Infection Control Assessment and Response (ICAR) Tool for General Infection Prevention and Control (IPC) Across Settings

Module 10. Antibiotic Stewardship Facilitator Guide

Antibiotic Stewardship: This form is intended to aid an ICAR facilitator in the review of a healthcare facility's antibiotic stewardship policies and activities. This interview should be conducted with antibiotic stewardship lead(s) if possible.

Leadership Commitment, Accountability and Stewardship Expertise to Improve Antibiotic Use

1. Which of the following **individuals** are responsible for the management and outcomes of antibiotic stewardship activities at your healthcare facility: (Select all that apply)

   Physician
   - Co-lead
   - Lead
   - Designated physician support

   Pharmacist
   - Co-lead
   - Lead
   - Designated pharmacist support

   Other (e.g., RN, PA, NP, IP, other), specify: _____
   - Co-lead
   - Lead
   - Designated support

   Unknown

   None, the healthcare facility does not have individuals responsible for antibiotic stewardship activities management and outcomes

   Not Assessed

Identifying an antibiotic stewardship lead or co-lead who is/are accountable for program management and outcomes is critical for the successful implementation of antibiotic stewardship policies and activities. Most hospitals have found a physician and pharmacist co-leadership model to be effective.

If a non-physician is identified as a lead for stewardship activities, it is important to designate a physician (or medical director) who can serve as a point of contact and support for the non-physician lead. Regular "stewardship rounds" for the co-leaders, or the non-physician lead and the supporting physician can strengthen program leadership.

The core elements of antibiotic stewardship for hospital, outpatient, nursing home, and small and critical access hospitals can be found here: **https://www.cdc.gov/antibiotic-use/hcp/core-elements**.

For strategies to improve antibiotic prescribing in outpatient dialysis settings refer to:

https://www.cdc.gov/antibiotic-use/hcp/antibiotics-hemodialysis

Notes

2. Which of the following describes the **individual** responsible for the management and outcomes of antibiotic stewardship activite**s**? (Select all that apply, repeat for **each** individual)

> Has dedicated time to manage the program and conduct daily stewardship interventions
> Specify percent time in the job description or in an average week dedicated to stewardship activities at the facility:
>> 0-25%   26%-50%   51-75%   76-99%   100%
>
> Has antibiotic stewardship responsibilities specified in the employment contract, job description or performance review
> Is on-site at the healthcare facility
>> Full-time   Part-time
>
> Provides remote stewardship expertise (tele-stewardship)
> Completed infectious diseases training (residency or fellowship)
> Completed antibiotic stewardship training (certificate program, conference, online training)
> Unknown
> None, the healthcare facility does not have individuals responsible for antibiotic stewardship activities management and outcomes
> Not Assessed

A priority example of leadership commitment includes giving stewardship program lead(s) time and resources to manage the program and conduct daily stewardship interventions. That includes having stewardship as part of the job description to ensure that lead(s) have dedicated time to spend on developing and maintaining stewardship activities.
https://www.cdc.gov/antibiotic-use/hcp/core-elements

For healthcare facilities without pharmacy staff on-site, placing stewardship requirements into the contractual responsibilities of pharmacy services can help support stewardship implementation. This can include a requirement for supporting antibiotic use tracking and formal stewardship training.

Healthcare facilities with limited stewardship expertise can consider funding remote consultation or tele-stewardship. Even when remote expertise is used, it is important to have a stewardship lead on staff at the facility. Healthcare facilities can also seek additional expertise by joining multi-facility stewardship collaboratives or engaging with public health organizations.

Training in infectious diseases and/or antibiotic stewardship benefits stewardship program lead(s). An example of an online stewardship training can be found here: **https://www.cdc.gov/antibiotic-use/hcp/training**.

Notes

3. Healthcare facility leadership has demonstrated **commitment** to antibiotic stewardship efforts by: (Select all that apply)

> Having an antibiotic stewardship **policy** that requires an antibiotic stewardship program or requires the implementation of antibiotic stewardship activities
> Allocating **resources** to support education and training for stewardship team and healthcare professionals
> Ensuring **support** for stewardship activities from key departments and groups such as information technology or microbiology
> Having a senior executive who serves as a point of contact or "**champion**" and ensures availability of resources and key support to implement stewardship activities
> Having regularly scheduled meetings with facility leadership and/or the hospital board to **report** and discuss stewardship activities, resources, and outcomes
> **Communicating** to healthcare facility staff about antibiotic use, resistance, and stewardship activities via email, newsletters, events, or other avenues
> Unknown
> None, the healthcare facility does not demonstrate commitment to antibiotic stewardship efforts
> Not Assessed
> Other (specify): _____

Dedicating necessary human, financial and information technology resources is critical for the success of stewardship activities. **https://www.cdc.gov/antibiotic-use/hcp/core-elements**

Regularly scheduled meetings can be done quarterly, biyearly or yearly depending on the facility size and activities planned.

Refer to leadership commitment and accountability sections in:

https://www.cdc.gov/antibiotic-use/hcp/core-elements/hospital-implementation.html

https://www.cdc.gov/antibiotic-use/hcp/core-elements/outpatient-antibiotic-stewardship.html; and

https://www.cdc.gov/antibiotic-use/hcp/core-elements/nursing-homes-antibiotic-stewardship.html

Notes

Actions and Activities to Improve Antibiotic Use

4. Healthcare facility has the following antibiotic stewardship **activities**: (Select all that apply)

    Policy that requires prescribers to **document** indication and duration for all antibiotic orders during order entry or in the medical record

    Facility-specific **treatment recommendations** for common or high-priority conditions (Select all that apply)

        Respiratory infections

        Urinary infections

        Skin and soft tissue infections

        Other (specify): _____

    Prospective **audit and feedback** for specific antibiotic agents

    Formal procedure that **reviews antibiotics** 48-72 hours after initial order (i.e., antibiotic time-out)

    Preauthorization for specific antibiotic agents

    Stopping unnecessary antibiotic(s) in new cases of *Clostridioides difficile* infection (CDI)

    Assess and clarify documented penicillin allergy

    Antibiotic stewardship activities are integrated into quality improvement initiatives such as optimizing the treatment of sepsis

    Review of planned outpatient parenteral antibiotic therapy (OPAT)

    Discharge stewardship

    Collaboration with microbiology laboratory staff

    Unknown

    None, the healthcare facility does not have any activities to improve antibiotic use

    Not Assessed

    Other (specify): _____

Facility-specific treatment recommendations are based on national guidelines and local pathogen susceptibilities and ensure optimal use of antibiotics for treating common infections.

Prospective audit and feedback is an external review of antibiotic therapy by an expert in antibiotic use, accompanied by suggestions to optimize use, at some point after the agent has been prescribed. Prospective audit and feedback is different from an antibiotic "timeout" because the stewardship program rather than the treating team conducts the audits.

In the hospital, an antibiotic timeout is a provider-led reassessment of the continuing need and choice of antibiotics when the clinical picture is clearer and more diagnostic information, especially results of cultures and rapid diagnostics, is available. In nursing homes and other settings, an antibiotic timeout can be led by the designated stewardship lead if provider-led reassessment is not feasible.

Preauthorization requires prescribers to gain approval prior to the use of certain antibiotics.

https://www.cdc.gov/antibiotic-use/hcp/core-elements

For examples for stewardship activities supported by nursing staff, refer to page 7 in **https://www.cdc.gov/antibiotic-use/media/pdfs/core-elements-small-critical-508.pdf** and the Stewardship Recommendations from the American Nurses Association Workgroup.

Refer to the action section in:

https://www.cdc.gov/antibiotic-use/hcp/core-elements/hospital-implementation.html;

https://www.cdc.gov/antibiotic-use/hcp/core-elements/outpatient-antibiotic-stewardship.html and

https://www.cdc.gov/antibiotic-use/hcp/core-elements/nursing-homes-antibiotic-stewardship.html

For more resources in hemodialysis settings, refer to:

https://www.cdc.gov/antibiotic-use/hcp/antibiotics-hemodialysis

For more resources on sepsis, refer to:

Sepsis Clinical Information.

It is important for members of the antibiotic stewardship program to regularly communicate and collaborate with microbiology laboratory staff when possible. The following document outlines the key activities and roles of microbiology laboratory staff, as part of the antibiotic stewardship team.

Key Activities and Roles for Microbiology Laboratory Staff in Antibiotic Stewardship Programs Updated: August 2020 (cdc.gov)

Notes

Tracking and Reporting Antibiotic Use and Outcomes

5. Healthcare facility **tracks** antibiotic use by: (Select all that apply)

Submitting to the National Healthcare Safety Network (NHSN) Antimicrobial Use (AU) Option
Using electronic health record data
Using pharmacy data
Submitting to multi-facility antibiotic stewardship collaborative or public health organization
Manual tracking
Unknown
None, the healthcare facility does not track antibiotic use
Not Assessed
Other (specify): _____

Antibiotic use measurement is critical to identify opportunities for improving antibiotic use and to assess the impact of stewardship interventions.
https://www.cdc.gov/antibiotic-use/hcp/core-elements
Information on the National Healthcare Safety Network (NHSN) Antimicrobial Use (AU) Option is available here:
Antimicrobial Use and Resistance (AUR) Options.

For hospital participating in the NHSN AU Option, the Standardized Antimicrobial Administration Ratio (SAAR) risk-adjusted summary measure can be used to track antibiotic use, compare antibiotic use to a national benchmark, and assess the impact of stewardship activities.
NHSN's Guide to the SAAR
Refer to the tracking and reporting sections in:
https://www.cdc.gov/antibiotic-use/hcp/core-elements/hospital-implementation.html;
https://www.cdc.gov/antibiotic-use/hcp/core-elements/outpatient-antibiotic-stewardship.html and
Antibiotic Stewardship Implementation Resources for Nursing Homes.

6. Healthcare facility monitors **adherence** to the following antibiotic stewardship activities: (Select all that apply)

Documentation of indication and duration of antibiotic orders
Facility-specific treatment recommendations
Prospective audit and feedback
Antibiotics review 48-72 hours after initial order
Preauthorization
Unknown
None, the healthcare facility does not monitor adherence to stewardship activities
Not Assessed
Other (specify): _____

Evaluation of stewardship policies and activities, such as monitoring adherence to facility-specific treatment guidelines, is important to identify opportunities for quality improvement and to assess the impact of stewardship activities.
https://www.cdc.gov/antibiotic-use/hcp/core-elements

7. Healthcare facility provided prescribers with antibiotic use reports within the last 12 months: (Select all that apply)

Facility, unit, clinic, or service-specific reports
Individual prescriber-level reports
Unknown
None, the healthcare facility does not provide antibiotic use reports to prescribers
Not Assessed
Other (specify): _____

Individual prescriber-level reports, especially when including comparison with peers and coupled with targeted feedback to prescribers, has been shown to be effective for improving antibiotic prescribing. **https://www.cdc.gov/antibiotic-use/hcp/core-elements**
Refer to the tracking and reporting section: **Antibiotic Stewardship Implementation Resources for Outpatient Facilities**.

Notes

Education of Healthcare Professionals, Patients, and their Families

8. Healthcare facility provided **education and training** on optimal antibiotic prescribing, antibiotic adverse events, and antibiotic resistance within the last 12 months to: (Select all that apply)

    Prescribers
    Pharmacists
    Nursing staff
    Patients and families
    Unknown
    None, the healthcare facility does not provide education and training on antibiotic stewardship
    Not Assessed
    Other (specify): _____

There are a variety of mechanisms for disseminating antibiotic education including educational resources with continuing education credits. Also, pocket-guides, newsletters or electronic communications can be used to provide stewardship resources and education. Interactive academic detailing (e.g., face-to-face interactive workshops) has the strongest evidence for improving antibiotic prescribing practices.

Core Elements of Antibiotic Stewardship

Stewardship educational and training resources:

Antibiotic Use Healthcare Professional Resources and Training

Antibiotic Use Patient Resources and Education

Providing stewardship continuing education activities for clinicians is important. One resource is **CDC Training on Antibiotic Stewardship** that can provide physicians, nurse practitioners, physician assistants, certified health education specialists, nurses, pharmacists, and public health practitioners with a master's degree with over 10 hours of free continuing education. The content is accessible in multiple modules that can be taken in any order.

The course includes educational content on:

- Antibiotic resistance threats in the United States, risks and benefits of antibiotic use and benefits of antibiotic stewardship
- Communication training for clinicians to improve outpatient antibiotic prescribing and use
- Antibiotic stewardship in the outpatient setting, dentistry, emergency departments, hospitals, and nursing homes

Notes