<table>
<thead>
<tr>
<th>Study</th>
<th>Country</th>
<th>Design</th>
<th>Setting (No. of patients)</th>
<th>Evaluated component</th>
<th>Comparator</th>
<th>Outcome</th>
<th>Recommendations</th>
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</thead>
<tbody>
<tr>
<td>Hanssens et al. 2005</td>
<td>Qatar</td>
<td>Prospective observation and evaluation of patients charts</td>
<td>Hospital (71)</td>
<td>Appropriateness of use of antimicrobials and prescribing patterns of physicians</td>
<td>Compliance with local hospital guidelines, international guidelines and clinical judgment and experience</td>
<td>Inappropriate antibiotic management (52% positive cultures in 76% of patients with presumed or proven infection with only 52% change in empiric therapy post sensitivity results) Low potential for microbiological diagnostic procedures and inappropriate microbiological investigations</td>
<td>Urgent need for updated empiric and local hospital treatment guidelines in addition to the need for a review of antibiotic prescribing policies Monitoring of antibiotic usage Role of clinical pharmacist in assuring justified use of continuous antibiotics Implementation of empirical antibiotic treatment without any delay, based on clinical judgment, guided by local antibiograms and antibiotic resistance patterns and on de-escalating antibiotic strategy Rotating empirical antibiotic schedule to limit emergence of resistance patterns Good communication among healthcare professionals Implementation of infectious control practices to reduce resistance and the spread of nosocomial infections Future drug utilization reviews to assess anti-infectious management</td>
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<tr>
<td>Al-Tawfiq, 2012</td>
<td>Saudi Arabia</td>
<td>Retrospective observation of and evaluation of the pharmacy register of the annual medication utilization</td>
<td>Hospital</td>
<td>Appropriateness of use of antimicrobials</td>
<td>Compliance with WHO guidelines for defined daily dose of antimicrobials</td>
<td>Increased and unexplained usage of intravenous antibiotics; especially fluoroquinolones (from 3.5 to 82.643 defined daily dose/100 patient days) leading to emergence of fluoroquinolone-resistant bacterial strains</td>
<td>Specific unit antimicrobial consumption data to be able to compare with benchmarking data such as the NHSN Education and implementation of antimicrobial stewardship programme to control the use of antibiotics</td>
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