Background: Cefdinir is a widely used orally administered cephalosporin for community-acquired (CA) respiratory tract infections and SSTIs. Oral agents are infrequently tested in vitro and their activity against contemporary clinical strains is not well characterized.

Methods: More than 400 isolates from CA-SSTIs were collected from medical centers in North America (NA) including: 243 of susceptible (S) Staphylococcus aureus (SA), 21 of resistant (R) Staphylococcus aureus (MRSA), 57 of Streptococcus pyogenes, 25 of Enterobacteriaceae (E. coli [SA], 21 of Staphylococcus epidermidis [KSP]) and 21 of Coagulase-negative staphylococci (CoNS). All isolates were collected over the period of January 1997 to December 2000. Isolates were collected from non-sterile body sites and were considered as negative controls if they were not associated with clinical infections.

Results: The MIC of S. aureus was 0.25 mg/L, which was four-fold more potent than the other oral cephalosporins evaluated against SA (MIC 50, 2 mg/L). Cefdinir was four-fold more potent than cefuroxime (MIC 50, 2 mg/L) and eight-fold more potent than cefotaxime or aztreonam. Most bacteria were susceptible (≥90%) to cefdinir except for Enterobacteriaceae and ESBL producers. All SSTIs were susceptible to cefdinir (MIC 0.25 mg/L) with an increased minimum inhibitory concentration (MIC; ≤0.03 mg/L). Only 24.3% of strains were considered susceptible and 34.2% of strains showed intermediate-susceptibility (MIC 0.12-4 mg/L). Cefdinir was four- to eight-fold more potent than cefuroxime against SSTIs (β-lactams are one of the most widely prescribed classes of antimicrobial agents for uncomplicated community-acquired infections in North America. The current cefdinir application for uncomplicated SSTIs pathogens appears to be validated using contemporary clinical strains from NA.

Abstract: Cefdinir showed potency and spectrum comparable or superior to other orally administered β-lactams. The continued cefdinir application for uncomplicated SSTIs pathogens appears to be validated using contemporary clinical strains from North America.