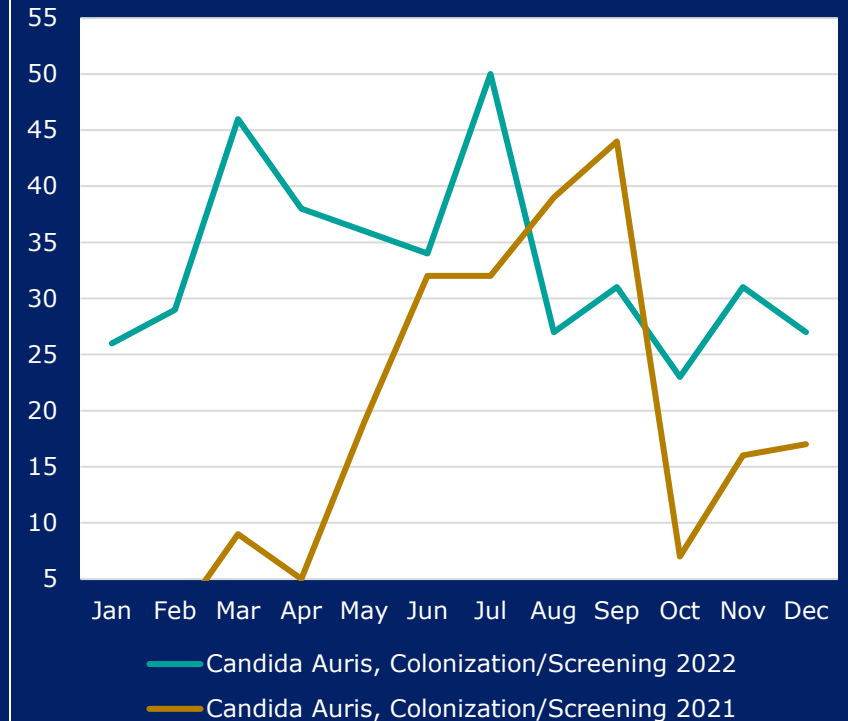
CRE Cases, 2022 vs 2017-2021
Average



Candida Auris, Clinical
Cases, 2021 vs 2022

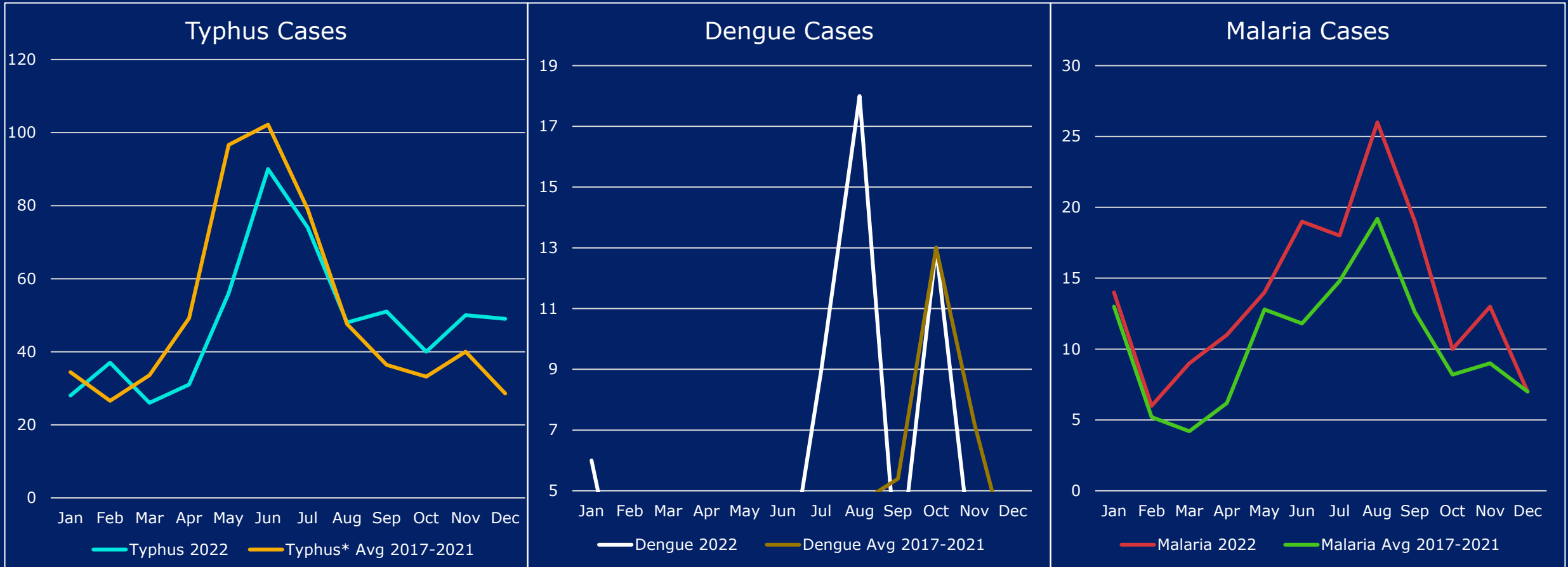


Candida Auris,
Colonization/Screening Cases,
2021 vs 2022



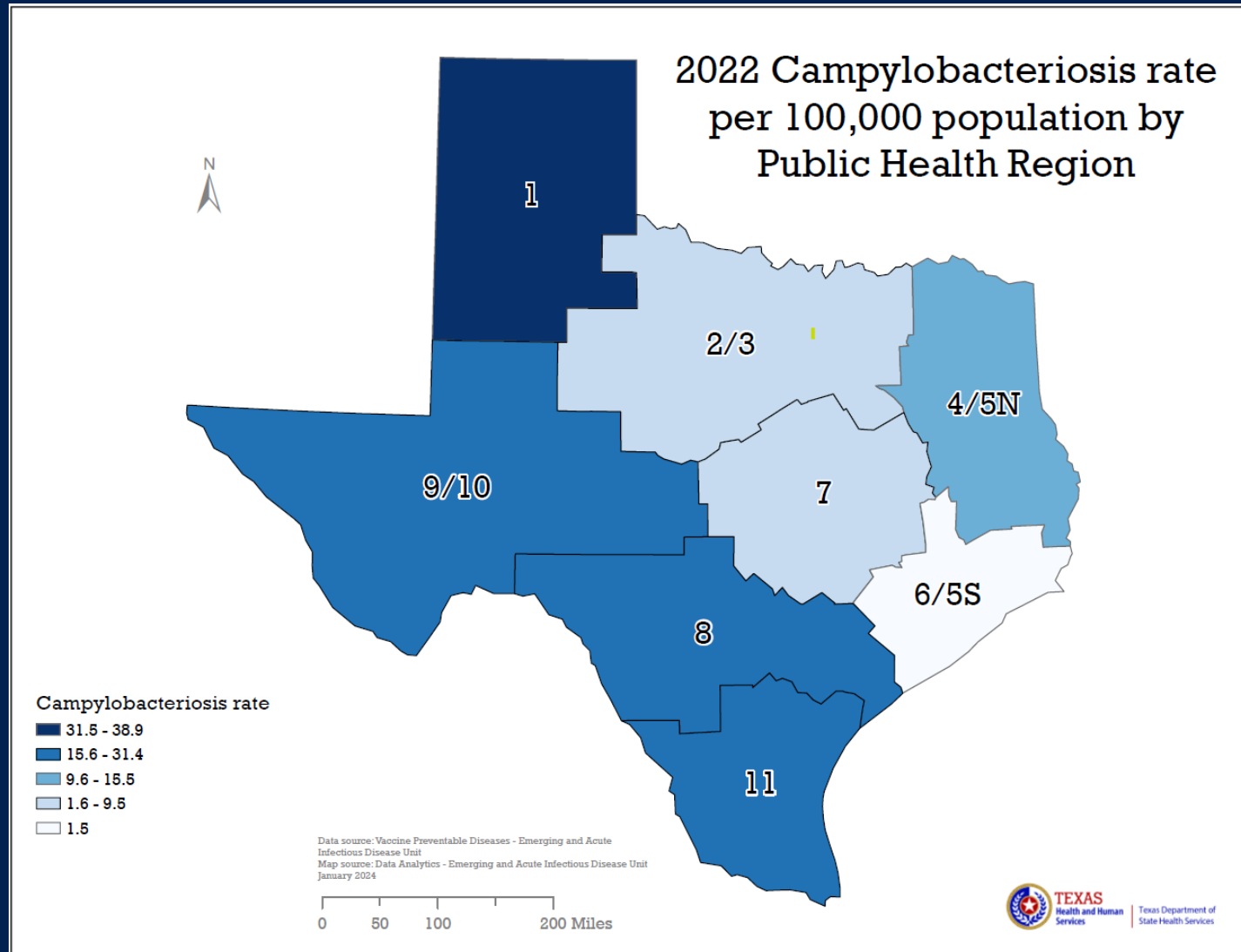
2022 Finalized NEDSS Data, Texas Residents. Summaries available on the [DSHS Texas DSE Annual Report](#).
Top 3 Most Commonly Reported Cases, 2022, for HSU
Produced by Texas DSHS, EAIDU, Data Analytics

ZCB Conditions' Cases by Month, 2022 versus Earlier



2022 Finalized NEDSS Data, Texas Residents. Summaries available on the [DSHS Texas DSE Annual Report](#).
 Top 3 Most Commonly Reported Cases, 2022, for ZCB
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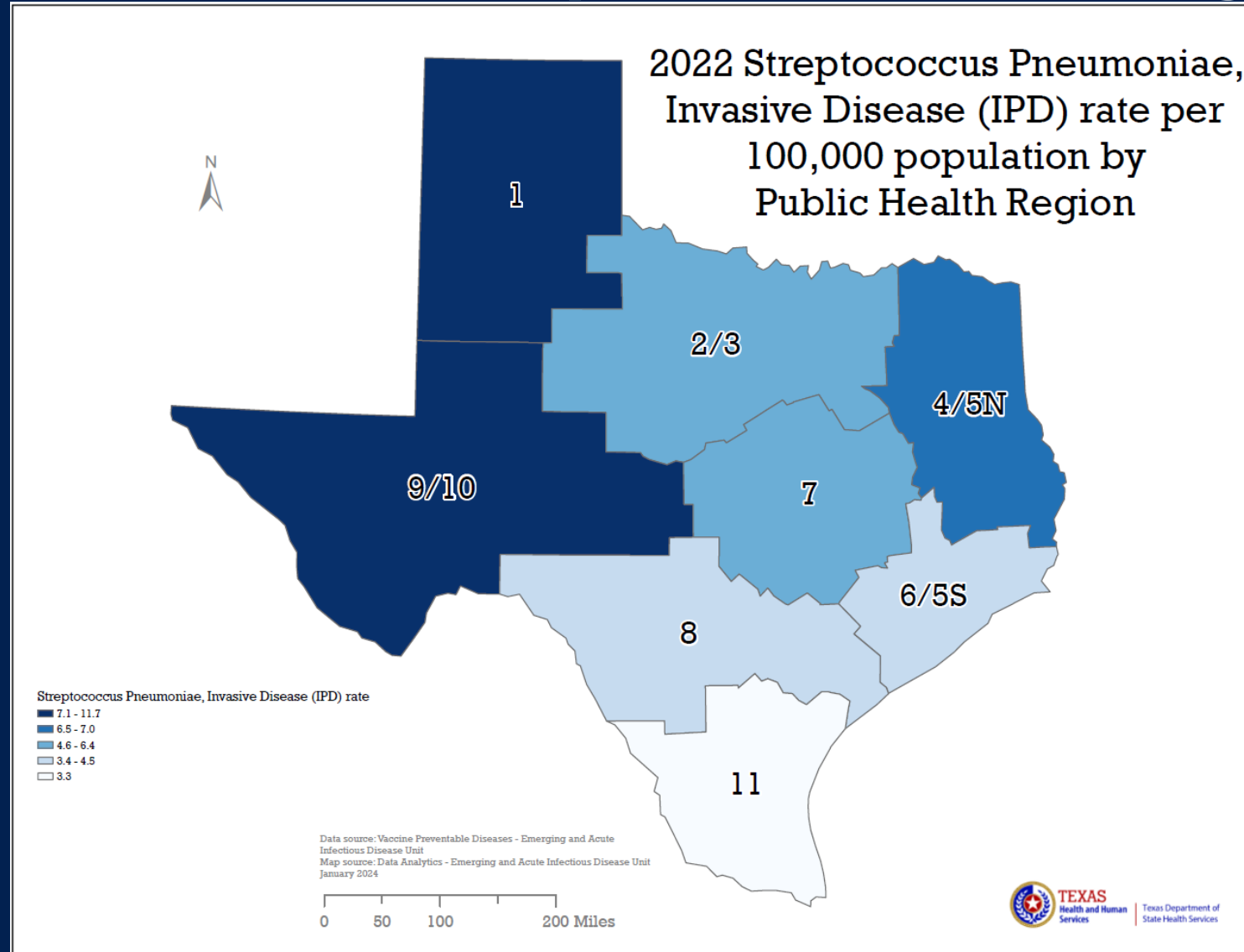
EAIDU Conditions by Public Health Region, 2022



2022 Finalized NEDSS Data, Texas Residents. Summaries available on the [DSHS Texas DSE Annual Report](#).

Produced by Texas DSHS, EAIDU, Data Analytics

EAIDU Conditions by Public Health Region, 2022



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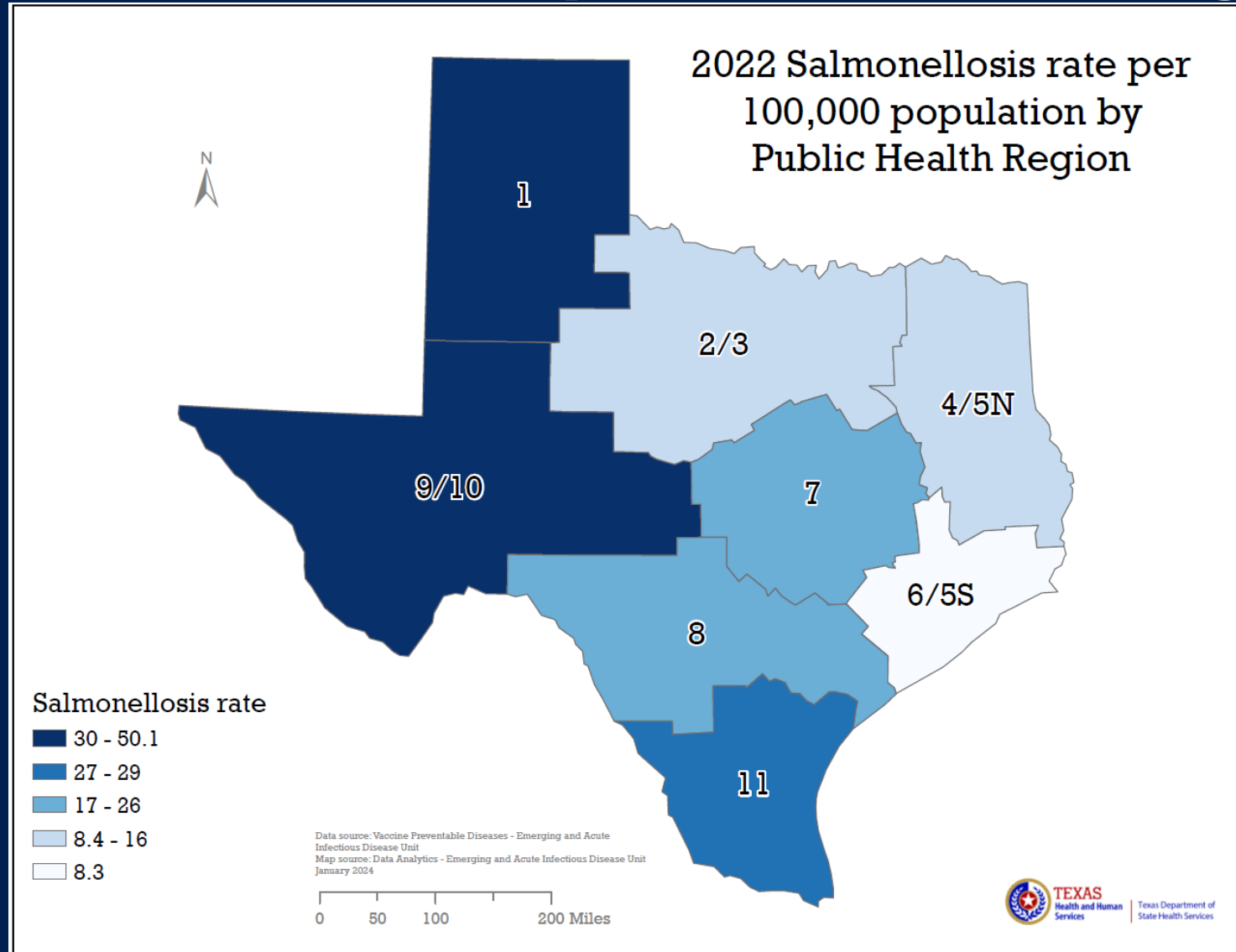


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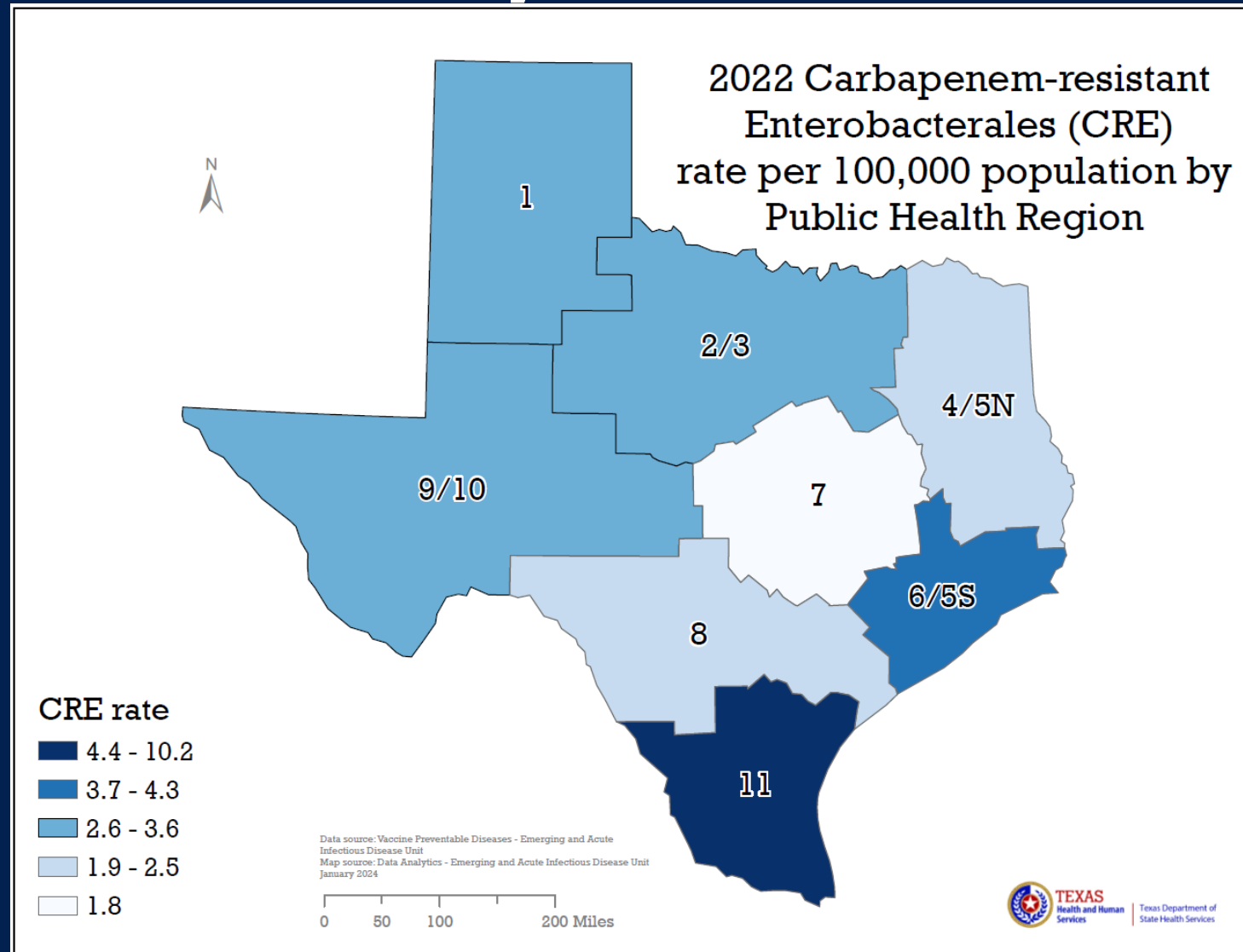
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EAIDU Conditions by Public Health Region, 2022



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HSU Conditions by Public Health Region, 2022



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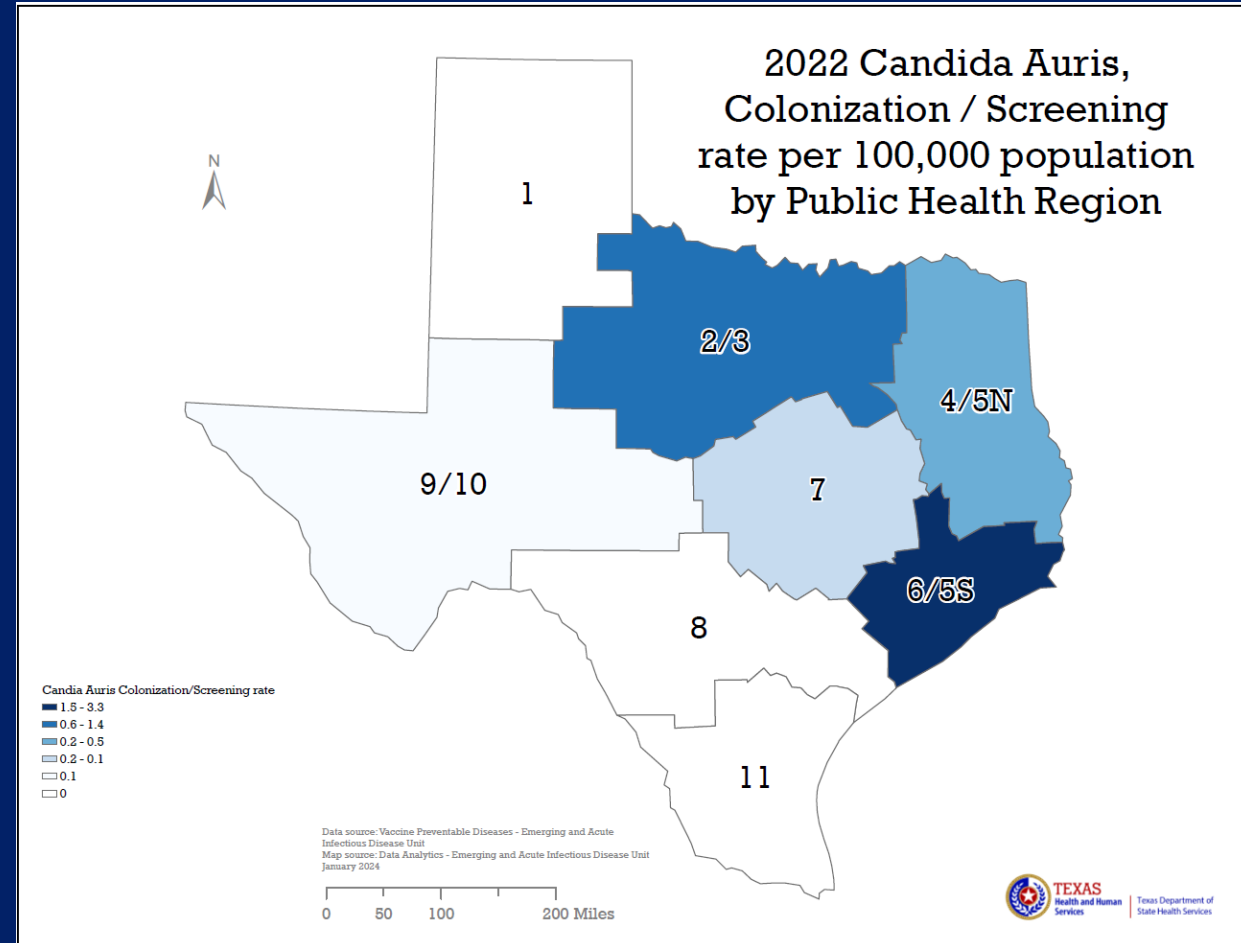
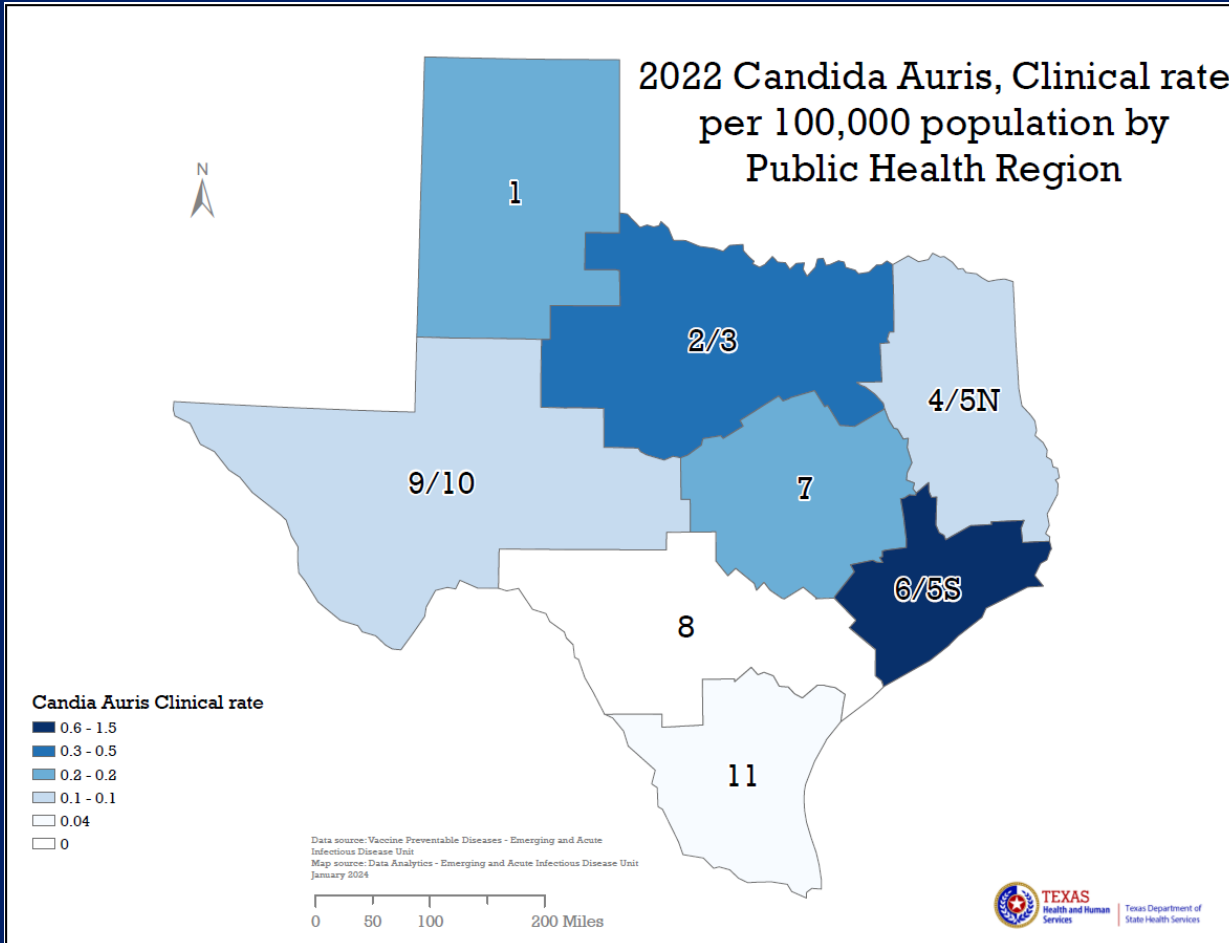


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HSU Conditions by Public Health Region, 2022



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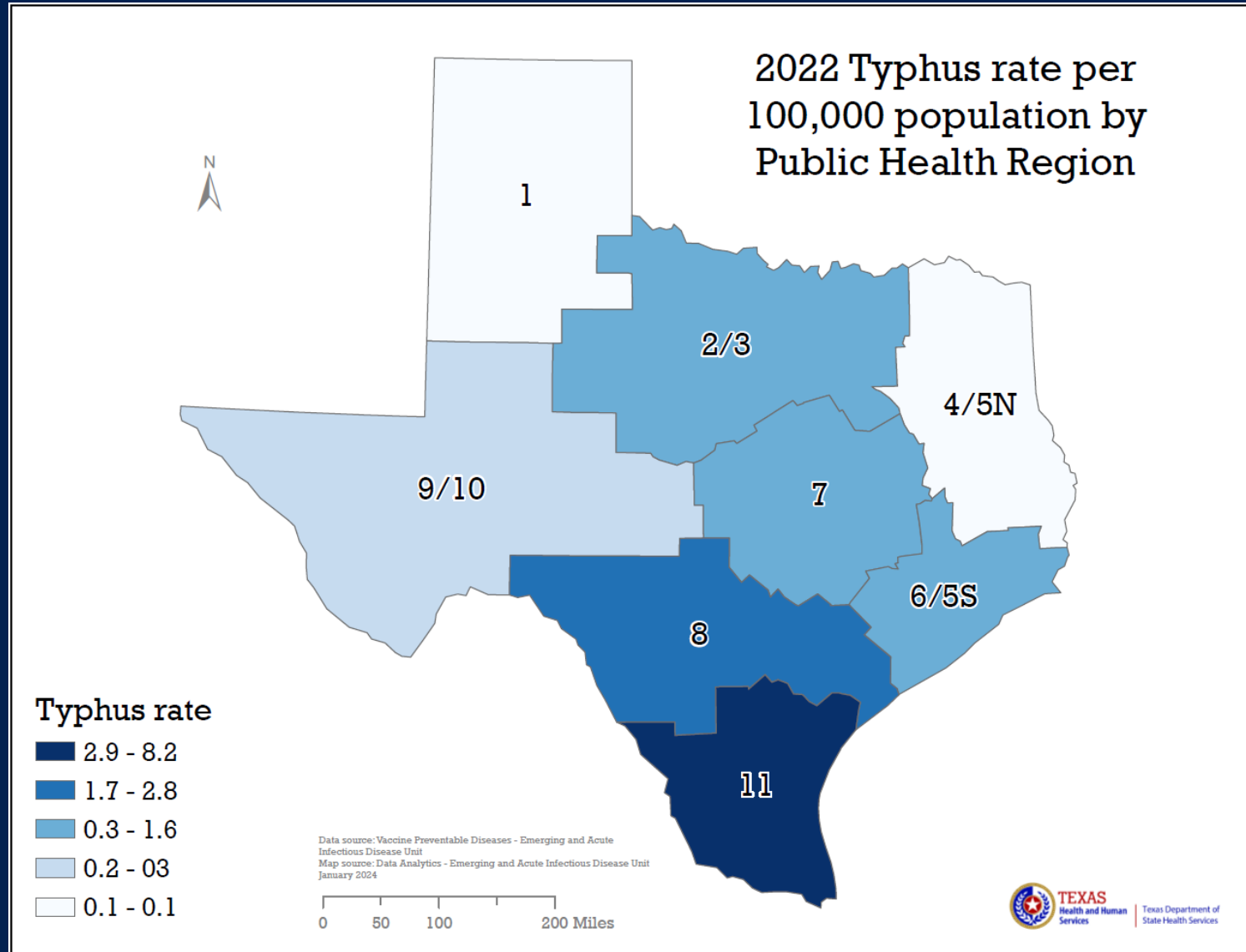
Typhus Rate by Public Health Region, 2022



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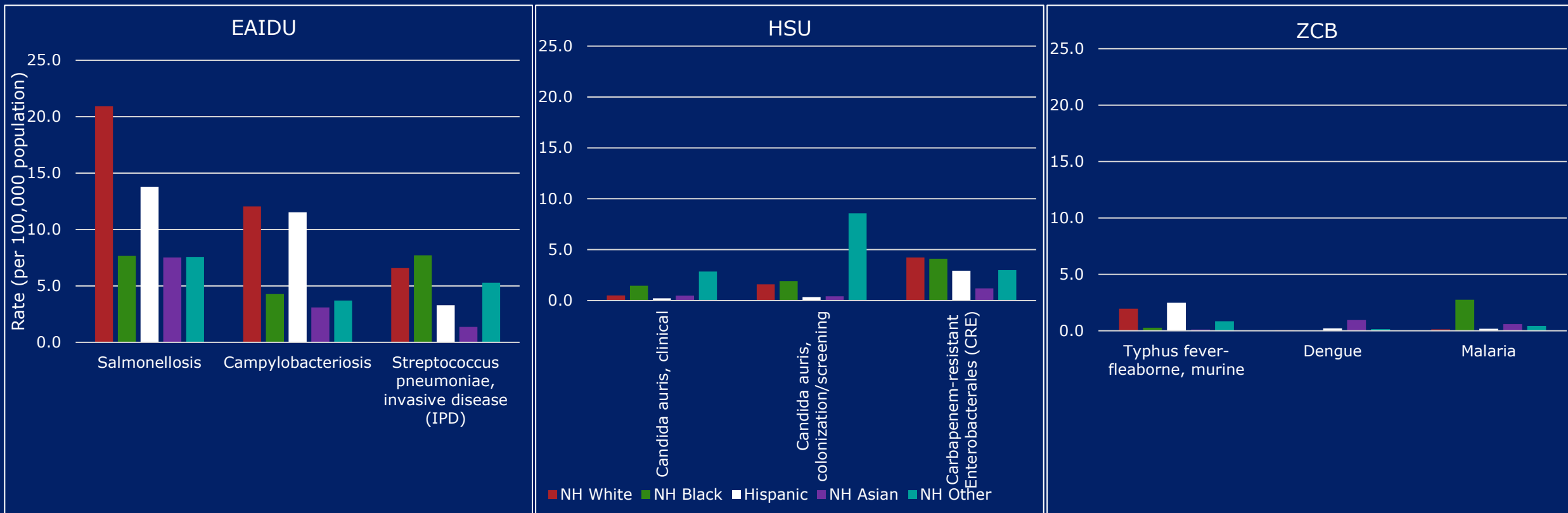
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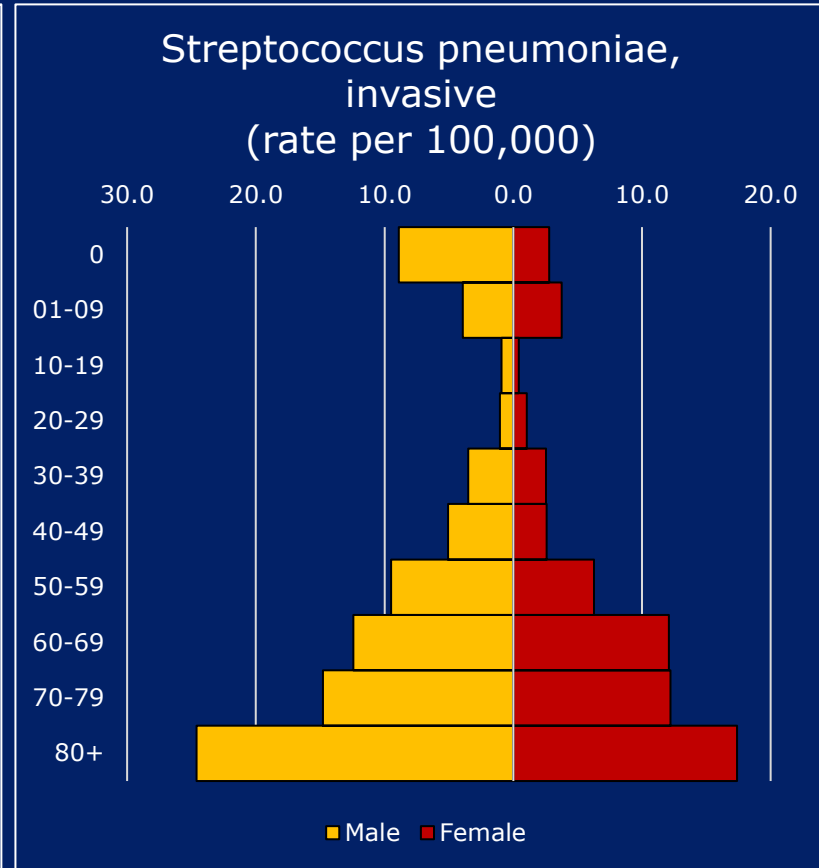
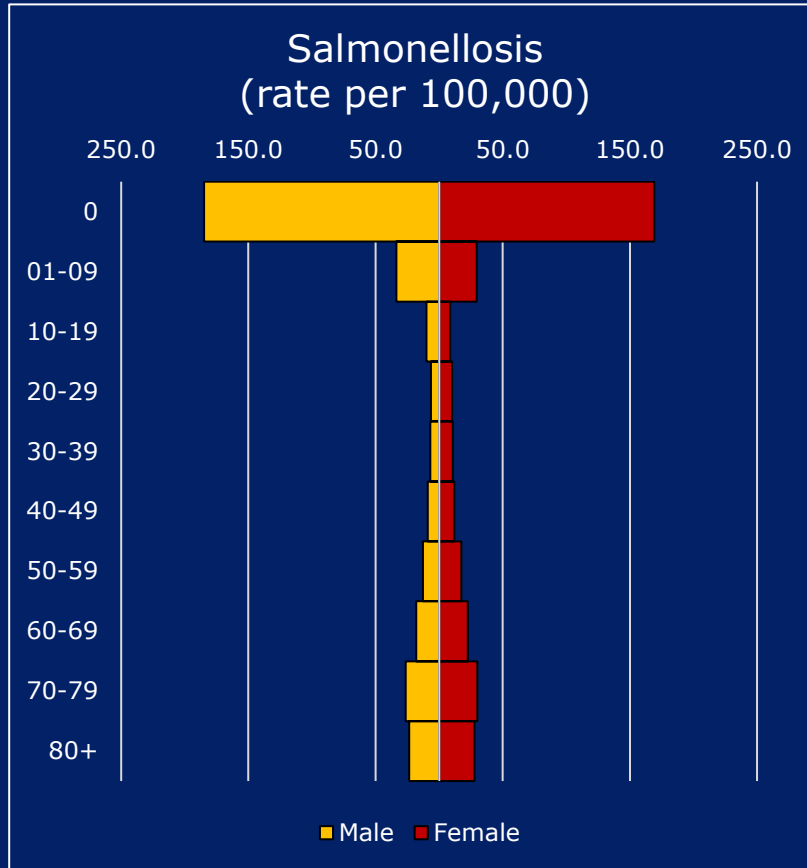
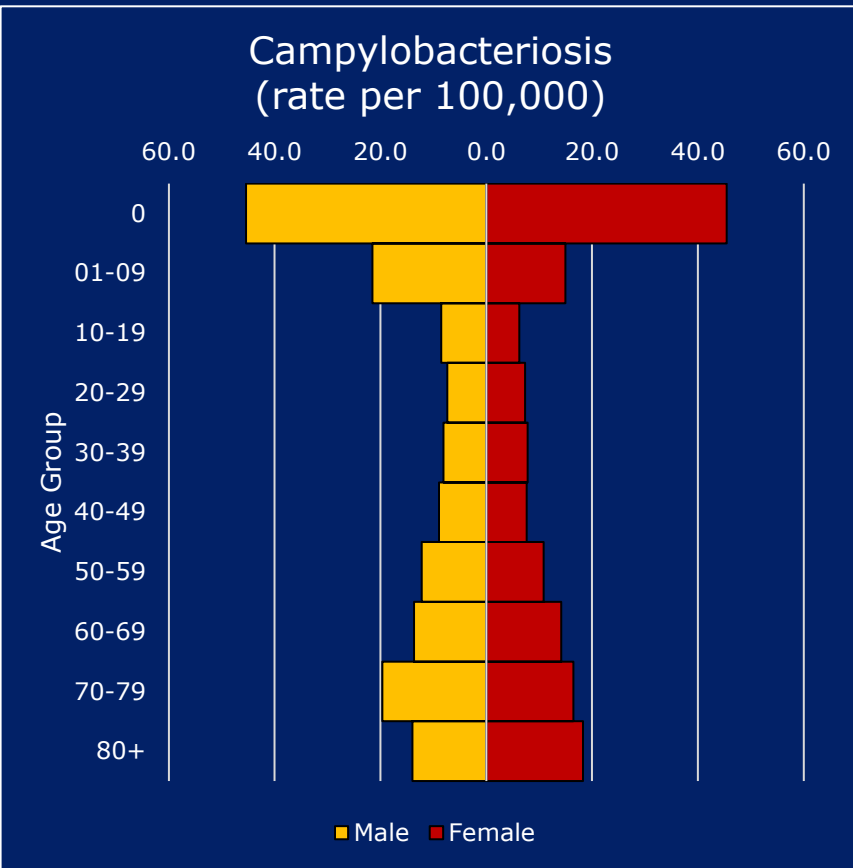
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Top 3 Conditions for Each Unit by Race/Ethnicity, 2022



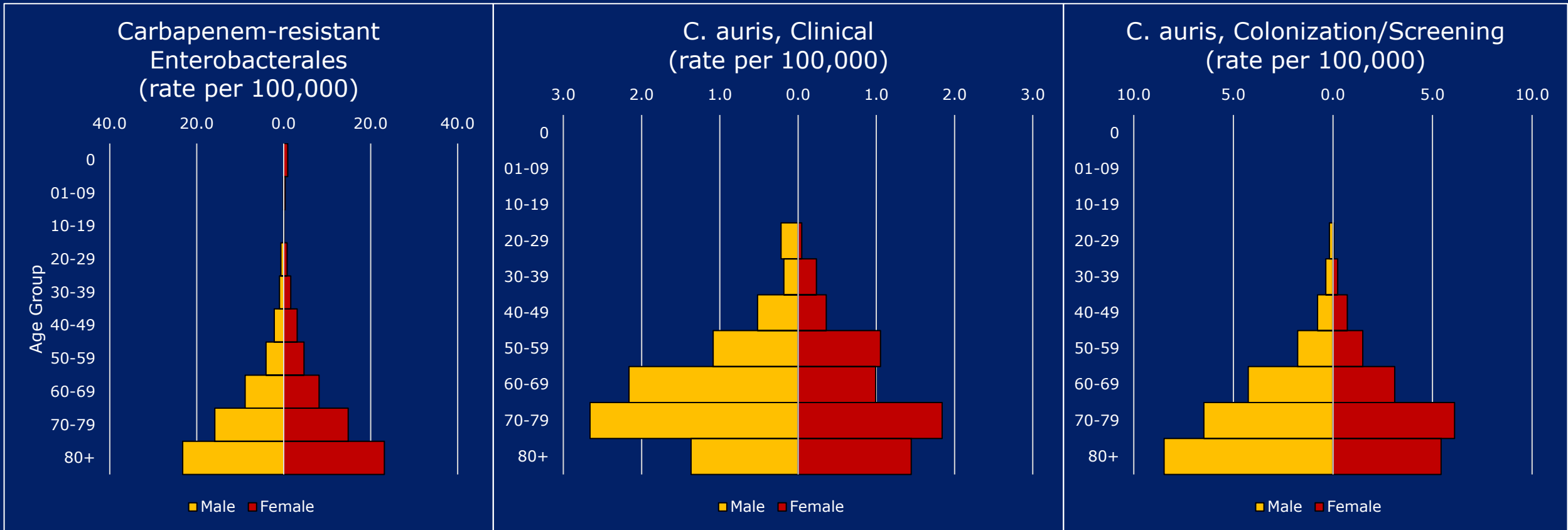
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EAIDU Conditions by Gender and Age Group, 2022



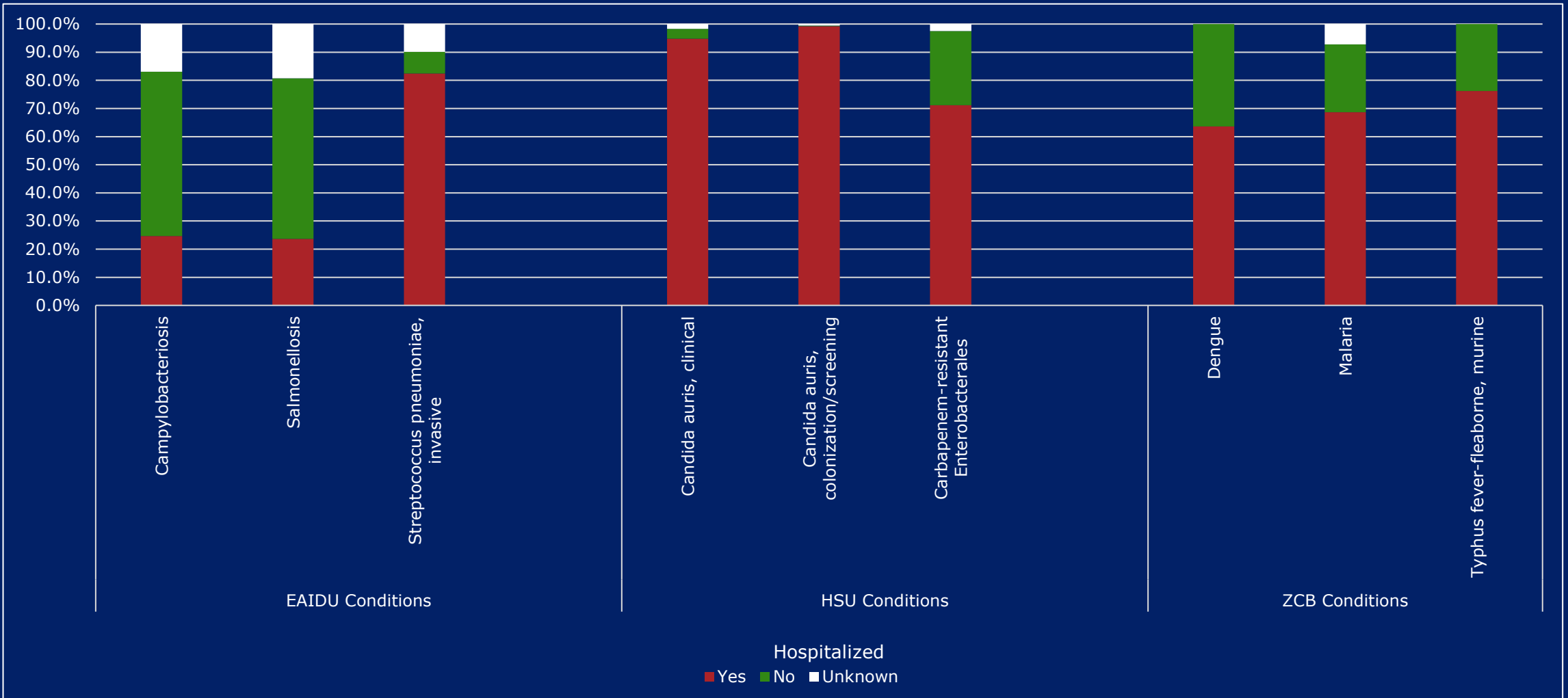
2022 Finalized NEDSS Data, Texas Residents. Summaries available on the [DSHS Texas DSE Annual Report](#).
 Top 3 Most Commonly Reported Cases, 2022, for EAIDU
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HSU Conditions by Gender and Age Group, 2022



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 Top 3 Most Commonly Reported Cases, 2022, for HSU
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Percent of Patients Hospitalized by Condition, 2022



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2023 Data Quality Assurance (QA): Overview, Tips, & Tricks

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Office of the Chief State Epidemiologist

Texas Department of State Health Services



Introduction

- DSHS Data Quality Assurance (QA) is conducted by EAIDU's Data Analytics Team (DA)
- Central Office QA is conducted to support Regional and Local QA
- These QA efforts are complementary to the Annual Data QA conducted to support CDC year-end data finalization
- Data QA is utilized to ensure all NEDSS case investigation fields are filled for reporting

QA Content



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- MMWR Year & MMWR Week
- More About Event Date
- Earliest Date Suspected Check Changed to Event Date
- Other Important QA Fields
- Investigation Case Status
- NEDSS Notifications

MMWR Year & MMWR Week

- In 2024, cases entered for MMWR* Year 2023 will need to be manually edited for year and entered with MMWR Week 52
- There is no MMWR Week 53 in MMWR Year 2023
- MMWR Year for cases should be assigned based on event dates – which is calculated using the earliest date from a set hierarchy
- Case Status, Condition, or MMWR Week and Year should not be altered for any case with an MMWR year prior to 2023

*MMWR = Morbidity and Mortality Weekly Report (which specifies a MMWR Week and MMWR Year for Reporting)
Data Source: Centers for Disease Control and Prevention



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MMWR Year & Week Example for Pagebuilder*

Case Status

Transmission Mode:
Detection Method: Provider reported
Confirmation Method: Laboratory confirmed
Confirmation Date: 01/07/2023
Case Status: Confirmed
MMWR Week: 52
MMWR Year: 2022

*Pagebuilder pages: A page type within the NEDSS web system that includes updated formatting and reporting capabilities.



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MMWR Year & Week Example for Legacy*

Epidemiologic

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Is this patient associated with a day care facility? No
Is this patient a food handler? No
Is this case part of an outbreak? No

Where was the disease acquired? Indigenous, within jurisdiction

Transmission Mode: Indeterminate

Detection Method: Provider reported

Confirmation Method: Laboratory confirmed

Confirmation Date: 03/01/2023

Case Status: Confirmed

MMWR Week: 52

MMWR Year: 2022



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*Legacy pages: A page type within the NEDSS web system that has wide compatibility but older formatting and fewer capabilities than Pagebuilder pages. Efforts are underway to convert Legacy pages to Pagebuilder pages over time.

More About Event Date

- Event Date is created and updated whenever a date is changed in NEDSS
- Event Date is calculated using the earliest day from the following hierarchy:
 - Onset Date
 - Diagnosis Date
 - Earliest Date Reported to County
 - Earliest Date Reported to State
 - PHC Add Date (Date Investigation was Created)
- MMWR Year and MMWR Week should be set to match Event date



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More About Event Date

- For most conditions, the year of occurrence should be based on Onset Date
- If Onset Date is unknown, the earliest known date such as Diagnosis Date or Specimen Collection Date should be used as event date to determine appropriate MMWR Week and MMWR Year
- If Onset Date is in a previous year and was not reported during that year (e.g., Lyme Disease chronic for 2 years before diagnosis), leave Onset Date blank, record the reported/suspected onset date in comments, and utilize Diagnosis Date to drive Event Date and MMWR Year.



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Earliest Date Suspected Check Changed to Event Date



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- Previously, our DA team checked Symptom Onset Date against Earliest Date Suspected, but Earliest Date Suspected is frequently not entered or used
- Going forward, Earliest Date Suspected will no longer be used as a check against Onset Date. Instead, Event Date will now be used as a check against Onset Date

Other Important QA Fields

- Case Status
- Jurisdiction
- County & State
- Date of Birth
- Age
- Sex
- Race/Ethnicity



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Investigation Case Status

- All cases entered in NEDSS must be closed with the investigation case status code set to Closed (C)
- Cases with Investigation Status "Open" or "Blank" under tab "investigation status" will need to be changed
- Example:

Investigation Summary

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* **Jurisdiction:** Dallas CO Health and Human Servcs

Program Area: IDEAS - Waterborne

State Case ID:

Investigation Start 02/18/2022

Date:

Investigation Status: Closed

Share record with Guests for this Program Area and Jurisdiction



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NEDSS Notifications

- Notifications from NEDSS allow reportable cases entered and completed to be sent to CDC's MVPS system*
- Reportable cases can only be sent to CDC's MVPS system if they are closed out and a notification is sent
- To check if a notification is completed you can find it from the Patient's Case ID in "Events" under "Patient Events History" titled "Notification"



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Summary	Events	Demographics		
Go to: Investigations Lab Reports Morbidity Reports Vaccinations Treatments Documents Contact Records				
Patient Events History				
<input checked="" type="checkbox"/> Investigations (1)				
Start Date	Status	Condition	Case Status	Notification
02/18/2022	Closed	Campylobacteriosis	Confirmed	COMPLETED

*CDC's [Message Validation, Processing, & Provisioning \(MVPS\)](#) System: A software system that receives data from jurisdictions, helps process them, and compiles them for national reports.

NEDSS Notifications Continued

- Notifications are only confirmed to be sent if the example previously shown is labeled “Completed”
- Sometimes notifications result in errors and sometimes the notification isn’t created. Please check the notification status of cases, especially if the case has not received a review from the Central Office team
- Central Office teams will notify Regions & Locals if further action is needed to a case to correct notification errors



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Summary for Q&A



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- QA assists with the Annual Data QA conducted to support CDC year-end data finalization
- 2023 Cases entered in 2024 need to have MMWR Year & Week manually edited
- Earliest Date Suspected will no longer be used as a QA Check
- Ensure cases are closed out in Investigation Case Status to assist with NEDSS notifications to CDC

Data source when not otherwise specified: Texas NEDSS, Texas Notifiable Conditions, finalized datasets. Summaries available on the [DSHS Texas DSE Annual Report](#).

Prepared by: Texas DSHS EAIDU-Data Analytics Team on 01/24/2024



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Thank You

EAIDU-DataAnalytics@dshs.texas.gov