

Impact of voluntary vs enforced compliance of third-generation cephalosporin use in a teaching hospital.

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The purpose of this study was to assess and compare the impact of voluntary compliance and enforced compliance with institutional guidelines for initiating third-generation cephalosporin therapy.

An audit of third-generation cephalosporin use during a 6-month period shortly after ceftriaxone and ceftazidime were added to the hospital formulary already containing cefotaxime was performed. During this period, compliance to institutional guidelines for initiating therapy was voluntary. A follow-up audit during a similar 6-month period was performed to assess compliance with institutional guidelines shortly after an enforcement policy was placed in effect. The results of these two audits were compared to assess usage patterns of these cephalosporins, compliance rates with institutional guidelines for initiating therapy, use of susceptibility testing to guide therapy, effect of use of these drugs on susceptibility patterns within the hospital, and third-generation cephalosporin costs during periods when institutional policy was unenforced and enforced.

Only 24.2% of 66 courses of third-generation cephalosporins were initiated in compliance with institutional guidelines during the initial audit period. Susceptibility testing revealed an organism susceptible to a first-generation cephalosporin in 13 courses but in only six instances was a switch to the more narrow-spectrum antibiotic performed. At the time routine susceptibility testing to ceftazidime and ceftriaxone was instituted, 92% of *Enterobacter cloacae* were sensitive to ceftriaxone and 89% of *Pseudomonas aeruginosa* were sensitive to ceftazidime. Fifteen months later, when voluntary compliance to institutional policy was terminated, 70% of *E. cloacae* were sensitive to ceftriaxone and 73% of *P. aeruginosa* were sensitive to ceftazidime. During the last 6 months of this period, pharmacy expenditures totaled \$50,000. The second audit revealed 85.4% of 48 courses of treatment complied with guidelines for initiating therapy. Since enforcement was instituted, sensitivity of *E. cloacae* to ceftriaxone has risen to 88% and sensitivity of *P. aeruginosa* to ceftazidime has increased to 80%. Pharmacy expenditures decreased to \$23,000.