NARMS Now: Human Data Navigation Guide

National Center for Emerging and Zoonotic Infectious Diseases
Division of Foodborne, Waterborne, and Environmental Diseases

Overview

- **NARMS Now: Human Data, an interactive tool from CDC**
  - makes it easy and quick to find out about antibiotic resistance in bacteria isolated from sick people
    - data are available for *Campylobacter*, *E. coli* O157, *Salmonella*, and *Shigella*—bacteria transmitted commonly through food
  - allows users to access antibiotic resistance data by bacterial species and serotype, antibiotic, year, and geographic region
  - illustrates how resistance has changed over time
    - data can be viewed on interactive maps, graphs, or tables
  - provides access to the most up-to-date results

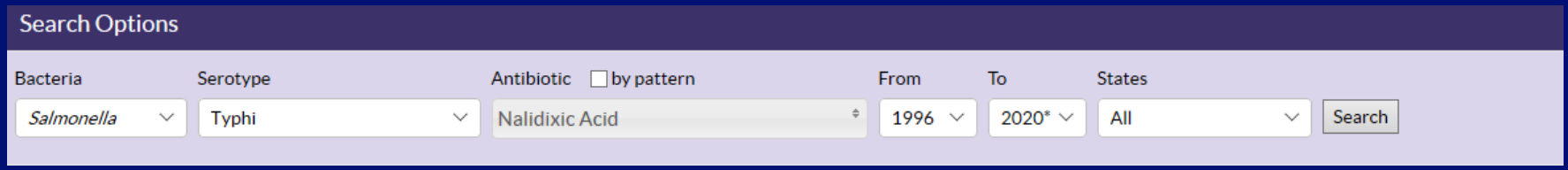
Getting Started

With NARMS Now: Human Data,
you can access human antibiotic resistance data online at

www.cdc.gov/narmsnow

Searching NARMS Now: Human Data

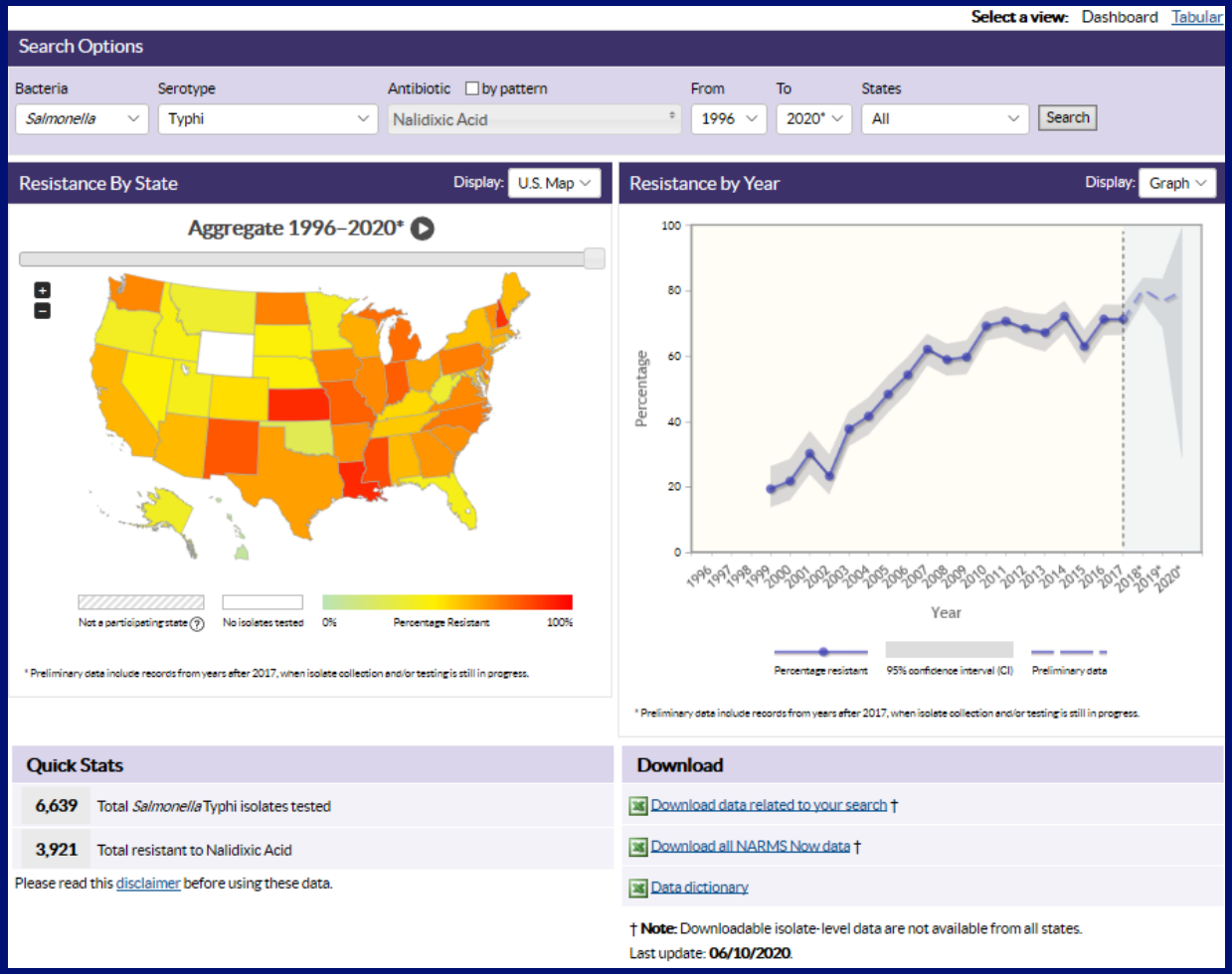
- Go to www.cdc.gov/narmsnow.
- There you'll see the search options where you can apply filters based on your interests.



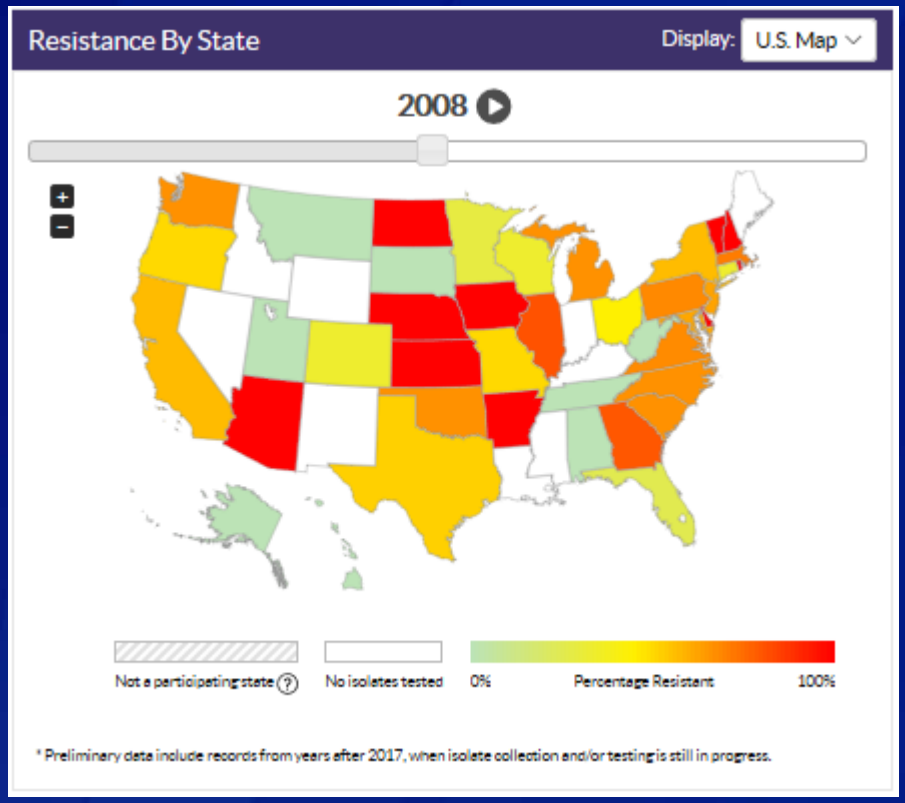
- Bacteria: Choose *Salmonella*, *Shigella*, *E. coli* O157, or *Campylobacter*
- Species or serotype: Choose the species or serotype
- Antibiotic: Choose one or more antibiotics
  - Select "by pattern" to choose common antimicrobial combinations
- Year range: Choose the date range
- Site(s): Choose all states or a specific state.

Using the Dashboard

After you define search criteria and click “Search”, the dashboard will show a map, line graph, and quick statistics.

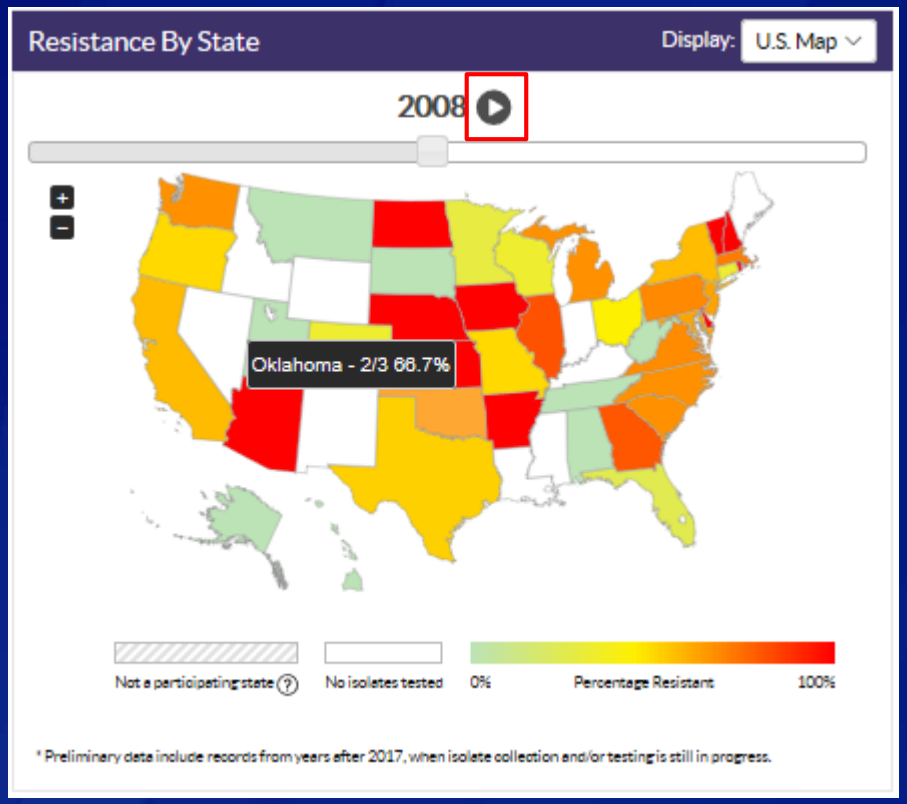


Viewing the Map



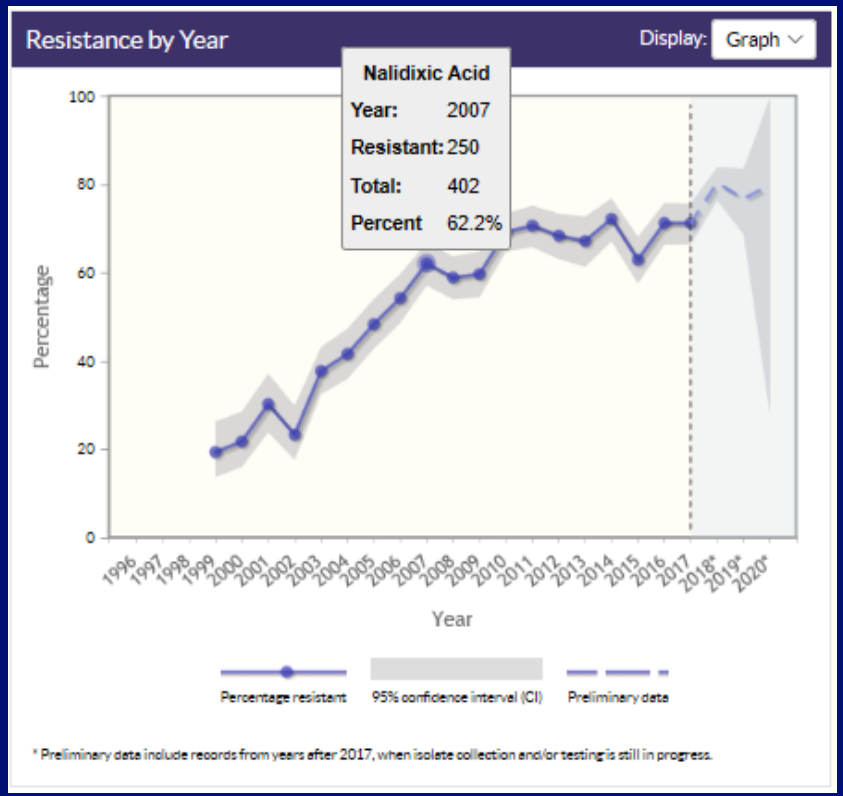
- Each state is highlighted in a color based on the percentage of isolates resistant that year.
  - Red is for the states with the highest percentage of resistant isolates while green is for the states with the lowest percentage of resistant isolates
- States that did not participate in NARMS that year are shaded grey with white hash marks.
- States with no isolates tested that year are white.
- Years where only preliminary data are available are followed by an asterisk.

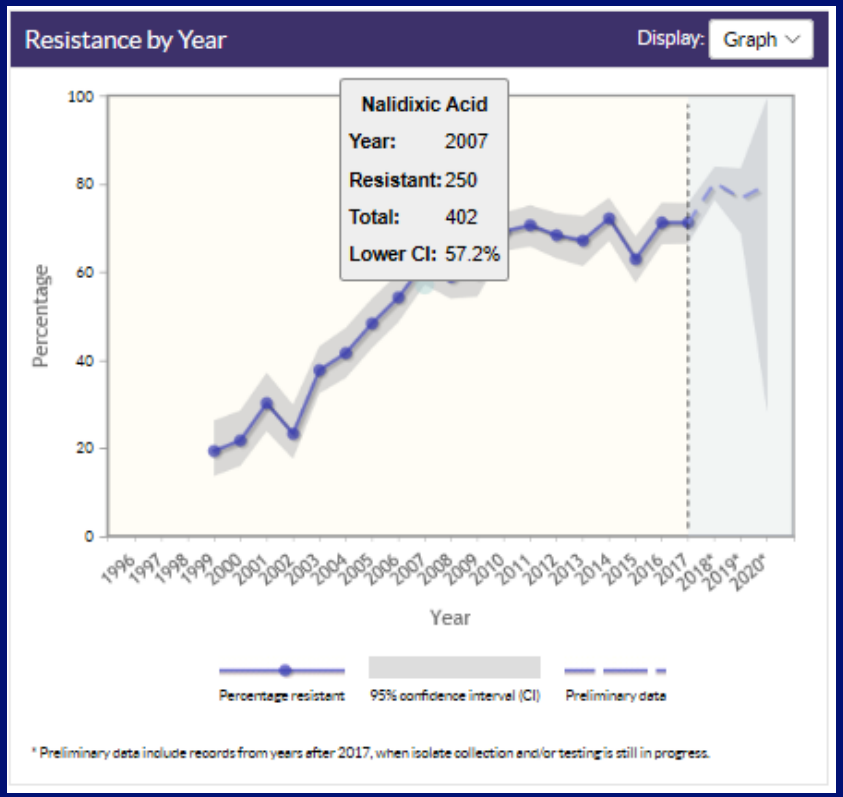
Using the Map



- Press the button above the map to see data by year.
- Hit the button to stop at a specific year.
- Place cursor over a state to display the percentage of isolates resistant for the selected year.

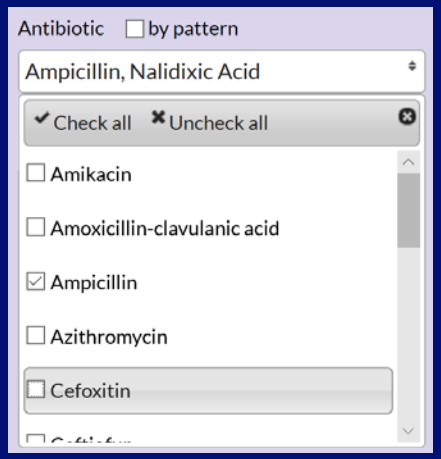
Viewing the Line Graph



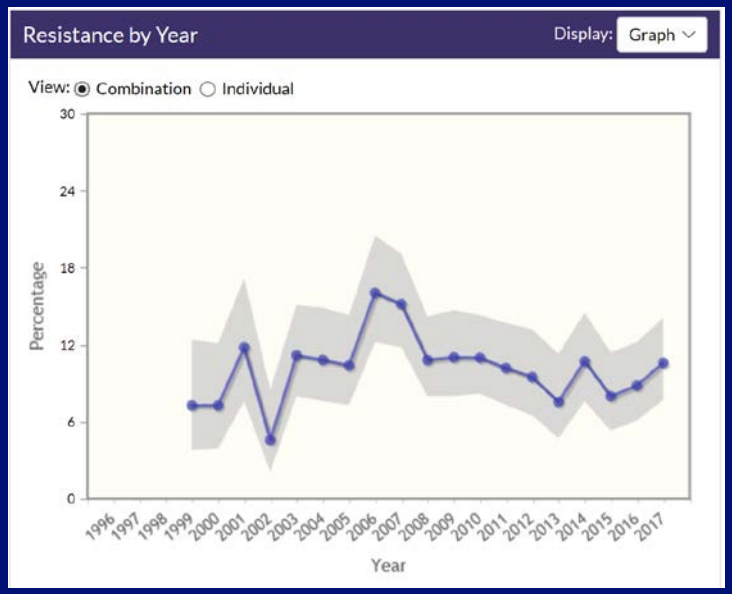


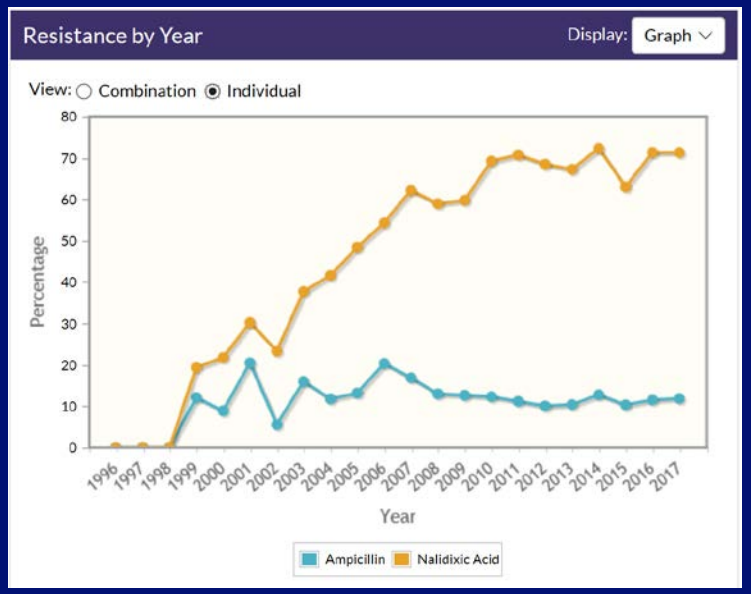
- Place cursor over a data point to see the percentage of isolates resistant for that year.
- Place cursor above and below the data point to see the upper and lower 95% confidence intervals.
- Data in the shaded area to the right of the vertical dashed line represent preliminary years.

Selecting Multiple Antibiotics

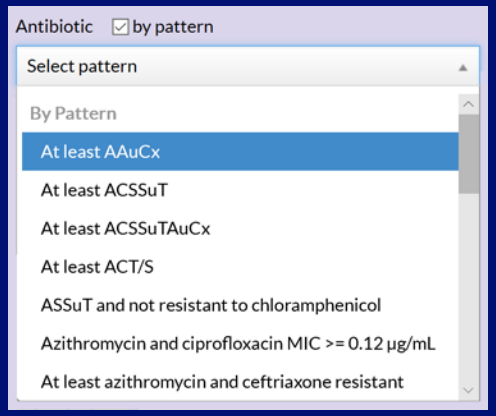


- Select more than one antibiotic in the antibiotic selection list
- In the line graph, you can view the data in two ways:
  - Combination – resistance to both antibiotics is displayed with confidence intervals
  - Individual – resistance to each antibiotic is shown in separate lines. Each antibiotic can be toggled on or off in the key for the line graph.

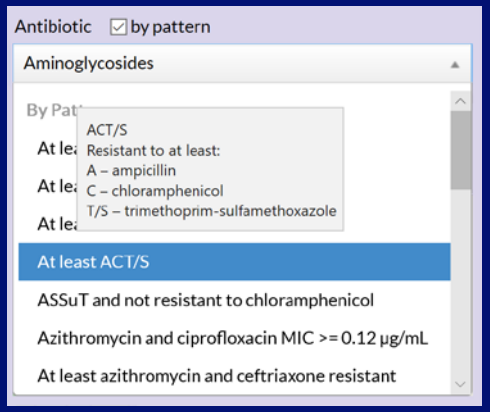


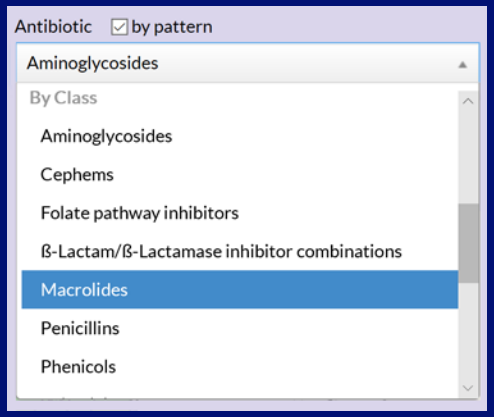


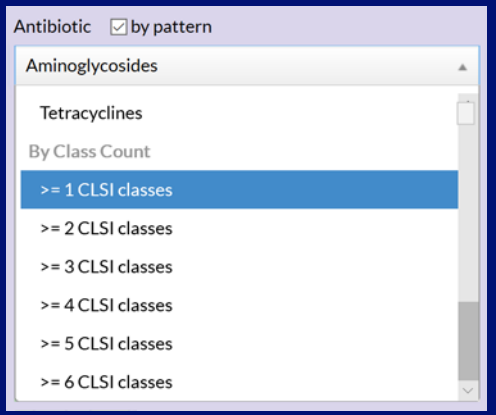
Selecting Common Antibiotic Patterns



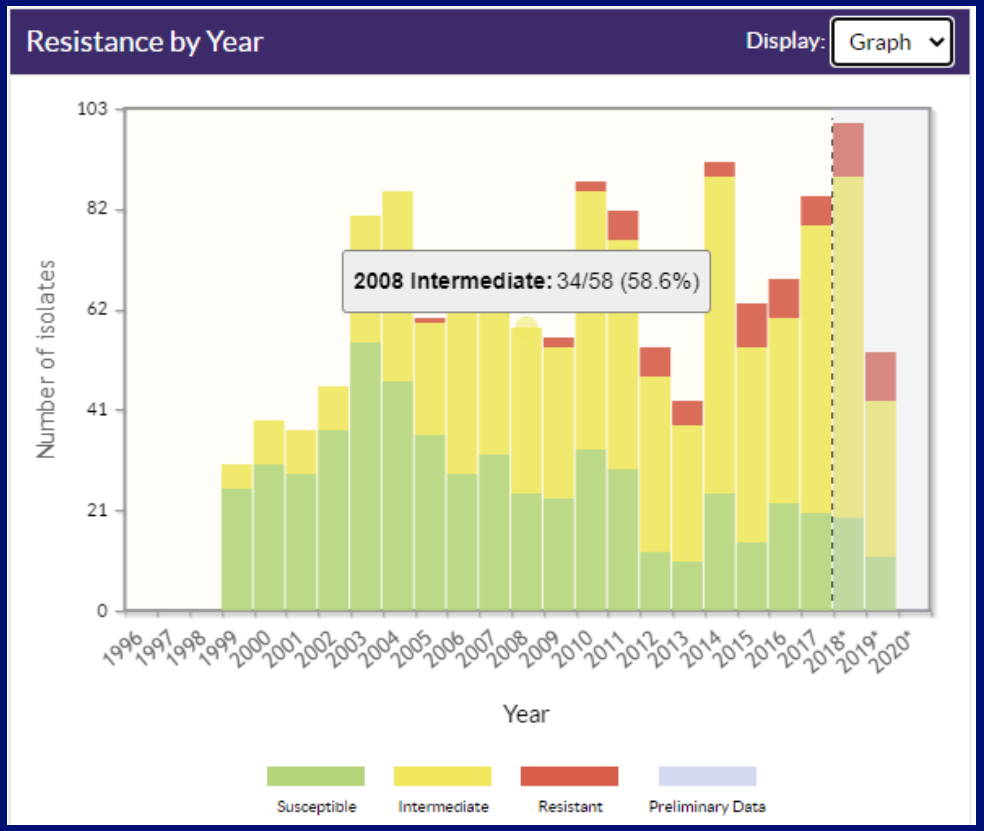
- Check “by pattern” above the antibiotic select list to see selection options for various antibiotic groupings
- You can select different types of patterns:
  - By Pattern – by common multi-drug resistant (MDR) patterns. Cursor over the pattern to see the antibiotics included
  - By Class – by common Antimicrobial classes
  - By Class Count – by CLSI (Clinical and Laboratory Standards Institute) counts





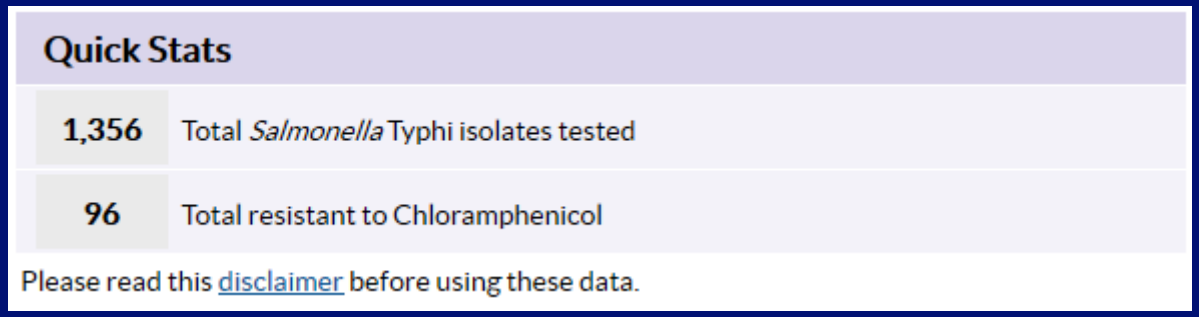


Viewing Resistance by Year for One State



Place cursor along the bar to see the number and percentage of isolates that were susceptible, intermediate, and resistant for each year selected.

Viewing Quick Stats



Quick Stats	
1,356	Total *Salmonella* Typhi isolates tested
96	Total resistant to Chloramphenicol

Please read this disclaimer before using these data.

- Quick stats provide statistics on the number of isolates tested and number of resistant isolates for all selected years.

Viewing Data Tables

NARMS Now: Human Data

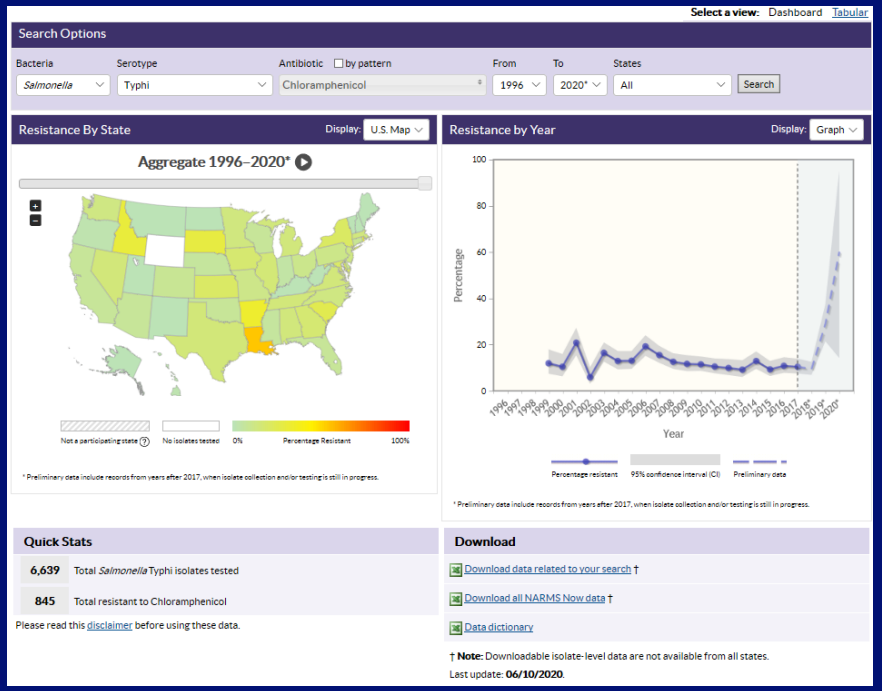
CDC > NARMS > NARMS Now: Human Data

Welcome to NARMS Now: Human Data, an interactive tool from CDC that contains antibiotic resistance data from bacteria isolated from humans as part of the National Antimicrobial Resistance Monitoring System (NARMS). More

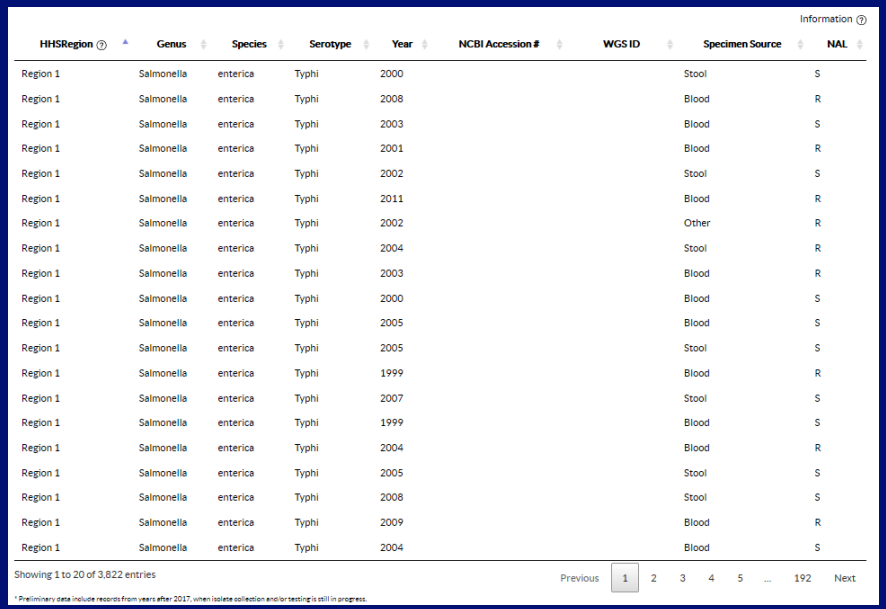
Select a view: Dashboard Tabular

Select "Tabular" to display the data in a table format.

Dashboard view



Tabular view



Information

HHSRegion	Genus	Species	Serotype	Year	NCBI Accession #	WGS ID	Specimen Source	NAL
Region 1	Salmonella	enterica	Typhi	2000			Stool	S
Region 1	Salmonella	enterica	Typhi	2008			Blood	R
Region 1	Salmonella	enterica	Typhi	2003			Blood	S
Region 1	Salmonella	enterica	Typhi	2001			Blood	R
Region 1	Salmonella	enterica	Typhi	2002			Stool	S
Region 1	Salmonella	enterica	Typhi	2011			Blood	R
Region 1	Salmonella	enterica	Typhi	2002			Other	R
Region 1	Salmonella	enterica	Typhi	2004			Stool	R
Region 1	Salmonella	enterica	Typhi	2003			Blood	R
Region 1	Salmonella	enterica	Typhi	2000			Blood	S
Region 1	Salmonella	enterica	Typhi	2005			Blood	S
Region 1	Salmonella	enterica	Typhi	2005			Stool	S
Region 1	Salmonella	enterica	Typhi	1999			Blood	R
Region 1	Salmonella	enterica	Typhi	2007			Stool	S
Region 1	Salmonella	enterica	Typhi	1999			Blood	S
Region 1	Salmonella	enterica	Typhi	2004			Blood	R
Region 1	Salmonella	enterica	Typhi	2005			Stool	S
Region 1	Salmonella	enterica	Typhi	2008			Stool	S
Region 1	Salmonella	enterica	Typhi	2009			Blood	R
Region 1	Salmonella	enterica	Typhi	2004			Blood	S

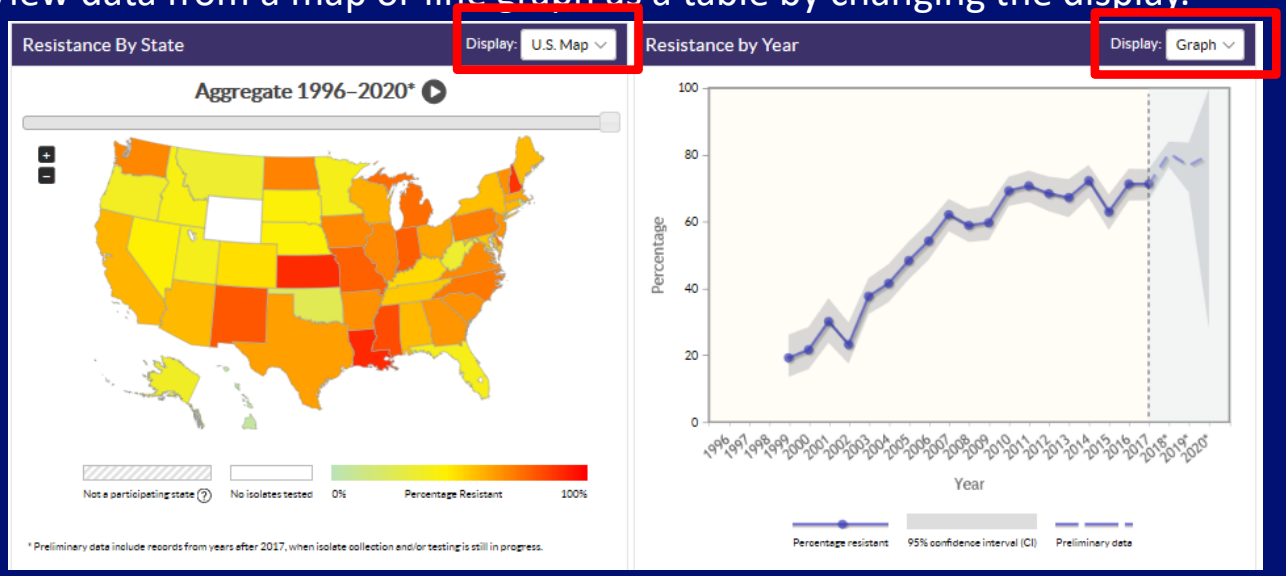
Showing 1 to 20 of 3,822 entries

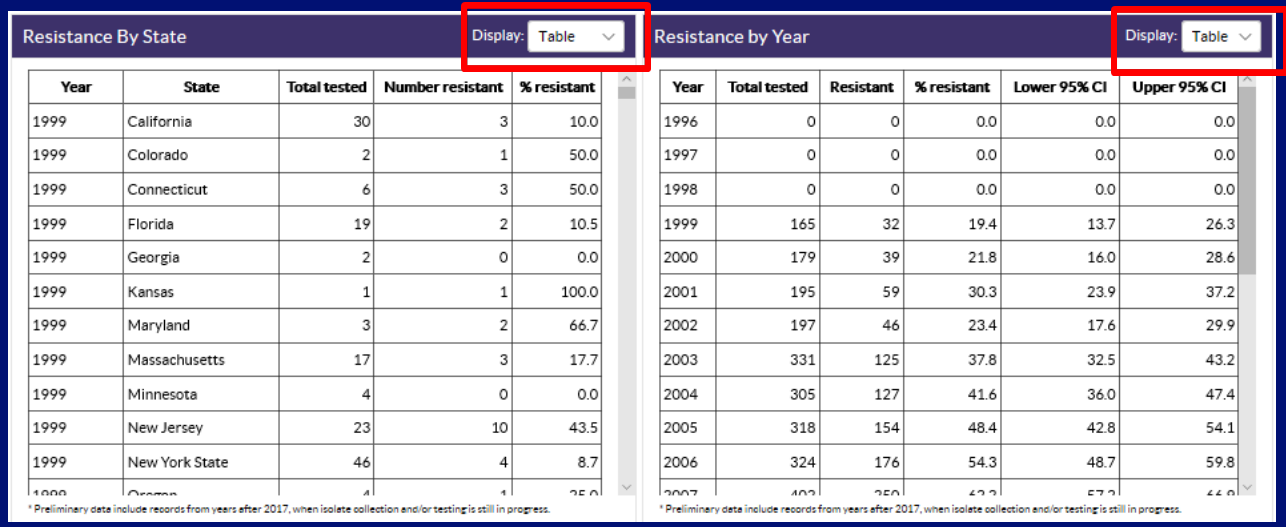
Previous 1 2 3 4 5 ... 192 Next

* Preliminary data include records from years after 2017, when isolate collection and/or testing is still in progress.

Viewing Data Tables

View data from a map or line graph as a table by changing the display.





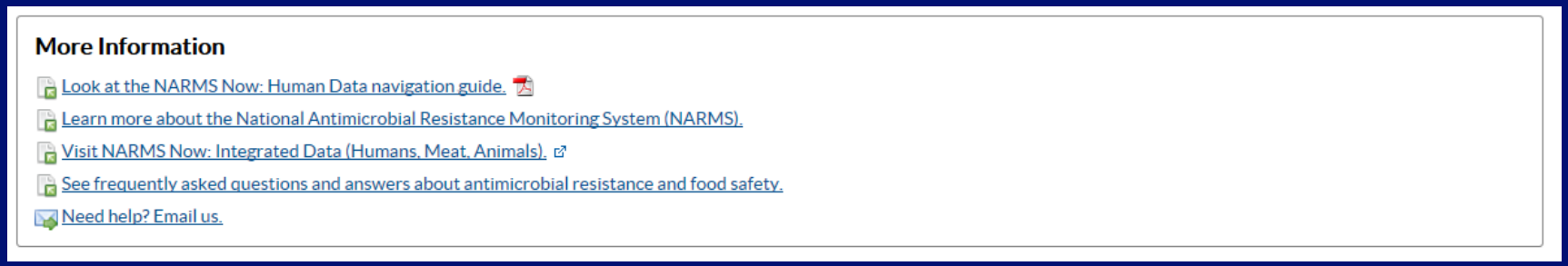
Year	State	Total tested	Number resistant	% resistant
1999	California	30	3	10.0
1999	Colorado	2	1	50.0
1999	Connecticut	6	3	50.0
1999	Florida	19	2	10.5
1999	Georgia	2	0	0.0
1999	Kansas	1	1	100.0
1999	Maryland	3	2	66.7
1999	Massachusetts	17	3	17.7
1999	Minnesota	4	0	0.0
1999	New Jersey	23	10	43.5
1999	New York State	46	4	8.7
1999	Oregon	4	1	25.0

Year	Total tested	Resistant	% resistant	Lower 95% CI	Upper 95% CI
1996	0	0	0.0	0.0	0.0
1997	0	0	0.0	0.0	0.0
1998	0	0	0.0	0.0	0.0
1999	165	32	19.4	13.7	26.3
2000	179	39	21.8	16.0	28.6
2001	195	59	30.3	23.9	37.2
2002	197	46	23.4	17.6	29.9
2003	331	125	37.8	32.5	43.2
2004	305	127	41.6	36.0	47.4
2005	318	154	48.4	42.8	54.1
2006	324	176	54.3	48.7	59.8
2007	402	250	62.2	57.2	66.9

Downloading Data

- Click on the links in the “Download” section to:
  - download data related to your search
  - download all NARMS human isolate data
  - view the data dictionary
- Data will be downloaded in a CSV (Comma Separated Values) format which is viewable in Excel

Learn More



- At the bottom of the page, you'll find links to helpful resources:
  - NARMS Now: Human Data navigation guide
  - CDC NARMS website
  - NARMS Now: Integrated Data (Humans, Meat, Animals)
  - Frequently asked questions about antibiotic resistance and food safety
  - CDC NARMS contact information

Questions?

Please contact CDC NARMS at

EntericBacteria@cdc.gov