

# Virtual Mentor

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## Clinical Case

### Unnecessary antibiotics

Commentary by Jonathan A. Finkelstein, MD, MPH

Dr. Waterman had a 12-year-old general pediatrics practice in a rapidly growing suburban community. Although well liked by his patients and their families, he found it increasingly difficult to thrive as a solo practitioner under a managed care system. After careful consideration, he decided to merge his practice with a fairly new pediatrics group in the same community.

During merger negotiations with his three new partners, Dr. Waterman agreed to a compensation formula based largely on the number of patients seen. His new partners, led by the ambitious Dr. Connolly, have also made no secret of their desire to increase the “market share” of the practice and the importance of securing a strong foothold in the community before more competition “moves in.”

In the winter, a few months after the merger, the office was flooded with anxious parents and their sneezy, sniffing and coughing youngsters. Ever since a medical school buddy told him about a case of community-acquired MRSA (methicillin-resistant *Staphylococcus aureus*) he had encountered, Dr. Waterman has been particularly sensitive to the threat of antibiotic resistance. He has therefore adjusted his prescribing pattern over the last few years to minimize antibiotic use. Although it requires more clinic time, Dr. Waterman is careful to explain to each parent why antibiotics might not be indicated for his or her child and what can be done to manage cough and cold symptoms at home.

The clinic was characteristically overbooked one Saturday in January, and Dr. Waterman was called in to see patients even though it was his day off. Assisted by Joan, the clinic nurse, he examined one of Dr. Connolly’s regular patients, a 4-year-old boy named Colby. Dr. Waterman told Colby’s mother that he suspected his symptoms were due to a respiratory virus and would not therefore prescribe antibiotics. She listened attentively to what he said and then became somewhat agitated, arguing that Dr. Connolly always gave Colby an antibiotic “just to be safe.” In fact, as she told him, she had spoken with Dr. Connolly that morning and he had specifically told her to bring Colby in for an antibiotic prescription. “Now, after listening to what you told me, I am just confused.” As the clinic nurse slipped out of the room, Dr. Waterman tried yet again to alleviate her anxiety and explain his reasoning.

Suddenly, Dr. Connolly opened the door and burst into the examining room with Joan at his side and gave Colby and his mother a big smile. “Everything going all right?” he asked. “I have your prescription right here. Sorry about the delay.” Later on, Dr. Connolly sympathetically told Dr. Waterman that making parents you haven’t met before “happy” isn’t always easy and that he was glad he could “help out” with Colby’s case.

That evening, after everyone had left the clinic, Dr. Waterman looked through every one of the past week’s charts. He noticed that Dr. Connolly and the other two pediatricians regularly prescribed antibiotics inappropriately. He also observed that they each managed to see about 20 percent more patients than he did.

### **Commentary**

The case of Dr. Waterman and his young patient Colby is an example of two general and quite common dilemmas faced by all clinicians: first, how should a physician respond to patient requests for treatments that are unlikely to be of benefit, and, second, how can a clinician maintain his or her own professional integrity when practicing in a group with different clinical approaches or values. The former is an example of what might be considered a “low impact” ethical decision. Whether or not Colby receives a single course of an antibiotic is not likely to be a life-and-death event for him or anybody else. The potential benefits may be negligible, but the potential harms to Colby are small as well. However, we should concern ourselves with the ethical issues surrounding this case because the “low impact” decisions we make over and over again, in aggregate, do have consequences for our patients, for the populations we serve and for us as professionals. Dilemmas about the use of antibiotics are also complex because they call on us to weigh potential benefits and harms to an individual with those that may accrue to the population at large. In this country, in particular, the focus of medical professionals has been almost exclusively on the benefits and harms to individuals, with less regard for the consequences to public health more generally [1].

It may be helpful to divide patient requests for ineffective treatment into several categories. In some cases the treatment, though not helpful, will be quite unlikely to harm the individual or the community; in others, it carries a risk of harm to the individual but not the community; and in still others, the treatment, though safe for the individual, carries a risk for the community. Unnecessary antibiotic use primarily falls into the last category—the one that is perhaps the most ethically and interpersonally challenging for physicians. So what are the likelihood and magnitude of harms from unnecessary antibiotic use? For individuals, the risk of carrying antibiotic-nonsusceptible organisms increases (for a limited period) after a course of antibiotics [2]. Colby’s mother should know that there is a small risk of harm to Colby himself associated with taking an antibiotic. This small risk is outweighed when we use antibiotics appropriately for treatment of bacterial infections but not when prescribed for viral illnesses. Estimating the harm to the community is quite difficult. High rates of antibiotic use are widely believed to have contributed to increasing rates of antibiotic resistance among human pathogens [3, 4]. And resistant

infections are harder to treat [5]. In one study, Coast has articulated the difficulty of estimating the aggregate, long-term harm to the population because of diffuse nature of the effects, comparison of current and future benefits and harms, uncertainty about the future course of resistance, and the possible development of new antibacterial agents, among other reasons [6]. Thus, the harm of any individual course of antibiotic (appropriate or not) is unknown, but small.

The professional integrity issues raised in this case overemphasize the role of financial pressures on physician practice, suggesting that the primary driver of the differences in clinical care between Dr. Waterman and new colleagues is their approach to surviving in a financially competitive environment. That there are significant financial pressures on physicians in practice is not in doubt, and these may have increased over recent decades. It is also true, though, that even in the halcyon days of fee-for-service medicine, there were incentives for physicians to keep their patients “happy.” In fact, increases in antibiotic use in this country have occurred over decades [7]. It is also not merely a new function of managed care that professionals in practice groups disagree on both the financial aspects of their partnership or the correct approach to managing common clinical conditions.

So, to review the situation:

1. Colby has a terrible viral upper respiratory tract infection.
2. We have the potential harm to the community of unnecessary antibiotic use, which is quite small if we consider just one additional antibiotic prescription but potentially large (though unknown) when we consider unnecessary antibiotic prescribing in aggregate.
3. The beleaguered Dr. Waterman has his financial survival on the line along with his professional integrity as an evidence-based physician.

As is often true in clinical dilemmas, the best course lies in optimizing communication and interpersonal negotiation—with both patients and colleagues. Dr. Waterman failed in his attempt to help Colby’s mother understand that an antibiotic will not help her son. In this particular case, it may have been an impossible task. Patients learn from their clinicians *over time*, and it may be difficult for a covering physician to change a longstanding pattern of treatment. Some data suggest, however, that what is perceived by physicians as a demand for unnecessary antibiotics is really just a request by parents for more information on diagnosis and effective treatments [8]. Whether or not prescribing antibiotics judiciously takes more time in practice is debatable. But, since we are largely responsible for the expectations of our patients, we can train the next generation to understand better the natural history of viral illness and the risks of antibiotic resistance. Increased public awareness regarding antibiotic overuse is one likely reason for the recent dramatic decreases in antibiotic prescribing in this country [9, 10].

In the end, the resolution with Colby’s mother about this single course of antibiotic is less important than the resolution of the differences between Dr. Waterman and his

practice partners. If he could catalyze a shift of this practice toward more judicious antibiotic use, he would be reducing the exposure of his community to thousands of antibiotics. How could Dr. Waterman raise this issue? One approach is to focus the practice group on *consistency* of practice in this and other key areas. That is, if one partner always prescribes antibiotics for 7 days of green runny nose and another does not, we can hardly blame patients for being confused about the appropriate treatment. Dr. Waterman might engage his colleagues in a conversation that begins with, “Wouldn’t it be helpful if we agreed on treatment strategies for the very common problems that we frequently see in each others’ patients?” It may be easier to bring available evidence to the table in this discussion than to argue about management of an individual case.

Certainly, such conversations happen more frequently in some practices than in others. Whether or not Dr. Waterman can remain with this practice group depends on whether he is able to engage them in such conversations. Variation in clinical skill, motivations for practice and even professional ethics will always exist. And clinicians may not have complete control over all of the partners with whom they work. Dr. Waterman will need to decide, over time, whether he is comfortable with the quality of care he can provide with this group of colleagues. For Colby, the issue is not really a single antibiotic prescription but antibiotic prescribing in aggregate and the levels of resistance in his community. Similarly, the issue for Dr. Waterman is not really a single 4-year-old with a runny nose, but an approach to evidence-based medical care, consistency in practice and integration of both individual and population ethics in decision making.

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