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Antibiotic use and resistance in long term care facilities.

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Abstract

INTRODUCTION: The common occurrence of infectious diseases in nursing homes and residential care facilities may result in substantial antibiotic use, and consequently antibiotic resistance. Focusing on these settings, this article aims to provide a comprehensive overview of the literature available on antibiotic use, antibiotic resistance, and strategies to reduce antibiotic resistance.

METHODS: Relevant literature was identified by conducting a systematic search in the MEDLINE and EMBASE databases. Additional articles were identified by reviewing the reference lists of included articles, by searching Google Scholar, and by searching Web sites of relevant organizations.

RESULTS: A total of 156 articles were included in the review. Antibiotic use in long term care facilities is common; reported annual prevalence rates range from 47% to 79%. Part of the prescribed antibiotics is potentially inappropriate. The occurrence of antibiotic resistance is substantial in the long term care setting. Risk factors for the acquisition of resistant pathogens include prior antibiotic use, the presence of invasive devices, such as urinary catheters and feeding tubes, lower functional status, and a variety of other resident- and facility-related factors. Infection with antibiotic-resistant pathogens is associated with increased morbidity, mortality, and health care costs. Two general strategies to reduce antibiotic resistance in long term care facilities are the implementation of infection control measures and antibiotic stewardship.

CONCLUSION: The findings of this review call for the conduction of research and the development of policies directed at reducing antibiotic resistance and its subsequent burden for long term care facilities and their residents.

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