

Comprehensive Antibioqram Toolkit

Phase 1 Assessment and Planning

To ensure the success of any new program, it is customary to assess the environment and devise a detailed plan for implementation. The first phase of implementing an antibioqram program is to conduct a thorough assessment of the nursing home's capacity and readiness for change. Most likely this assessment will be conducted by the nursing home's administrator and/or the director of nursing. The nursing home must be stable, with no outstanding resident safety, quality, or staffing issues that require resolution before undertaking this new endeavor. There must also be sufficient interest in improving antibiotic prescribing to justify the use of the nursing home's resources to implement the program.

This section contains a number of checklists devised to assist with assessment and planning. These checklists are meant to help facility staff think through various facets of nursing home operations that could affect the success of an antibioqram program. The checklists are not meant to deter a facility from embarking on such an effort and, for that reason, were not configured to include any type of scoring system to indicate a particular point above or below which a facility should proceed or not. Each facility is unique, and the decision to implement a new program will hinge on a number of factors. Our goal is to prompt a thorough review of those factors.

Timeframe: Allow several months for assessment and planning.

Action Checklist

Assessment

Nursing Home Readiness Assessment

Although the antibioqram program does not require significant resources, a stable environment is important for any new program.

- Review the status of the nursing home's key leadership positions.
 - A stable staff with good working relationships will facilitate a smooth implementation of the new program.
 - During the review, consider any recent turnover in director of nursing, administrator, and medical director positions and how this turnover might affect the program.
 - Review the degree of involvement of the medical director in areas of quality improvement and infection control.
- Review the status of the contract with the clinical laboratory.
 - Has the current laboratory that processes microbiologic specimens been under contract with the nursing home for at least 12 months? If not, then revisit change at a later date, because at least 12 months of data are required for an antibioqram.
 - Should any issues/complaints with the laboratory be resolved before adding new contractual responsibilities?



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- Review the nursing home's business status.
 - Is the nursing home stable financially?
 - Does corporate management support the program?
 - Are ownership changes anticipated that might affect the support for this program?
- Review the nursing home's recent State certification survey.
 - Is the nursing home in good standing with the State survey agency, or do issues exist that should be resolved before implementing a new program?

Nursing Home Resources Assessment

- Implementation success will depend on identification of one or more leaders or program champions who will support and promote the program.
 - Will one or more individuals commit to leading this endeavor? Individuals who might assume the role of program champion include (but are not limited to) the director of nursing, medical director, nurse educator, or infection-control nurse. Ideally, there would be both a nursing and a physician/provider program champion.
 - Can sufficient buy-in be obtained from nursing and clinical prescribing staff, including both nursing home and covering clinicians?
 - Can a team of individuals who will be involved in implementation be identified and organized? Team members should include, at a minimum, the nursing home administrator, medical director, pharmacist, director of nursing, nurse educator, and infection-control nurse (if different than the nurse educator).
- Implementation will require training for prescribing clinicians (i.e., physicians, nurse practitioners, or physician assistants) and nursing staff.
 - Are resources sufficient (i.e., time, funds) to cover such training? Initial training of nurses and prescribing clinicians may take approximately 30 minutes.
- A sample of the combined Nursing Home Readiness and Resource Assessment is included in the Materials Section of this chapter; these materials can be adapted to fit the needs of any nursing home.

Prescribing Clinician Interest Assessment

- Assess the level of prescribing clinicians' interest in using antibiograms to improve antibiotic prescribing, by administering a brief survey. The survey should include a self-assessment of current empiric prescribing patterns as well as current knowledge and use of antibiograms, solicit questions prescribing clinicians may have about using antibiograms, and seek input on the best means of communicating antibiograms. This information will help tailor the program to the prescribers caring for residents in a specific nursing home.
- Communicate with area hospitals that frequently care for the nursing home's residents when they are transferred to the emergency department or admitted to the hospital. Offer to share the nursing home's antibiogram. The emergency department director and hospital epidemiologist are appropriate contacts.
- A sample prescribing-clinician survey is included as part this chapter.

Exploration of Concept With Clinical Laboratory

- The program champion or his/her designee should identify the correct contact at the clinical laboratory and initiate a conversation regarding antibiograms. In general, conversations with both a business contact and the clinical laboratory's medical contact (e.g., a microbiologist, epidemiologist, or infection-control specialist) will be needed.
- Discuss with the laboratory its capability to generate an antibiogram. The ability of the laboratory to generate a complete antibiogram report will be a key factor in advancing the program. The time required for developing the antibiogram is negligible if the laboratory has the software to generate it.
- If the laboratory cannot generate the antibiogram, nursing home staff will develop the antibiogram based on laboratory data. This activity, while not labor intensive, will require one nursing home employee with skills in data entry and formatting, as well as the guidance of someone with basic knowledge of microbiology laboratory reports. To create the antibiogram, nursing home staff will need approximately 4 hours to insert the laboratory data into a template and format the document. Less time will be needed if an automated tool, such as the one described in Phase 2, is utilized.
- Determine the feasibility of generating the antibiogram. This task will be done in collaboration with the clinical laboratory that processes microbiological specimens from the nursing home.
 - If more than one laboratory is used, all will need to be engaged to ensure that the necessary laboratory data are obtained.
 - Because clinical laboratories already store microbiological data in formats that are either automatically or easily transferable into antibiograms, this request should not be outside the scope of their usual services.
 - If more than one laboratory is used, nursing home staff likely will have to compile the data to create the antibiogram.
- Work with the clinical laboratory contact to discuss the availability and format of data and to request the initial antibiogram.
- Determine whether any changes are needed to existing laboratory contractual agreements. See Phase 2, Development, for further discussion.

Exploration of Concept With Local Hospitals, Emergency Departments, and Covering Physicians

- One potential benefit of developing a nursing home antibiogram is that it can be made available to outside facilities and prescribing clinicians who care for residents transferred to hospitals.
 - Nursing home residents are frequently transferred to emergency departments for acute care complaints that are related to infections (e.g., fever) or that could be interpreted to be from an infection (e.g., abdominal pain).
 - Physicians in the hospital and emergency department may begin antibiotics or change antibiotics in these cases. The information available in an antibiogram can help tailor empiric choices to the nursing home's recent pattern of microbial susceptibility.
- The success of this program will benefit by collaboration between clinical staff from the nursing home and the local hospital and emergency departments.

- Discussions should inform the hospital’s and emergency department’s medical directors about the program and gain their input on the most effective ways to share the nursing home antibiogram.
- Steps include:
 - 1) identifying the correct contact at the hospital (e.g., hospital epidemiologist), emergency department (e.g., emergency department director), and key prescribing clinicians;
 - 2) establishing a process to send the nursing home’s antibiogram with residents when they are transferred to the emergency department; and
 - 3) establishing a mechanism for ongoing communications regarding antibiograms.
- A checklist for communicating the nursing home’s antibiogram program to the local hospital and emergency department is in the Materials Included section of this chapter.

Planning

- When all assessment activities are complete, arrange a time to present the findings to nursing home leadership and management (and corporate representative(s), if applicable).
 - A stable staff who are interested and committed to the use of antibiograms, with sufficient support and resources, will enhance successful implementation.
 - An Antibiogram Factsheet is in the Materials Included section of this chapter to facilitate this discussion.
- Assemble the leader(s) and implementation team to devise a timeline and schedule.
 - Include time for presentations to prescribing clinicians and nursing staff, development of the antibiogram, meetings with the laboratory, and training for prescribing clinicians and nursing staff.
 - If possible, solicit input from other nursing homes that have implemented such a program. The clinical laboratory may be a resource for these contacts.
 - A sample timeline is in the Materials Included section of this chapter.

Materials Included

Assessment Tools

- Nursing Home Readiness and Resources Assessment
- Prescribing Clinician Survey
- Checklist for Local Hospitals/Emergency Department

Planning Tools

- Antibiogram Factsheet
- Sample Timeline