As a pharmacy student in the mid-1970s, Paul Just sat mesmerized one day as his professor unveiled a bulky computer. A similar one, the professor explained, was being used to predict President Nixon's response to drug therapy for blood clots in his leg. It could help physicians determine the right dose of the potentially lethal blood-thinner Warfarin. The application of computer technology to pharmacology was in its infancy, and Just was fascinated. "I wondered," he recalls, "what else pharmacists could do like that."

Earlier this year, Just stood before a conference of physicians and hospital administrators in Chicago and revealed the latest answer: a small, high-speed 920 Compaq loaded with software that can evaluate a drug's likely effect on a patient population and assess how the use of various drugs will affect a hospital's bottom line. Just, director of clinical pharmacy programs for Premier Health Alliance, a cooperative representing 225 U.S. hospitals, is one of a new breed that is applying "pharmaco-economic" analysis to institutional cost-cutting. This burgeoning discipline, which blends and analyzes drug product clinical research, patient profiles, and survival rates, has become Just's passion. "I tend," he says, "to be something of a crusader."

But some physicians dismiss Just's work as "cookbook medicine" and say that it threatens patients' well-being. "We are the ones who know patients' problems, allergies, sensitivities to medications," complains nephrologist Dr. Theodore Lewers, a trustee of the American Medical Assn. "We can't think about the bottom line and still put our patients first." Dr. J. Sanford Schwartz, executive director of the University of Pennsylvania's Leonard Davis Institute of Health Economics, says that Just's approach is "simplistic."

TAKING NOTICE. In these austere days of managed care, however, pharmaco-economics--previously used by manufacturers trying to demonstrate their drugs' cost-effectiveness--is grabbing the attention of hospital administrators and insurers. Just and his ilk are offering hospital bean-counters the evidence they need to influence doctors' drug choices. "It's physicians' prescribing practices that drive a hospital's drug budget," says Just.

Those expenditures are rising. Even as managed-care networks negotiate discounts from pharmaceutical companies to help hold drug price inflation below 2%, the cost of drugs remains a bitter pill for hospitals. One reason: Insurers' push to eliminate long hospital stays means that patients who are admitted are generally sicker and require more and costlier drugs than ever. Pharmacy budgets, which now constitute just under 10% of hospitals' total budgets, are expected to rise to 25% over the next three years. Costly new biotech products coming to market will help drive the increase.
Count among Just's boosters Wil Bruner, the director of pharmacy at Central DuPage Hospital, a 370-bed facility outside Chicago. Early last year, Bruner was close to losing his job because of spiraling costs in the pharmacy, which spends $3.5 million a year on drugs. When administrators threatened to turn management over to outside cost-cutting specialists, he sought Just's help.

After studying the formulary and interviewing staffers, Just suggested some quick fixes--supplying two drugs in a class instead of 10, for instance, and switching patients who could eat from intravenous to oral medications. But his main concern was that in dealing with doctors, the pharmacy was doing too much pill-counting and not enough advising.

A BIG CUT. Take Lovenox, a $25-a-dose blood-thinner used mainly for orthopedic surgery. Just found that physicians were using it for less-invasive treatments for which they could choose a less potent drug, Heparin, at only $1.50 a dose--perhaps because blood levels of Heparin must be more closely monitored. The hospital has since cut its use of Lovenox by more than 15%. Bruner says that such changes will reduce the pharmacy's budget by about $500,000 over two years.

Some of Just's recommendations are more controversial. Central DuPage physicians have rejected his advice that they switch from the clotbusting drug tissue plasminogen activator, or TPA, to a far cheaper alternative, streptokinase. TPA, used to treat acute heart attacks, costs $2,500 per dose. A well-publicized clinical trial showed that over 30 days, for every 100 patients treated, it saved one more life than streptokinase, which costs $300 per dose. In mid-April, the Food & Drug Administration ruled that drugmaker Genentech Inc. can promote TPA as "superior" if administered in a particular way.

A 1% difference, Just says, doesn't warrant "putting so much resources into TPA." The University of Pennsylvania's Schwartz disagrees. "One percent may not seem like a large number," he says, "but it's significant when you've saved a life." At issue is a basic shift managed care is making from concern for individuals to concern for groups.

Growing up in Pawtucket, R.I., Just once seemed set on a less contentious career as a drugstore pharmacist. He enjoyed the hours he spent at Bartley's Pharmacy, where he worked part-time. After finishing high school, he majored in pharmacy at Virginia Commonwealth University, then earned his doctorate at Philadelphia College of Pharmacy & Science. A board-certified pharmacotherapy specialist, he joined Premier in 1991 and launched its pharmaco-economics effort in late 1993.

Throughout his schooling, he says, he was struck by how often doctors were swayed by zealous drug salespeople. "I wanted to become an expert in understanding to a minuscule component how drugs work and how to select proper therapy," he says, "so I could work side by side with physicians to do the best that could be done for patients in a cost-effective way."

Nonetheless, becoming the target of doctors' hostility hasn't fazed him. "Unfortunately, there will always be some physicians who don't want to listen to any alternative approaches," he says. "If given the chance, I usually can overcome some of their resistance." But not among the Theodore Lewers of the world. Lewers gripes that he recently prescribed a kidney medicine only to have his patient's health plan refuse to pay for it. "They forced me to change to one of two drugs on their formulary," Lewers says. "That's not right, and it's not in the best interest of my patient." Perhaps not. But as Paul Just can attest, doctors' orders don't pack the punch they used to.