

Optimizing antibiotic prescribing in hospitals – Do dedicated antibiotic pharmacists make a difference?

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Background and Objective: Antibiotic resistance is one of the biggest threats to global health, and it is important to have a restrictive and judicious antibiotic policy to help slow development of antibiotic resistance.

The aim of this study was to evaluate whether a pharmacist working specifically with optimizing antibiotic prescription could improve the antibiotic treatment in internal medicine wards.

Setting and Method: The study took place at a medical unit with 63 beds in a general hospital in Central Norway. The data was collected by a dedicated antibiotic pharmacist who reviewed the antibiotic treatment for all patients in the internal medicine wards for 8 weeks. The review focused on choice of antibiotic, dose, formulation, dosing interval and duration, and drug interactions. Antibiotics that did not comply with national guidelines and other drug-related problems (DRPs) related to antibiotics were discussed with a physician.

Main outcome measures: Three outcomes were measured: 1. The number of patients prescribed antibiotics that did not comply with national guidelines, 2. The number of patients with DRPs related to their prescribed antibiotics, and 3. The number of antibiotic related DRPs identified by the pharmacist and accepted by the physician.

Results: The study included 253 patients that were prescribed antibiotics.

For 45 % of the patients the national guidelines were not followed when the antibiotic treatment was started.

One or more antibiotic related DRPs were identified for 91 patients (36%).

Of the 126 antibiotic related DRPs, 73 (58 %) were accepted by the physician.

The most common antibiotic related DRPs were interactions, dose and dosing interval.

Conclusion: Our findings indicate that an antibiotic pharmacist performing dedicated medication reviews can identify large number of antibiotic related DRPs that are seen as clinically relevant by the treating physician and thereby can improve the antibiotic treatment for individual patients.