

Should all patients harbouring ESBL-producing organisms be isolated?

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Isolation as a mean to control the spread of multidrug-resistant (MDR) organisms is subject to controversy. Isolation makes sense if a bacteria is efficaciously transmitted by direct contact, and patients (or their surrounding surfaces) harbouring them are important reservoirs. In a recent systematic review of published articles, multifaceted strategies including contact precautions and isolation has been shown to be associated with increased probability of controlling the spread of MDR gram negatives. However, because isolation may be associated with adverse effects, pros and cons should be carefully considered. Many clonal outbreaks of ESBL-producing *Klebsiella pneumoniae* in which colonised patients are key reservoirs have been described. Moreover, some clones of *K. pneumoniae* are well known by their great ability to spread by cross-transmission within healthcare centres. This usual epidemiologic behaviour makes it prudent to recommend isolation for all patients colonised or infected with ESBL-producing *K. pneumoniae*. This recommendation may be applied to other species of *Klebsiella* and *Enterobacter*. The decision is more difficult in the case of ESBL-producing *Escherichia coli*. Two arguments can be used to recommend isolation in these cases: the fact that some ESBL-producing *E. coli* has been shown to spread clonally, and the fact that the mobile genetic elements associated with ESBLs may be cross-transmitted using *E. coli* or other enterobacteria as a vehicle. However, clonal spread of *E. coli* actually occurs in the community, and whether acute care centers plays a relevant role in further amplifying the spread is far from clear. Well proven nosocomial outbreaks caused by ESBL-producing *E. coli* in which cross-transmission is important are scarce and usually affected small numbers of patients. Finally, the prevalence of colonisation with ESBL-producing *E. coli* in the community in many areas may be too high to feasibly detect and isolate all them. Thus, combining activities aimed at improving hand hygiene and prudent use of antibiotics which select for these organisms (mainly, cephalosporins and fluoroquinolones) while carefully tracking all nosocomial cases so that any outbreak can be readily detected is a reasonable alternative to isolation for all patients harbouring ESBL-producing *E. coli*. An exception to this might be patients admitted to ICUs, for which isolation may be prudent.