

# How to Establish an Antibiotic Stewardship Program/Committee

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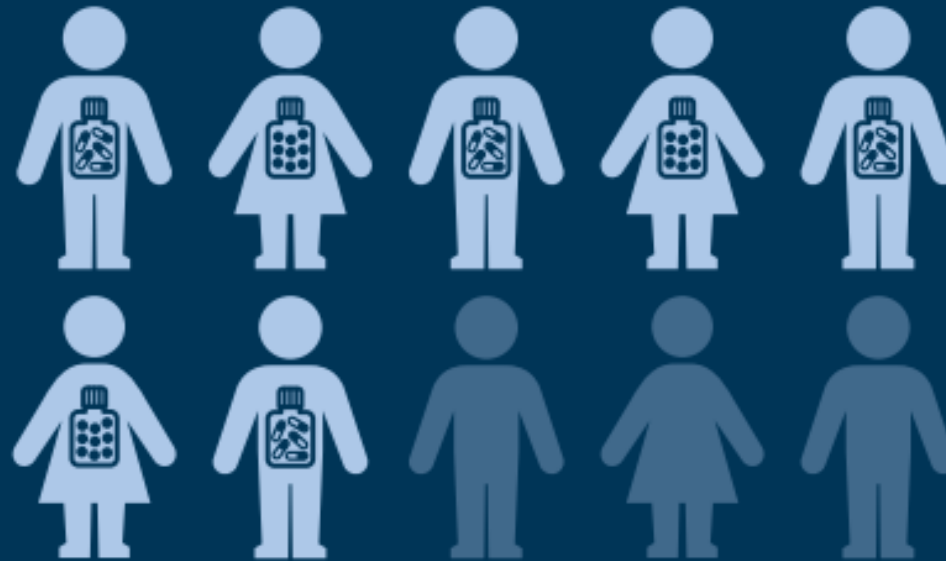
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# Objectives

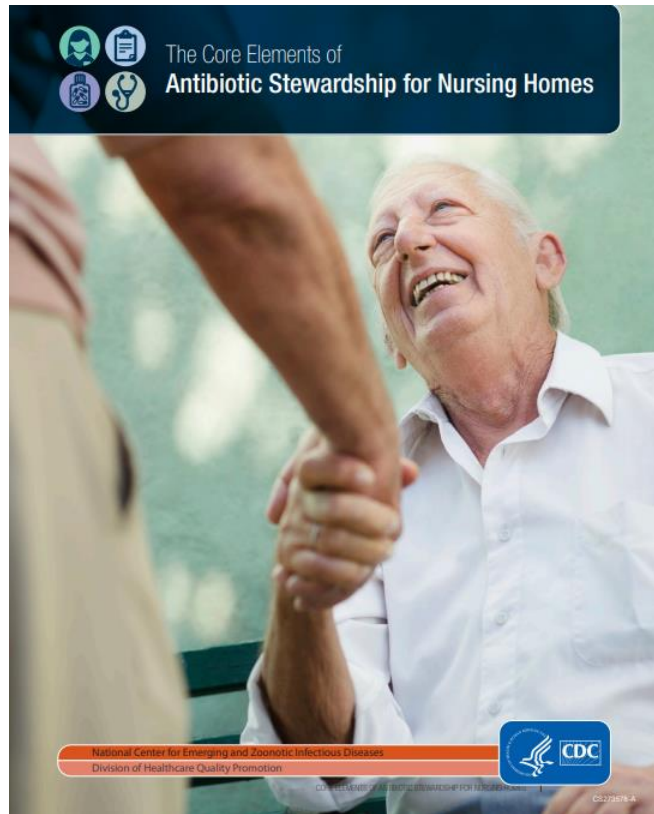
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- Review the core elements of action, tracking, and reporting and what they mean for your antibiotic stewardship program.
- Examine the importance of process and outcome measures.
- Discuss key stakeholders who should be involved in your antibiotic stewardship team/committee.



UP TO **70%** OF NURSING HOME RESIDENTS  
RECEIVED **one or more** COURSES  
OF SYSTEMIC ANTIBIOTICS IN A YEAR

Source: The Core Elements of Antibiotic Stewardship for Nursing Homes ([cdc.gov](https://www.cdc.gov/antibiotic-use/core-elements/))



# Core Elements of Antibiotic Stewardship for Nursing Homes

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Action

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Tracking

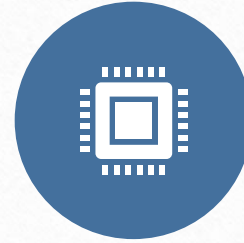
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Reporting



Policies and procedures  
that support optimal  
antibiotic use



Standardization/facility-  
wide implementation



Pharmacy interventions



Infection and  
syndrome-specific  
interventions

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Action- to improve antibiotic use

# Action: Policies and Procedures



- State Regulations

Rule 135. (1) An applicant or licensee shall maintain written, evidence-based infection prevention and control policies and procedures that are appropriate for the services offered. These policies and procedures must be available in electronic or written format. These policies and procedures must represent the complexity of the healthcare provided and the characteristics of the patient population served.

- Federal Regulations

## Infection Control Policies and Procedures

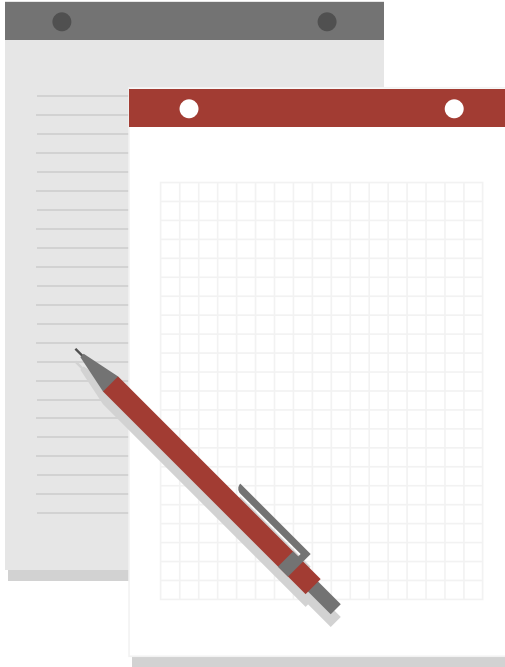
The facility must develop and implement written policies and procedures for the provision of infection prevention and control. The facility administration and medical director should ensure that current *infection control* standards of practice based on recognized guidelines *and facility assessment* are incorporated in the resident care policies and procedures. These IPCP policies and procedures must include, at a minimum, *the following*:

# Action:

## Standardization

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- Examples of practices that should be standardized:
  - Evaluation and communication of clinical signs and symptoms when a resident is suspected of having an infection.
  - Optimizing the use of diagnostic testing.
  - Implementing an antibiotic review process aka “antibiotic time-out” for all antibiotics prescribed in your facility.





# Action: Pharmacy Interventions

## Pharmacist expertise in:

- Appropriate ordering
- Review of culture data
- Developing antibiotic monitoring guidance
- Developing infection management guidance

		Aminoglycosides			B-Lactams			Cephalosporins				Quinolones		Others		
Gram (-)	# of patients	Amikacin	Gentamikin	Tobramycin	Ampicillin	Impipnem	Pipericillinp Tazobactam	Cefzolin	Cefoxitin	Ceftriaxone	Ceftazidime	Ciprofloxacin	Nitrofurantion	TMP/SMX		
Echerichia coli	4	100	100	100		100	100				100	75				
Klebsiella sp	13	100	84.6	92.3	38.5	100	92.3	84.6	100	100	100	38.5	92.3	38.5		
Proteus sp	7	71.4	57.1	71.4		85.7	85.7			57.1	57.1		28.6	71.4		
Pseudomonas aeruginosa	13	100	83.3	92.3	91.7		100		81.8	100	100	30.8		69.2		
	Penicillins				Cephalosporins		Quinolones		Others							
Gram (-)	# of patients	Penicillins	Ampikillin	Oxacillin	Nafcillin	Cephalexohin	Ceftriaxone	Ciprofloxacin	Moxifloxacin	Gentamacin	Linezolid	Rifampin	Tetracydine	TMP/SMX	Vancomycin	Nitrofurantion
Staph aureus (all)	8	0		0	0			0	0	87.5	100	100	100	100	100	100
Methicillin Resistant (MRSA)	8	0		0	0				0	87.5	100	100	100	100	100	100
Methicillin Susceptible (MRSA)	0															
Enterococcus sp	4	100	100					50		75			25		100	100

## Antibiogram:

An overall profile of antimicrobial susceptibility testing results of a specific microorganism to a battery of antimicrobial drugs.

Action:  
Infection and  
Syndrome-  
Specific  
Interventions



Identification of inappropriate courses of antibiotics



Analysis of trends



Examples: Treatments for asymptomatic bacteriuria  
Urinary tract infection prophylaxis

# Tracking & Reporting

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## Process Measures:



- Rate of antibiotic starts that do not meet criteria
- Use of antibiogram to guide empiric treatment

## Outcome Measures:



- Rate of antibiotic starts per 1000 resident days
- Incidence of facility-acquired MDROs and C. diff

# Tracking how and why antibiotics are prescribed

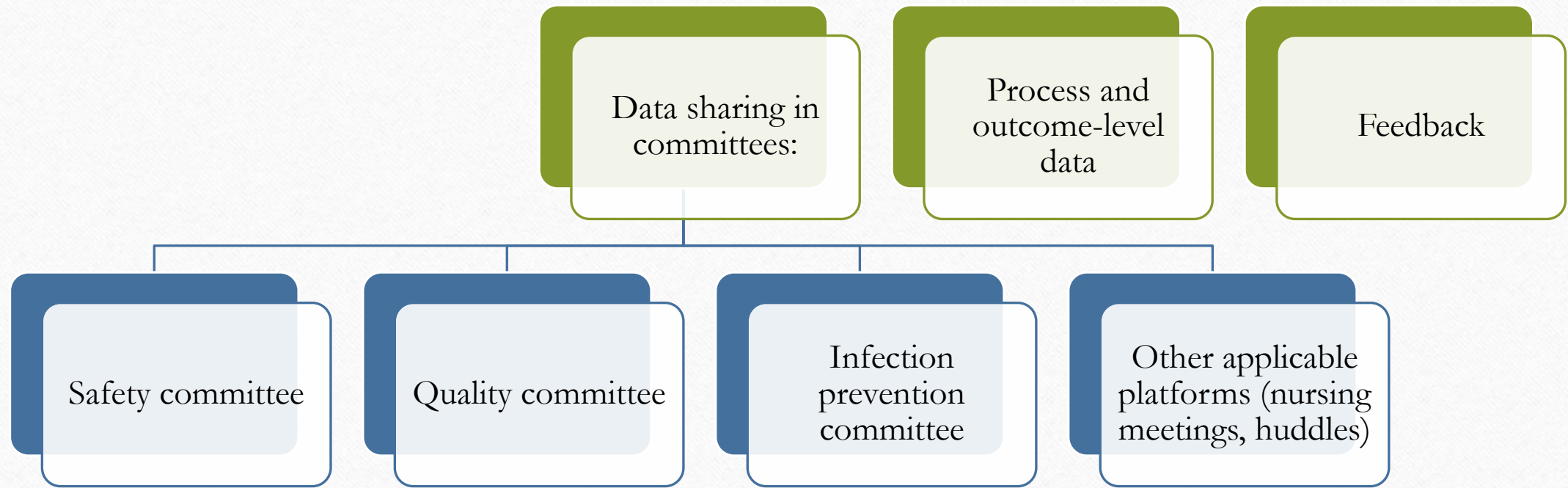
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## Important Process Measure:

- Perform reviews on resident medical records for new antibiotic starts to determine whether clinical assessment, prescription documentation and antibiotic selection follows the facility antibiotic use policies and practices.



# Reporting



# Forming an Antibiotic Stewardship Team

## Examples of individuals to choose for your antibiotic stewardship team

- Medical Director
- Director or Assistant Director of Nursing
- Infection Control Preventionist
- Consultant Pharmacist
- Family Representative
- Resident of Facility
- Administrator or other Senior Executive



# Antibiotic Stewardship and Medical Directors

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Medical Directors can:

- Set standards for antibiotic prescribing practices for all healthcare providers prescribing antibiotics.
- Oversee adherence to antibiotic prescribing practices.
- Review antibiotic use data and ensure best practices (e.g., the right drug at the right dose for the right amount of time) are followed.



## Antibiotic Stewardship and Directors of Nursing



### Establish

**Establish standards for nursing staff to assess, monitor and communicate changes in a resident's condition that could impact the need for antibiotics.**

### Use

**Use their influence as nurse leaders to help ensure antibiotics are prescribed only when appropriate.**

### Educate

**Educate front line nursing staff about the importance of antibiotic stewardship and explain policies in place to improve antibiotic use.**

## Antibiotic Stewardship and Infection Preventionists



<b>Identify</b>	Identifying evidence-based guidelines to inform facility-specific guidelines for initiating antibiotics and treating infections.
<b>Educate</b>	Educating staff, residents, and families during the implementation of facility antibiotic use and prescribing policies.
<b>Monitor</b>	Conducting process surveillance to monitor antibiotic use and assess adherence to antibiotic prescribing and use policies.
<b>Surveillance</b>	Conducting outcome surveillance for infections and antibiotic-resistant organisms to monitor the impact of antibiotic stewardship efforts.

## Consultant Pharmacists

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Provide

**Provide education to staff about the different types of antibiotics and their uses.**

Review

**Review antibiotic prescriptions as part of the drug regimen review for new medications and ensure they are ordered appropriately.**

Establish

**Establish laboratory testing protocols to monitor for adverse events and drug interactions related to use of antibiotics and other high risk medications.**

Review

**Review microbiology culture results and provide feedback to prescribers on initial antibiotic selection to let them know if it is the right drug to treat the infection or if the bacteria may be resistant to the antibiotic.**



# Nursing Involvement

## Empowerment

- Speak up for resident safety
- Education regarding antibiotic use criteria

## Engagement

- Input on how to improve
- Involvement in performance improvement plans

## Support

- Upper and mid-level leadership
- Medical leadership



# Wrap-up!

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- Follow requirements for tracking and reporting of process and outcome measures to improve antibiotic stewardship practices.
- Engage multi-disciplinary team as members of the antibiotic stewardship committee.
- Educate nursing staff and healthcare providers on the importance of antibiotic stewardship and following facility policies and procedures.

# Contact Us

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