

# Impact of Early Antimicrobial Stewardship Intervention in Patients with Positive Blood Cultures.



Early antimicrobial stewardship intervention (ASI) combined with rapid diagnostics in patients with positive blood cultures reduces hospital length of stay (LOS) and time-to-definitive therapy.

In this randomized comparative study, researchers aimed to compare clinical outcomes between early ASI paired with rapid diagnostic technologies compared with rapid diagnostic technologies with standard of care (SOC) reporting in patients with positive blood cultures.

Patients included in the study were adults with positive blood cultures and organism speciation detected via Matrix Associated Laser Desorption Ionization-Time of Flight mass spectrometry (MALDI-TOF) who were admitted for at least 48 hours following the positive blood culture.

The ASI and SOC arms were similar in age, sex, comorbidities, and severity of illness. The time-to-definitive therapy was significantly reduced in the ASI group by 30.3 hours on average. Further, median hospital LOS following the first positive blood culture was significantly shorter by 2.5 days in the ASI group.

**The relevance and external validity of these findings was increased by the pragmatic design of the study that allowed for the inclusion of most evaluable patients and during the normal course of workflow for antimicrobial stewardship pharmacists.**



*According to the study authors, “The effect of ASI, in combination with MALDI-TOF, appears to have multiple clinically relevant benefits and potential cost savings.”*

## REFERENCE

[O'Donnell JN, Rhodes NJ, Miglis CM, et al. Impact of early antimicrobial stewardship intervention in patients with positive blood cultures: results from a randomized comparative study: Impact of stewardship on BSI outcomes. \*Int J Antimicrob Agents\*. 2021;106490. doi:10.1016/j.ijantimicag.2021.106490](#)