Assessment of ASP Interventions

The following ASP interventions are recommended by the Infectious Diseases Society of America and the Society for Healthcare Epidemiology of America in their Guidelines for Developing an Institutional Program to Enhance Antimicrobial Stewardship (Dellit, 2007). Each has advantages and disadvantages as listed below (Joint Commission Resources, 2012). Consider which of the interventions might be right for your hospital or ways you might modify or adapt one or more of the interventions to better fit your hospital's needs.

Intervention	Advantages	Disadvantages	Notes
Prospective audit with intervention and feedback	• Proven in clinical studies to reduce and modify use of antibiotics, improve selected clinical outcomes, and decrease antimicrobial expenditures (Joint Commission Resources, 2012)	• Resource intense • Requires team member training and experience in antimicrobial therapy • Voluntary adherence by clinicians to intervention	• Requires intervention for patients already on antimicrobials • Requires ongoing review, intervention/feedback by an infectious disease physician or a clinical pharmacist with infectious disease training
Formulary restriction and pre-authorization	• Proven in clinical studies to reduce and modify use of antibiotics, improve selected clinical outcomes, and decrease antimicrobial expenditures (Joint Commission Resources, 2012) • When used with infection control interventions, effective in controlling *C. difficile* (Dellit, 2007)	• Potentially delays start of treatment • Time intensive • Perceived loss of prescriber autonomy (Joint Commission Resources, 2012) • Requires on-call infectious disease physician or other trained professional to approve use	• Requires identifying specific antimicrobial agents to be restricted • Can help control costs • Requires monitoring overall trends in antimicrobial use to assess and respond to shifts in use (Dellit, 2007)
Education	• Reaches a large number of prescribers in a short period of time (Joint Commission Resources, 2012) • Effective for communicating the need and rationale for subsequent stewardship interventions (Joint Commission Resources, 2012; Dellit, 2007)	• Marginally effective in changing prescriber practices when used alone (Dellit, 2007) • Has not demonstrated a sustained impact when used alone (Dellit, 2007) • There is rapid loss of knowledge when used alone (Joint Commission Resources, 2012)	• Can be incorporated into other meetings • Can provide consistent messaging across the organization

Intervention	Advantages	Disadvantages	Notes
Guidelines and Clinical Pathways	• Can improve antimicrobial utilization (Dellit, 2007) • Reduces variation in prescribing practices (Joint Commission Resources, 2012) • Evidence-based (Dellit, 2007) • Assists with adherence to regulatory and third-party payer stipulations (Joint Commission Resources, 2012)	• Often not utilized unless combined with other stewardship strategies or elements (Joint Commission Resources, 2012)	• Acceptance by clinicians is better when local data are used and guideline is adapted to specific hospital (Joint Commission Resources, 2012)
Streamlining or de-escalation of therapy	• More effectively targets the causative pathogen thereby reducing antimicrobial exposure • Reduces costs associated with inappropriate treatment • Can eliminate redundant combination therapy		• Requires culture results • Requires monitoring use of initial, broad-spectrum empiric therapy for opportunities for more targeted treatment
Parenteral to oral conversion ("IV to PO")	• May allow for discontinuing venous access (improved patient comfort and mobility, decreased risk for phlebitis) (Joint Commission Resources, 2012) • Cost savings (Joint Commission Resources, 2012; Dellit, 2007) • Decreased lengths of stay (Dellit, 2007)	• Belief that IV therapy justifies continued hospitalization for third-party payers (myth) (Joint Commission Resources, 2012) • May help facilitate discharges during surges in capacity (Dellit, 2007)	• Individual patient must be a good candidate for oral alternative (nutrition status, bio-availability of drug)

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