

Four questions will help you identify which new drugs represent real advances in patient care.

NEW DRUGS

How to Decide Which Ones to Prescribe

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The drug rep has just left samples and a shiny, multicolored print ad for the new “Z” antibiotic. You glance at the smiling attractive model whose sinusitis has been cured by this new “breakthrough in antimicrobial technology” and wonder, “Is this a drug I should prescribe?”

Family physicians are barraged with new drug information. Twenty-six new drugs or biologicals and 20 new dosage forms were introduced in 2005 alone.¹ How do you sort out which drugs represent real advances in patient care and which are “me too” attempts by pharmaceutical companies to maintain market share? Asking myself four basic questions has helped me decide whether to add a new drug to my personal formulary.

1 Is the new product clearly more efficacious than existing drugs?

In some cases, the medical literature can help you answer this question. For example, in choosing an antidepressant for first-line management of major depression, the literature suggests that not one of the newer drugs is superior efficacy-wise to any of the other drugs, old or new.^{2,3} At the pharmacy cash register, however, there are marked differences in cost. (In my area, the retail costs of Lexapro and Paxil CR are \$70 to \$90 per month while generic fluoxetine costs \$10 to \$15 per month.)

In many cases, it can be difficult to compare the efficacy of a new drug with older “standard” products because new drugs are often tested only against placebo. Meta-analyses or other systematic reviews (e.g., Cochrane, <http://www.cochrane.org>) may be helpful in answering the question. For example, let’s say you are trying to decide which antibiotic to use in a patient with acute sinusitis. To answer the question “How much more effective is the new drug Levaquin than the old generic amoxicillin?” you would need to consult an evidence-based resource, such as the Evidence-Based Practice section of the Agency for Healthcare Research and Quality’s Web site (<http://www.ahrq.gov>).



Physicians underestimated the costs of branded drugs 90 percent of the time.

ahrq.gov/clinic/epcix.htm). Under the heading “EPC Evidence Reports,” select the topic index, look up “sinusitis, acute bacterial” and download the evidence report on this topic.⁴ The report (chapter 3, tables 1 and 2) suggests that the treatment failure rate with Levaquin (levofloxacin) 500 mg once a day for 10 to 14 days is 4 percent to 12 percent, while the failure rate for amoxicillin 500 mg three times per day for 10 days is 14 percent.

The number of patients you would need to treat with Levaquin to obtain one additional cure compared with using amoxicillin is somewhere between 10 and 50. (Number Needed to Treat = $1/\text{Absolute Risk Reduction}$ or $1/0.14-0.04 = 1/0.1 = 10$ at the low end of the range and $1/0.14-0.12 = 1/0.02 = 50$ at the high end.) If you also consider the drug costs (\$10.85 per day for Levaquin versus \$0.80 per day for amoxicillin, per <http://www.drugstore.com>), you would probably conclude that the generic is a reasonable choice compared with the newer, more costly drug.

2 Does the new dosage or formulation of an older product offer significant advantages?

Some drugs are clear winners. For example, I’m exuberant about Exubera, the newly approved inhaled insulin. Although only a short-acting product will be available initially, Exubera represents an important breakthrough for my needle-phobic patients with type-2 diabetes. I’m less impressed, however, with the benefit offered by another new drug, Niravam, the orally disintegrating alprazolam

that is touted for patients “who want to take their medication discreetly.” At seven times the cost of generic alprazolam, it seems reasonable to excuse yourself and go to the bathroom to take your medication.

I’ve also grown skeptical of product names that end in XL, CR, ER, SR and XR, because they frequently represent pharmaceutical company attempts to extend sales of a previous blockbuster product that has gone generic. How much is a once-a-day product worth in terms of adherence or convenience compared to a bid or qid product? Consider that a supply of Ultram ER 200 mg per day costs \$160 per month, whereas tramadol 50 mg four times per day costs \$15 per month.

In some cases, the advantages of a new long-acting formulation seem great enough to justify the higher costs. For a hypertensive patient with angina who really needs 24-hour coverage with a beta-blocker and can’t remember to take his evening metoprolol, Toprol XL 100 mg per day is an excellent choice despite the higher cost (\$40 per month, as opposed to metoprolol 50 mg twice a day for \$12 per month).

3 What does the new drug cost?

As you’ve probably noticed, this third question surfaces frequently as you ask the first two. Will the patient be able to buy the new prescription? A study of 205 practicing resident and faculty physicians at seven community-based family medicine residency teaching clinics in Iowa looked at what these doctors knew about the prices of 20 commonly prescribed medications. Both staff and resident physicians underestimated the costs of branded drugs 90 percent of the time and overestimated the costs of generic products 90 percent of the time.⁵ The faculty did not score much better than the residents.

We often do not know what the prescriptions we are writing are costing our patients. Therein lies part of the explanation of the fact that many new prescriptions never get filled.

■ Evidence-based resources can help you assess whether a new drug is clearly more effective than older, cheaper drugs.

■ Some new drugs offer significant advantages over older products, which justifies any additional costs.

■ Physicians often do not know the cost of the drugs they prescribe.

About the Author

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As the number of patients who are uninsured or underinsured continues to grow, it is critical that as family physicians we know what the prescriptions we are writing cost and we communicate with our patients about their ability to pay for them. I have Epocrates Rx (<http://www.epocrates.com>) loaded on my Palm handheld, and it has helped me immensely in having these discussions with my patients. It allows me to look up cost information for any drug, including health plan co-payment amounts and retail costs, and it provides generic substitutions.

4 Is the new drug safe?

Until a few years ago, I operated under the assumption that the Food and Drug Administration (FDA) was acting as an effective safety officer in determining which drugs could be brought to market safely. More recently the FDA has been pushed by pharmaceutical companies to streamline and shorten the approval process and shoved by consumer activist groups to move more methodically. Many drugs have been brought to market with fewer than 3,000 patients being exposed to them,⁶ which is not enough to detect unusual but significant side effects. Since 1993, seven drugs have been approved and then withdrawn by the FDA. These seven drugs have been implicated in the deaths of more than 1,000 patients.⁷

My approach is not to be the first on the block to prescribe a new product. I'll sit tight in recommending RotaTeq, the new rotavirus vaccine, until its manufacturer completes the post-marketing study of 40,000 infants who will receive close scrutiny for intussusception, the malady that doomed the first rotavirus vaccine. In like manner, I'll hold off on prescribing Ketek (telithromycin), the first ketolide antibiotic, because of its association with three cases of severe liver toxicity.⁸

Bottom line on prescribing new drugs

Go slowly: See what six to 12 months of post-marketing experience reveals in terms of both efficacy and side effects. Weigh carefully the risks associated with a new drug against the value for a specific patient.

When discussing new drugs with pharma-

ceutical reps, ask for head-to-head studies with older, standard drugs in comparable doses, and ask for the absolute risk reduction (not relative risk reduction), the number needed to treat and the size of clinical trials. (If you aren't familiar with these terms, see "Understanding the Risks of Medical Interventions," *FPM*, May 2000.)

Use unbiased resources for your decision making. *The Prescriber's Letter*, *The Medical Letter*, Epocrates, knowledgeable colleagues and your local pharmacists and pharmacologists are excellent resources.

Scrutinize new drugs that end with XL, CR, ER, SR or XR. Does the drug offer clinically relevant new efficacy, safety or adherence benefits, or is it simply a "me too" product?

Finally, get smart about the costs of the prescriptions you write every day. Engage your patients to find out if they are able to buy the drugs you prescribe. I use the line, "Lots of my patients are having a hard time paying for their prescriptions. Will this \$20 drug be a problem for you?"

While many new drugs do represent advances in patient care, many others are not far superior to their older, cheaper counterparts. It is our job as physicians to sort out these issues and prescribe drugs that are truly in our patients' best interests. **FPM**

Send comments to fpmedit@aafp.org.

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You should become comfortable with tools available for looking up drug costs and discussing these issues with patients.

In some situations, it may be wise to hold off on prescribing new drugs until post-marketing studies can reveal more information about their efficacy and side effects.

When comparing old and new drugs, focus on the absolute risk reduction, the number needed to treat and the size of the clinical trials.