

Concise Antibiogram Toolkit Background

This toolkit is designed to guide nursing homes in creating their own antibiograms, an important tool for guiding empiric antimicrobial therapy. Information about antibiograms and instructions on how to create them is included.

What is an antibiogram?

- Antibiograms are important tools for health care professionals involved in prescribing empiric antibiotics for suspected bacterial infections. These tools utilize microbiologic data from patient specimens from a nursing facility to estimate prevalence of antibiotic susceptibilities for common bacterial pathogens. They are also an important component of monitoring trends in antimicrobial resistance within facility nursing home.
- Hospitals use antibiograms as part of their infection control measures to classify types of bacteria found in cultures, to identify patterns of antibiotic susceptibility in those bacteria, and to track changes in antibiotic susceptibility over time. Hospitals use these cumulative antimicrobial susceptibility test data reports to determine the most appropriate agents for initial empirical antimicrobial therapy and to target efforts to reduce inappropriate antibiotic use.

Why should you develop and use an antibiogram at your nursing facility?

- Antibiograms encourage responsible use of antibiotics throughout facilities. Prescribing clinicians—physicians, nurse practitioners, and physician assistants—can consult these tools before initiating empiric antibiotic therapy, which may improve outcomes among patients with infections.
- Antibiograms are a good way to detect changes in resistance patterns.
- Antibiograms can be inexpensive to develop and maintain. The results are easily accessible to health care providers.

What should you know before you decide to use an antibiogram?

- Antibiograms are not generalizable to different nursing homes; they can be useful tools for guiding empiric therapy and monitoring antibiotic susceptibility trends within a specific nursing home.
- Selection of empiric therapy in a particular patient should not be based solely on an antibiogram. A patient's particular infection history, including past antimicrobial use, must also be considered.
- Antibiograms only capture the aggregate proportion of susceptible isolates for a given organism-antibiotic combination. They do not provide the prevalence resistance to multiple antibiotics.
- Antibiograms provide guidance for empiric antibiotic use in patients, but other factors including patient characteristics and prevalence of other risk factors should be incorporated when making therapeutic decisions.