

all sizes, and that carry with them significant morbidity and mortality.

Guidance is presented in the form of answers to a series of clinical questions for each pathogen. Although brief descriptions of notable clinical trials, resistance mechanisms, and antimicrobial susceptibility testing (AST) methods are included, the document does not provide a comprehensive review of these topics. GRADE methodology (ie, Grading of Recommendations, Assessment, Development, and Evaluations) are not employed. Due to differences in the molecular epidemiology of resistance and availability of specific antibiotics internationally, treatment suggestions are geared toward AMR infections in the United States. This guidance document applies to both adult and pediatric populations. Suggested antibiotic dosing for adults with AMR infections, assuming normal renal and hepatic function, are provided in Table 1. Pediatric dosing is not provided. The content of this document is current as of 31 December 2023. The most current version of this IDSA guidance document and corresponding date of publication is available at: www.idsociety.org/practice-guideline/amr-guidance.

GENERAL MANAGEMENT RECOMMENDATIONS

Suggested treatment approaches in this guidance document assume that the causative organism has been identified and that in vitro activity of antibiotics is demonstrated. If 2 antibiotics are equally effective, important considerations in selecting a specific agent include safety, cost, convenience, and local formulary availability.

Complicated Urinary Tract Infection Definition

In this document, the term complicated urinary tract infections (cUTI) refers to UTIs occurring in association with a structural or functional abnormality of the genitourinary tract, or any UTI in an adolescent or adult male. In general, the panel suggests cUTI be treated with similar agents and for similar treatment durations as pyelonephritis. For cUTI where the source has been controlled (eg, removal of a Foley catheter) and ongoing concerns for urinary stasis or indwelling urinary hardware are no longer present, it is reasonable to select antibiotic agents and treatment durations similar to those that would be selected for uncomplicated cystitis, with day 1 of therapy being the day source control occurred.

Empiric Therapy

Empiric treatment decisions are outside the scope of this guidance document. However, in general, empiric therapy should be informed by the most likely pathogens, severity of illness of the patient, the likely source of the infection, and any additional patient-specific factors (eg, severe penicillin allergy, severe immune compromise, chronic kidney disease). When

determining empiric treatment for a given patient, clinicians should also consider: (1) previous organisms identified from the patient and associated antimicrobial susceptibility testing (AST) data in the last 12 months [3], (2) antibiotic exposure within the past 3 months [3], and (3) local AST patterns for the most likely pathogens. Treatment decisions should be refined based on the species and the AST profile of the pathogen, as well as on the identification of any prominent β -lactamase genes that have been identified.

For all organisms, but for DTR *P. aeruginosa*, CRAB, and *S. maltophilia* in particular, a distinction between bacterial colonization and infection is important because unnecessary antibiotic therapy will only further the development of resistance and may cause unnecessary antibiotic related harm to patients. Commonly selected empiric antibiotic regimens are generally not active against CRAB and *S. maltophilia* infections. The decision to target treatment for CRAB and/or *S. maltophilia* in empiric antibiotic regimens should involve a careful risk-benefit analysis after reviewing previous culture results, clinical presentation, individual host risk factors, and antibiotic-specific adverse event profiles.

Duration of Therapy and Transitioning to Oral Therapy

Recommendations on durations of therapy are not provided, but clinicians are advised that the duration of therapy should not differ for infections caused by organisms with resistant phenotypes compared to infections caused by more susceptible phenotypes [4]. After AST results are available, it may become apparent that inactive antibiotic therapy was initiated empirically. This may impact the duration of therapy. For example, uncomplicated cystitis is typically a mild infection [5]. If an antibiotic not active against the causative organism was administered empirically for uncomplicated cystitis, but clinical improvement nonetheless occurred, it is generally not necessary to repeat a urine culture, change the antibiotic regimen, or extend the planned treatment course. However, for all other infections, if AST results indicate a potentially inactive agent was initiated empirically, a change to an active regimen for a full treatment course (dated from the start of active therapy) is suggested. Additionally, important host factors related to immune status, ability to attain source control, and general response to therapy should be considered when determining treatment durations for AMR infections, as with the treatment of any bacterial infection. Finally, whenever possible, transitioning to oral therapy should be considered (assuming intravenous [IV] therapy was initially prescribed), particularly if the following criteria are met: (1) susceptibility to an appropriate oral agent is demonstrated, (2) the patient is hemodynamically stable, (3) reasonable source control measures have occurred, and (4) concerns about insufficient intestinal absorption are not present [6].