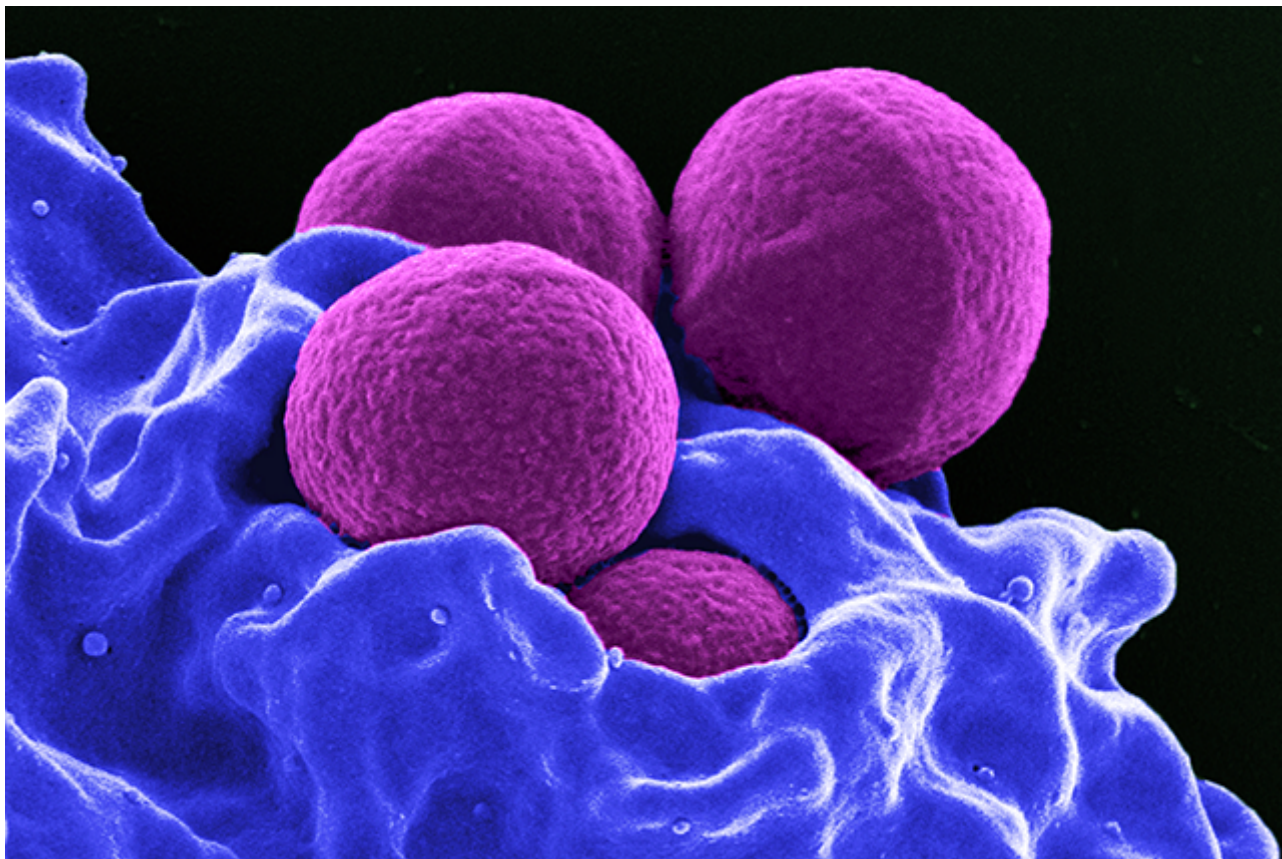


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'Why not take a risk?' attitude is impeding efforts to stem rise in antibiotic-resistant infections

The global rise in infections resistant to antibiotics is considered one of the most urgent global threats to human health.

By [Susan Perry](#) | MinnPost contributing writer



This digitally-colored scanning electron micrograph depicts four magenta-colored, spherical methicillin-resistant *Staphylococcus aureus* bacteria in the process of being phagocytized by a blue-colored human white blood cells.

National Institute of Allergy and Infectious Diseases

June 11, 2018 The global rise in infections resistant to antibiotics is considered [one of](#)

[the most urgent global threats to human health](#). Indeed, it's been called ["the health crisis of our generation."](#)

In the United States alone, antibiotic-resistant infections, such as [clostridium difficile](#) (CDIFF), [carbapenem-resistant Enterobacteriaceae](#) (CRE) and [Neisseria gonorrhoeae](#), are responsible for more than 2 million illnesses — and at least 23,000 deaths — each year.

The human cost of those illnesses is immense, but so is the economic cost — an annual hit to the U.S. economy of \$20 billion in direct medical costs and \$35 billion in indirect costs (such as lost work days and productivity), [according to the Centers for Disease Control and Prevention](#) (CDC).

One of the many factors behind the rise in antibiotic-resistant infections has been the inappropriate prescribing of antibiotic medications to patients. A 2016 CDC [study](#) found that about a third of all antibiotics prescribed in U.S. doctors' offices and hospital emergency rooms are unnecessary.

Most of those unneeded prescriptions — about 47 million in total each year, according to the CDC — are being given to patients with viral and other non-bacterial illnesses that don't respond to antibiotics, including colds and the flu, and most coughs, sore throats, stuffy noses and ear infections.

There's evidence that a public health campaign to educate both physicians and patients about this issue is working — at least, a bit. The health insurer Blue Cross Blue Shield [reported](#) last year, for example, that the rate of outpatient antibiotic prescriptions among their patients declined by 9 percent from 2010 through 2016.

That meant, however, that a still-large percentage of the antibiotic prescriptions given to Blue Cross Blue Shield patients in 2016 — 21 percent — were unnecessary.

Dual responsibility

So, who's to blame for the continued overprescribing of antibiotics? Doctors? Patients?

Both, according to a recent [study](#) published in the journal [Medical Decision Making](#). The study surveyed 149 clinicians (including doctors, nurses and physician assistants), 225 patients at two large urban hospitals and 519 other adults through a national online website (Amazon's [Mechanical Turk](#) platform) about their knowledge and expectations regarding antibiotics. All participants lived in the United States.

The surveys revealed that a significant proportion of patients and their health care providers have a “why not take a risk?” attitude about antibiotics, even when they're fully aware that the drugs aren't indicated for the patient's illness.

It's an attitude that often overrides any concerns about the drugs' potential side effects, which include allergic reactions (sometimes serious ones), rashes, yeast infections and diarrhea. And it certainly overrides the broader concern about the growing antibiotic-resistance crisis.

Specifically, the study found that 48 percent of the clinicians it surveyed, 78 percent of the hospital patients and 49 percent of the other adults expressed the belief that as long as there was a possibility that the patient might get better — no matter how irrational that belief was — they might as well give it a try.

“The problem is that patients, but more surprisingly clinicians, are not fully recognizing the potential harms from antibiotic use,” said [Eili Klein](#), one of the study's authors and a mathematical ecologist and epidemiologist at the Center for Disease Dynamics, Economics & Policy (CDDEP), in [a released statement](#). “Despite the fact that approximately 20% of patients can get some sort of side effect, this does not seem to be as important a factor in decision-making as one would expect.”

Needed: a different educational strategy

These were small surveys, of course, and therefore their results may not reflect attitudes about antibiotic use in the broader population, either among patients or clinicians.

Still, the fact that antibiotics continue to be overprescribed in such large numbers suggests that such attitudes are widespread.

Klein and his co-authors say that new educational strategies are urgently needed. Rather than focusing on teaching patients the difference between bacterial and viral infections (which the surveys found many people already knew), a better approach, they say, might be to reframe the choice that the patient has to make between “remaining sick or potentially being qualitatively worse off.”

It’s not clear, of course, whether that educational approach would work. Still, it’s worth a try, say the researchers, given the urgency of the current global antibiotic-resistance crisis.

“The most important driver of antibiotic resistance is antibiotic use,” said Klein. “Eliminating unnecessary antibiotic use would eliminate unnecessary harms to patients, and help reduce the spread of antibiotic resistance, which threatens the medical gains of the last century.”

FMI: You’ll find an abstract of the study [on the Medical Decision Making webpage](#), but the full paper is, unfortunately, behind a paywall.



Susan Perry

Susan Perry writes Second Opinion for MinnPost, covering consumer health. She has written several health-related books, and her articles have appeared in a wide variety of publications.