



## Resistance of man and bug

Why individual clinicians make specific decisions usually can be sorted out. But our behavior as a group is more difficult to understand and, even when there are pressing and convincing reasons to change, behavior is difficult to alter.

In this issue, Drs. Federico Perez and David Van Duin (page 225) discuss the emergence of carbapenem-resistant bacteria, dubbed “superbugs” by the media. Antibiotic resistance is not new; it was reported in *Staphylococcus species* within several years of the introduction of penicillin.<sup>1</sup> However, it has been increasing in prevalence and molecular complexity after years of relatively promiscuous antibiotic use. As the percentage of inpatients with immunosuppression and frailty increases in this environment of known antibiotic resistance, initial empiric antibiotic choices will by necessity include drugs likely to further promote development of resistant strains. But why do physicians still prescribe antibiotics for uncomplicated upper respiratory tract infections and asymptomatic bacteriuria, despite numerous studies and guidelines suggesting this practice has little benefit? Is it because patients expect a prescription in return for their copayment? Is it the path of least resistance? Or do physicians not accept the data showing that it is unnecessary?

On page 209, Dr. Gerald Appel discusses diabetic nephropathy, an area that involves resistance of another kind, ie, the apparent resistance of physicians and patients to achieving evidence-based treatment targets. We hold controlled trials as the Holy Grail of evidence-based medicine, yet we seem to have an aversion to following guidelines based on trial-derived evidence. (I do not refer here to blind guideline adherence, ignoring individual patient characteristics.)

So how can physicians’ behavior be altered and our resistance to change be reduced? Experiments are under way, such as paying physicians based on their performance, linking patients’ insurance rates to achieving selected outcomes, and linking physician practice self-review to certification. Perhaps naively, I continue to believe that the most effective impetus to changing personal practice is the dissemination of data from high-quality trials (tempered by our accumulated experience and keeping our eyes wide open), coupled with our desire to do the best for our patients.

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1. Barber M. Coagulase-positive staphylococci resistant to penicillin. *J Pathol Bacteriol* 1947; 59:373–384.