

**R207**

**Publication Only**

**Antimicrobials: Antibiotic usage**

**Practical implementation of an antibiotic stewardship programme: a single-centre experience**

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Background:

Bacterial resistance to antibiotics is an increasing problem in treating patients with infections. To curb this problem, antibiotic stewardship, a broad range of measures mainly aimed at the improved use of antibiotics, has gained interest. Recently, a policy document from the Dutch Working Party on Antibiotic Policy has been published recommending the setting-up of an antibiotic stewardship team (A-team) in every hospital in the Netherlands from 2014 onwards. The A-team has a multi-faceted approach: restriction of antibiotic prescription, review and feedback of prescribed courses, education of antibiotic prescribing physicians, and epidemiologic surveillance of antibiotic resistance. In this pilot study we focussed primarily on the impact of the review and feedback method.

Methods:

In a 715 bed university teaching hospital, two surgical wards (41 respectively 32 beds) with known high rate of antibiotic prescription were selected for this pilot study. All Prescriptions of antibiotics were extracted from the electronic prescribing software system and gathered in a database. Every prescribed course of antibiotics was defined as one antibiotic event. These events were reviewed and scored for appropriateness and adequacy with respect to antibiotic use. Appropriate use was defined as prescription according to local guidelines. An event was adequate if the antibiotic was deemed effective based on the identification of the microorganism and its antibiotic susceptibility pattern. Adequacy also involves de-escalating measures to prevent unnecessary use of broad-spectrum antibiotics.

The study comprised two consecutive arms of 6 weeks. First, a single-blinded observation arm in which there was no intervention. Subsequently, an intervention arm in which observed deviations from appropriate and adequate antibiotic use were reviewed and in which feedback on improved antibiotic use was given to the attending clinician.

Results:

During the observation period a total of 122 antibiotic events were reviewed; 46% of these were classified as appropriate, and 42% were adequate.

During the intervention period a total of 164 antibiotic events were reviewed. This resulted in 80 events for which feedback was given. The review and feedback strategy resulted in a 56% appropriate use of antibiotics (a relative increase of 22% compared to the observation period) and in 63% adequate use (a relative increase of 50%). The measured workload for the A-team for these two wards was about 10 hours per week.

Conclusion:

The implementation of a review and feedback strategy resulted in a relative improvement of appropriateness and adequacy of the antibiotic treatment of 22% and 50%, respectively, compared to antibiotic use during the observation arm of this study. This review and feedback strategy required approximately 10 hours of work per week. When extrapolated to all wards in our hospital, including the two surgical wards, the workload is estimated at approximately 24 hours of work.