



Nursing Home

Antimicrobial Stewardship Guide

Help Clinicians Choose the Right Antibiotic

Toolkit 1. Working With a Lab To Improve Antibiotic Prescribing

Tool 1. Background: Purpose and Use of the Antibiogram

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 resident 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 a 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 home?

- 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 residents 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 resident should not be based solely on an antibiogram. A resident'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 residents, but other factors including resident characteristics and prevalence of other risk factors should be incorporated when making therapeutic decisions.
- If it is wanted, interpretive guidance can be given to prescribing clinicians. It may be helpful to examine the antibiogram and identify the one two antibiotics that are not working with a specific organism. It may be, for example, that the key message is that [name of antibiotic] is not working for urinary tract infections because of significant resistance. Please avoid that antibiotic.

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