

microbiology and pathology journals. She served as the President of the Maryland Branch of ASM and on more than a dozen committees for the national organization. For her outstanding service for advancing the field of microbiology and for her service to ASM, Dr Charache received one of the most prestigious awards to be bestowed upon a clinical microbiologist, the bioMérieux Sonnenwirth Award for Excellence in Clinical Microbiology.

Dr Pat's commitment extended globally. In service to the National Academy of Sciences as a member of the Board on Science and Technology, she provided microbiology consultative services and mentorship to budding microbiologists and physicians in >30 countries. Her most recent international activities involved efforts to curb tuberculosis.

Dr Charache is survived by her husband, Samuel Charache, MD, Professor Emeritus of Pathology and Medicine of the Johns Hopkins University School of Medicine; their daughter, Barbara Charache Coleman, RN, research nurse at the Bayview Medical Center; 4 grandchildren (Debra, David, Dean, and Daniel); her sister, Jane Pier; and her brother, Dr Robert Connamacher.

Note

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Antimicrobial Stewardship and the Allergist: Reclaiming our Antibiotic Armamentarium

To the Editor—We commend Olans et al [1] for their recognition of a multidisciplinary

approach to antimicrobial stewardship. Increasing antimicrobial resistance coupled with the paucity of novel antimicrobial agents creates a clear need for effective antimicrobial stewardship programs (ASPs). The call for judicious use of antimicrobial agents gained further urgency through a joint statement published by the Society for Healthcare Epidemiology of America, the Infectious Diseases Society of America, and the Pediatric Infectious Diseases Society in 2012 [2]. More recently, the National Action Plan for Combating Antibiotic-Resistant Bacteria has brought the issue to the forefront of what is truly a worldwide problem [3].

Olans et al [1] also note the negative impact of reported penicillin allergy, which is linked to increased antimicrobial resistance, longer hospital stays, increased healthcare costs and death [4, 5]. Antibiotic regimens can deviate from first-line therapy in 38% of penicillin-allergic patients [6] and use of alternative agents, such as clindamycin and fluoroquinolones, can increase the risk of *Clostridium difficile* infection. ASP strategies targeting fluoroquinolone restriction have demonstrated significant reductions in *C. difficile* infections [7].

A significant number of patients report a penicillin allergy, with estimates in the literature ranging from 8% to 20% of the general population [8]. Allergist-immunologists can employ the use of skin-prick and intradermal testing with the major determinant, penicilloyl-polylysine, as well as penicillin G and, where approved, ampicillin. Negative test results should be followed by oral challenge, an effective way to clear patients of their reported allergy with minimal risk of resensitization [8]. Patients can be safely assessed for possible immediate hypersensitivity to penicillin and related β -lactams, reclaiming the use of β -lactam antibiotics for >90% of patients who undergo testing [4, 8].

The utility of such an evaluation in the context of an ASP is illustrated by the work of Rimawi et al [9], who used skin-prick testing in an inpatient setting. Blumenthal et al [10] also reported on the

potential benefits of evaluating penicillin allergies in the setting of methicillin-sensitive *Staphylococcus aureus* bacteremia. In an effort to achieve best practices, our institution has implemented targeted evaluation by an allergist-immunologist in conjunction with our ASP (Figure 1). This system allows inpatients with an identified history of penicillin allergy to complete a needs-based assessment followed by immediate or outpatient evaluation, all under the auspices of the ASP.

ASPs represent an important mechanism to provide optimal care for patients and protect the use of currently available antimicrobial agents. A model of antibiotic allergy testing with subsequent penicillin allergy delabeling and ASP integration may decrease broad-spectrum antibiotic use and associated healthcare costs, increase use of first-line antibiotic therapy, and improve patient outcomes [9]. As with skilled staff nurses, we contend that allergist-immunologists are an unrecognized but invaluable asset to ASPs in the effort to preserve the current antibiotic armamentarium.

Notes

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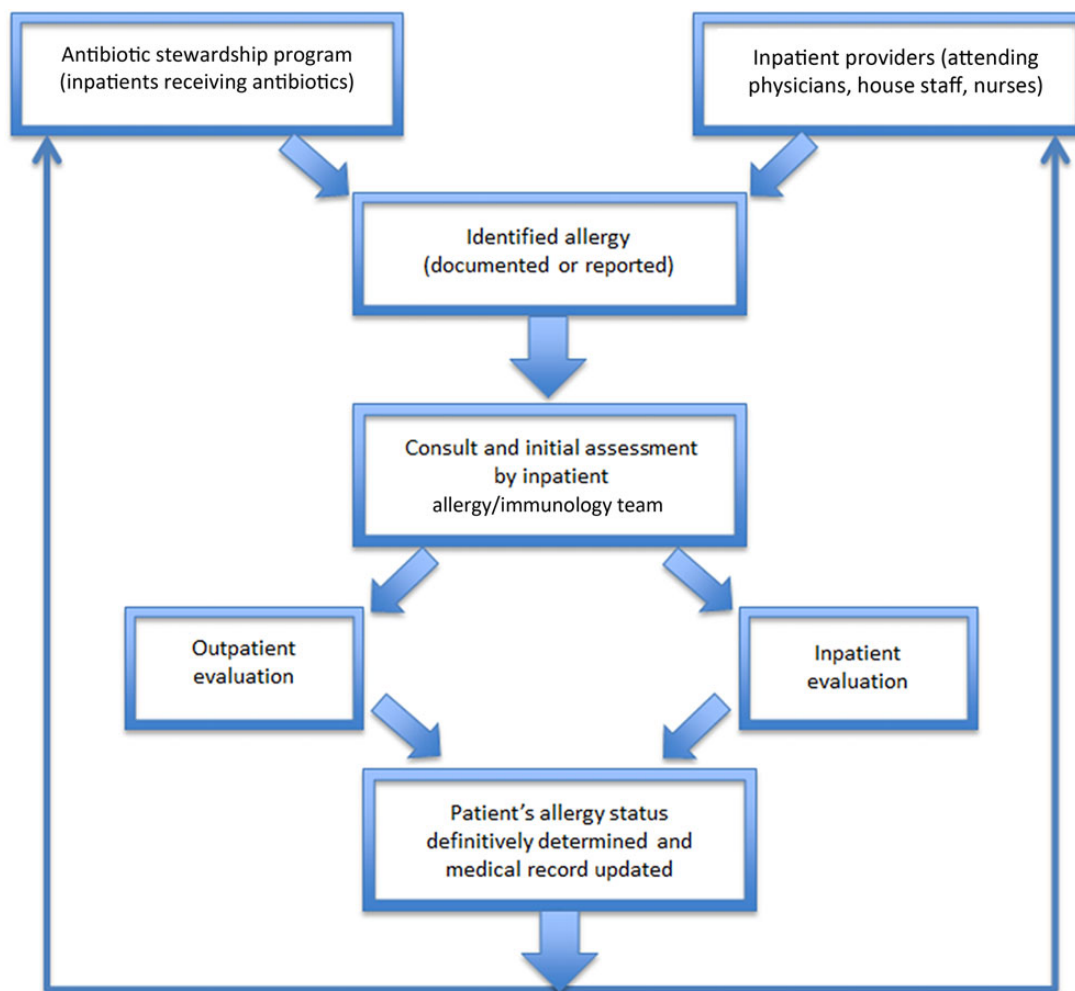


Figure 1. Flow chart of the approach taken at our institution to identify, rapidly assess, definitively evaluate, and properly categorize inpatients with a documented or reported allergy to penicillin or β -lactam allergy. This information is made available to the inpatient team and antimicrobial stewardship program during the current or future hospitalization, depending on the timing of evaluation.

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Reply to Ressler et al

TO THE EDITOR—We appreciate the comments of Ressler et al [1] regarding our

invited article [2]. We agree that to be effective, efficient, as well as safe for patient care, antimicrobial stewardship programs need to be truly multidisciplinary and to have clear and accurate communication among the participants. A label of “penicillin allergy,” even when incorrect, limits antimicrobial de-escalation options and shifts antibiotic selection toward broader and more multidrug-resistant organisms-selective classes of antimicrobials [3]. Staff nurses interact with the drug allergy and antibiotic selection process at several points. First, they often take the admission medication allergy history for the in-patient record. Second, they review the antibiotic order for safety before actually administering the medication to the