

## Use of Antibiotics: A Quality Improvement Initiative

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### Abstract:

**Reason for Audit:** This audit was triggered by the concern that antibiotics were being prescribed inappropriately across multiple medicine wards. Specific issues included:

1. Antibiotics being administered without clear clinical indications.
2. Prolonged courses of antibiotics (over 10 days) prescribed for minor infections, without any review or documentation of continued need.
3. Strong antibiotics being initiated as first-line therapy without appropriate diagnostic workups, such as cultures, or consultation with microbiologists.

**Aims of the Audit:** The primary objectives of this audit were to:

1. Reduce antibiotic resistance and minimize side effects such as *Clostridium difficile* (*C. difficile*) infections, which can result from inappropriate or prolonged antibiotic use.
2. Improve antibiotic stewardship by ensuring timely review of antibiotics after a designated period and adjusting or discontinuing them as clinically appropriate.
3. Ensure compliance with national/ Hospital guidelines regarding antibiotic prescribing practices, including the appropriate choice of antibiotics and their duration.
4. Emphasize diagnostic accuracy by promoting the practice of sending blood cultures before initiating antibiotics, especially in patients showing signs of sepsis, ensuring targeted and effective treatment.

### Audit Methodology:

- This audit was conducted in a prospective manner, focusing on five geriatric wards.
- Data were collected from clinical notes and the EPMA (Electronic Prescribing and Medicines Administration) system, ensuring comprehensive and accurate data capture.
- Trust antibiotic prescribing guidelines served as the benchmark for evaluating current practice.

### Key Findings:

1. Only 64% of patients were prescribed antibiotics in alignment with trust protocols and culture results, indicating significant room for improvement in compliance with the guidelines.
2. Only 42% of patients had their antibiotics reviewed after 5 days, or had a clear plan for review. This suggests a lack of structured follow-up, which is crucial for minimizing unnecessary antibiotic use.
3. Only 80% of patients had a documented reason for the antibiotic prescription, but the remaining 20% lacked this essential documentation, undermining the transparency and justification for antibiotic use.