Beating back the spread of antibiotic-resistant bacteria will require a multi-pronged approach. Some necessary steps include eliminating the active ingredients from hand soaps and livestock feed, and working to ensure that patients take their full dose of drugs. But the most essential question hovering over this issue is whether or not to treat sick patients with antibiotics.

Bacterial infections make antibiotics necessary. But viruses, like ones that cause the common cold and flu, are unaffected by these drugs. Anytime antibiotics are used, either properly or improperly, there is a potential resistance to bacteria.

This problem underscores the importance of physicians only prescribing antibiotics when actually needed. What makes this difficult, however, is that often viral and bacterial infections can present very similarly. During cold-and-flu season the question of whether to give antibiotics arises more frequently.

And unfortunately, this confusion appears to be commonplace, because according to new data from the Centers for Disease Control and Prevention, doctors are not making the right call very often.

The CDC collected data from five outpatient clinics over the previous two flu seasons, which included information from more than 14,000 patients. The agency found that patients with flu symptoms were given antibiotics 42 percent of the time -- instead of never.

Dr. Fiona Havers, from the CDC, points out that patients arriving at clinics with flu-like symptoms -- during flu season -- generally have the flu, and thus will not benefit from antibiotics since they are not an effective treatment. Patient data also revealed that 17 percent with lab-confirmed influenza were prescribed antibiotics.
Researchers also found, in a sub-analysis of four of the five sites for the 2014-2015 season, that 43 percent of patients who were given antibiotics for pharyngitis (sore throat) had a negative strep test. Pharyngitis can be caused by a variety of contagions, the vast majority of which are viral. Strep throat is the most cause of bacterial pharyngitis. These data show that even when a bacterial cause of pharyngitis is ruled out, patients still received antibiotics.

These data should not leave you thinking that physicians are just handing out antibiotics to any patient walking in the clinic. And it's too narrow a perception to believe that because doctors are the ones controlling the prescription pads, they are solely to blame.

Patients often demand to be given something, anything, despite doctors' protests that the prescription will do more harm than good. In fact, a recent survey found that about half of Americans don't know the proper time to be prescribed antibiotics. Physicians, on the other hand, should know the right time, but often submit to patient pressure or defensive medical practices.

Also, compounding the problem is that it can take days for a lab to identify the causative agent of an infection. In these cases, physicians often worry about getting patients antibiotics when, or if, they need them. The CDC recommends that doctors try using more delayed scripts for antimicrobials, which patients fill later, when the identity of the contagion is clear.

Both physicians and patients need to shoulder the blame for this poor report card, while adjusting their respective approaches to receiving the proper medication. Because if this pattern continues, we may not have any effective antibiotics left when we really need them.