

# ADEQUACY OF ANTIBIOTIC PRESCRIPTIONS IN A NURSING HOME

4CPS-040

J01 - Antibacterials for systemic use



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## Background and importance

The pervasive use of antibiotics has been identified as a major public health threat due to the emergence of antibiotic resistant bacteria. Antibiotics are among the most commonly prescribed drugs in nursing homes (NHs) and up to 75% of these are considered inappropriate

## Aim and objectives

To characterize antibiotic therapy in NHs and evaluate its adequacy

## Material and methods

Prospective study in a NHs (264 residents) → Residents with antibiotic prescriptions for suspected infections

July – September 2019

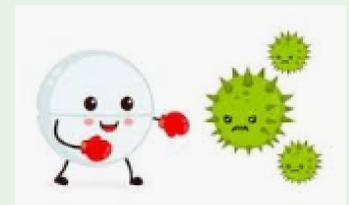
Medical and pharmacy records

Principal variable  
**Inadequate antibiotic therapy**

1. Conditions without antibiotic indication
2. Non-adherence to therapeutic guidelines
3. Incorrect dose, route of administration or duration
4. No microbiology sample collection when it needs
5. Microbiological evidence of infection not covered by the chosen antibiotics or no antibiotic de-escalation

Others variables

- Demographic and clinical characteristics
- Risk factors for infection
- Antibiotic prescribed
- Indication
- Microbiology data



## Results

62 residents

Sex: - Women	69.4 %
Age (years) [mean (SD)]	81.7 (10.7)
Antibiotic allergy	6.5 %
Charlson Comorbidity Index age-adjusted [mean (SD)]	5.8 (1.9)
Residents with risk factors for infection:	95.2 %
- Functional dependency	62.9 %
- Previous antibiotic therapy	59.7 %
- Cognitive impairment	53.2 %

Infections:	- Urinary tract infection	48.4 %
	- Skin and soft tissue infection	22.6 %
	- Respiratory tract infection	21 %
Sample collection		41.9 %
(- Before initiating antibiotics)		(76.9 %)
- Uroculture		65.4 %
- Exudate culture		11.5 %
- Others		23.1 %
Positive cultures		80.8 %
(- Monomicrobial infection)		(71.4 %)
- Gram-negative		85.7 %
- <i>Staphylococcus aureus</i> methicillin-resistant		14.3 %

Prescribed antibiotics:	- Amoxicillin/clavulanic	24.2 %
	- Quinolones	19.4 %
	- Fosfomicin-trometamol	19.4 %
	- Cephalosporins	11.2 %
	- Fosfomicin-calcium	9.7 %
	- Cloxacillin	9.7 %
	- Others	6.4 %
Treatment duration (days) [mean (SD)]		5.6 (3.5)
Type of treatment:	- Empirical	75.8 %
	- Targeted	21 %
	- Prophylactic	3.2 %
Combination therapy		1.6 %
Intravenous route		4.8 %

### Inadequate antibiotic therapy (51.6 %)

Conditions without antibiotic indication	9.3 %
Non-adherence to therapeutic guidelines	56.3 %
Incorrect dose, route of administration or duration	12.5 %
No microbiology sample collection when it needs	3.2 %
Microbiological evidence of infection not covered by the chosen antibiotics or no antibiotic de-escalation	18.7 %

## Conclusion and relevance

Broad spectrum antibiotics are often prescribed. There is a high number of inadequate antibiotic prescriptions. Pharmacy teams are well placed to support prudent selection of antibiotic therapy in NHs



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