Frequently Asked Questions

These answers pertain to the Antibiotic Resistance (AR) Healthcare Associated Infection (HAI) dataset of the AR Patient Safety Atlas. Mail additional questions to HIP@cdc.gov.

It looks like a particular state/territory/district has a very high percent resistance in the Atlas. Does this mean that they have a lot of antibiotic resistance?

Not necessarily. It is likely that regions with high percent resistance also have lot of antibiotic resistant infections, but additional data are needed before this conclusion can be made. First, while the Atlas data show that antibiotic-resistant bacteria are playing a role in HAIs, the main metric (percent resistance or %R) only shows the proportion of bacteria causing CAUTI, CLABSI, and SSI infections reported to NHSN that are resistant. There are other types of healthcare-associated infections to consider, so this metric does not reflect total burden or a total count of all resistant infections. Second, because percent resistance is calculated as a proportion, it is possible that a low number of resistant infections (e.g., 10) can produce a high %R if the total number of infections from the bacteria, regardless of resistance traits, are also low (e.g., 20). This means that while percent resistance may be "high" in one area, it may not mean that more people are getting resistant infections compared to another area. The Atlas does show, however, that resistant bacteria—some of which are ranked as urgent or serious threats—are still occurring in healthcare settings and, therefore, are at risk of spreading. Thus, the metrics in the Atlas may best be used as indicators of which type of antibiotic resistance problem may be most pressing and worthy of further investigation.

- For more information regarding the total burden of disease from antibiotic-resistant organisms (HAI or not) in the United States, see the 2013 Antibiotic Resistance Threats report.
- For more information regarding the incidence of healthcare-associated infections, see the latest National and State Healthcare-Associated Infections progress report.

Where can I learn more about the definitions for antibiotic resistance used in the Atlas?

See our Phenotype Definitions document, which includes definitions of antibiotic resistance used in Atlas.

Which Surgical Site Infections (SSI) are displayed in the Atlas?

The Atlas includes all surgical site infections following inpatient procedures reported to NHSN. Find additional information on the burden of specific surgical site infections in the most recent National and State Healthcare-Associated Infections progress report. More information about SSIs collected by NHSN can be found on the NHSN website: http://www.cdc.gov/nhsn/acute-care-hospital/ssi/index.html.

Where can I learn more about the types of infections included in the Atlas, or details about how the summary measures for antibiotic resistance are calculated?

More information on the types if infections and summary measures reflected in the Atlas data can be found in our Data Methodology document.

It looks like there are changes in the percent resistance over time. Does this mean that antibiotic resistance is increasing or decreasing?

See our Summary of Results document for information on changes in resistance over time and our Data Methodology document to understand why caution is advised when comparing resistance data between years.

Are antibiotic resistance data in the Atlas confirmed by CDC laboratories? Does the Atlas account for changes in Clinical & Laboratory Standards Institute (CLSI) breakpoints over time?

The Atlas presents antibiotic resistance data as they are reported to NHSN. These data represent the results of laboratory testing performed by each healthcare facility, and are therefore based on the breakpoints used by each facility's laboratory at the time the antimicrobial testing was completed.

I am interested in using the Atlas data for my own analysis. What are the limitations to using and interpreting this data?

The Atlas intends to make NHSN data easily accessible and we encourage further exploration. Before conducting your own analysis, however, see the "Limitations of the Data" section in the Data Methodology document to fully understand the limitations in using this data to understand the burden of antibiotic resistance.

For more information about the AR Patient Safety Atlas Antibiotic Resistance HAI dataset, visit: http://www.cdc.gov/hai/surveillance

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