Extended-spectrum β-lactamases (ESBL) are plasmid-mediated beta-lactamases that confer resistance to β-lactam antibiotics. The spread of ESBL among Enterobacteriaceae is a major concern due to the limited number of effective antimicrobial agents. ESBLs are often associated with other resistance mechanisms, such as AmpC enzymes, aminoglycosides, and fluoroquinolones. Extended-spectrum ß-lactamases (ESBLs) are plasmid-mediated beta-lactamases that confer resistance to β-lactam antibiotics. The spread of ESBL among Enterobacteriaceae is a major concern due to the limited number of effective antimicrobial agents. ESBLs are often associated with other resistance mechanisms, such as AmpC enzymes, aminoglycosides, and fluoroquinolones. ESBLs are typically associated with Enterobacteriaceae species, including Escherichia coli, Klebsiella pneumoniae, and Enterobacter cloacae. These enzymes hydrolyze several β-lactam antibiotics, including penicillins, cephalosporins, and carbapenems. The dissemination of ESBLs is a global issue, with reports of ESBL-positive isolates from various countries and regions. The spread of ESBLs is often associated with the inappropriate use of β-lactam antibiotics, which can lead to the selection of resistant strains. In the United States, ESBLs have been identified in a variety of settings, including hospitals, long-term care facilities, and the community. The prevalence of ESBLs varies significantly across different geographical regions and may be influenced by local antimicrobial usage patterns. The detection of ESBLs requires a standardized methodology to ensure accurate results. The Clinical and Laboratory Standards Institute (CLSI) provides standardized methods for the detection of ESBLs, which are based on the synergy test and the double-disk method. The synergy test involves the use of a β-lactamase inhibitor, such as clavulanic acid or sulbactam, which is added to the β-lactam antibiotic. The presence of ESBL is indicated by the lack of synergy between the β-lactam antibiotic and the inhibitor. The double-disk method involves the use of a β-lactam antibiotic disk and a disk containing the inhibitor. The presence of ESBL is indicated by an increase in the zone of inhibition around the antibiotic disk when the inhibitor disk is placed adjacent to it. Treatment options for ESBL-positive infections are limited, and the use of carbapenems is often considered as a last resort. The introduction of carbapenems has led to the development of carbapenem-resistant enterobacteriaceae (CRE), which poses a significant public health challenge. The control of ESBLs relies on the appropriate use of antimicrobial agents, infection control measures, and surveillance programs. Surveillance programs, such as the SENTRY Antimicrobial Surveillance Program, collect and analyze data on antimicrobial resistance trends among Enterobacteriaceae species. These data can provide valuable insights into the epidemiology of ESBLs and guide the development of effective strategies to control their spread. The dissemination of ESBLs is a complex issue that requires a multidisciplinary approach to address. The control of ESBLs requires a combination of measures, including antimicrobial stewardship, infection control, and surveillance. The effective control of ESBLs is crucial to ensure the availability of effective antimicrobial agents for the treatment of infections.