Reviewer's report

Title: Empirical use of antibiotics and adjustment of empirical antibiotic therapies in a university hospital: a prospective observational study

Version: 1 Date: 5 July 2006

Reviewer: Curtis Donskey

Reviewer's report:

I have the following comments for the authors to consider.

Minor essential revision.

The authors conclude that interventions should focus on streamlining and adjustment of therapy once microbiological results become available. This recommendation is based on the fact that a greater percentage of adjusted antibiotic therapy was inadequate (26%) in comparison to initial empirical therapy (22%). My interpretation is that the findings suggest that antibiotic control efforts should focus on both initial empirical therapy and adjustments. First, both initial and adjusted therapy was often inappropriate (26% vs 22% is probably not statistically significant). Second, although the percent of inappropriate empirical therapy was lower, the total number of patients receiving inadequate empirical therapy was higher (i.e. 121 patients received inappropriate empirical therapy vs. 46 who received inappropriate adjusted therapy). Third, initial empiric antibiotic choices may be clinically important because inadequate therapy may be associated with increased mortality (e.g. Drugs 2003;63:57-68; Antimicrob Agents Chemother 2005;49:1306-11). In addition, even short courses of initial therapy that is unnecessary or unnecessarily broad can cause persistent disruption of the normal flora and promote colonization by resistant pathogens (Clin Infect Dis 2004;39:219-26). The current study nicely documented that empirical therapy often either did not appropriately cover suspected pathogens or was broader than necessary.

Discretionary revisions.

1). Since space is not a limitation, it may be helpful to provide readers with some examples that illustrate some of the categories of inappropriate therapy that they are reporting.

2). Methods. The authors give the Sanford Guide as an example of a resource that they used for published guidelines. Since there are often minor discrepancies among various guidelines/textbook, etc., it would be appropriate to cite some of the other references or guidelines that they used when deciding on the appropriateness of therapy.

What next?: Accept after minor essential revisions