

Defensive Medicine: It Costs, but Does it Work?

In this issue of *THE JOURNAL*, Reynolds et al¹ take a giant first step in replacing loose conjecture about “defensive medicine” with formal quantitative analysis.

From 1983 to 1984, Reynolds et al estimate that the average malpractice insurance premium rose by \$1300 to \$8400 annually. Concurrently, in response to a perceived increase in malpractice risks, American Medical Association-surveyed physicians reported changes in their medical practices that were worth an additional \$4600 per physician per year.

See also pp 2776 and 2807.

The \$4600 increase in defensive medicine costs was more than 3.5 times the concomitant \$1800 increase in premiums. From such a finding, Reynolds and colleagues posit that each \$1 of malpractice risk—as gauged by insurance premiums—induces \$3.50 in defensive medicine expenditures. Hence, the average physician who paid \$8400 in malpractice premiums for 1984 was responsible for a total annual health care expenditure of \$30 000 for defensive medicine.

Reynolds et al acknowledge that their survey instrument and analytic techniques are not without limitations. But the article raises a more disturbing question that goes beyond methodology.

If defensive medical practices have become increasingly prevalent, and if defensive medicine is truly “defensive,” then why are the frequency and severity of malpractice claims continuing to rise? If defensive medicine worked, then wouldn't premiums fall?

There is, of course, a facile response. Defensive medicine does reduce the risk of an adverse judgment. Malpractice premiums are rising for other reasons: unfair liability laws from attorney-dominated legislatures, noncompetitive pricing by the insurance industry, jury awards out of proportion to damages, rising patient expectations, and the growth in technology-intensive medicine.

Whatever the merits of such alternative explanations for rising premiums, they still do not address the main issue. Much of defensive medicine, as currently practiced, may not be effective risk management.

Failure to diagnose has been a classic basis for negligence actions against physicians. To avert missed diagnoses, physicians apparently make widespread use of blood chemistries, bone films, and other routine tests. However, recent reviews of closed malpractice cases, particularly by Robertson,² suggest that failure to follow up abnormal test results may be an even greater source of liability.

Consider a previously well man who seeks your advice for a minor, sports-related musculoskeletal problem. You treat the chief complaint by purely local measures. Still, just for caution's sake, you obtain a urinalysis. The laboratory report shows occult hematuria. Due to a slipup in office communications, the report is filed directly into the patient's folder. No action is taken. A year later, after radical surgery for renal cell carcinoma, your former patient files suit.

Liability for negligence has also arisen from breakdowns in communication—unconfirmed, misinterpreted verbal orders to hospital staff; contradictory messages to patients from the primary physician, consultants, and nurses; and undocumented instructions to patients concerning medication.²

You admit a middle-aged woman for laparoscopy. The cardiologist who reads the routine preoperative electrocardiogram notes “poor R-wave progression consistent with acute myocardial infarction or improper lead placement.” He dictates his interpretation, but does not call you. Ten minutes into halothane, the patient develops ventricular fibrillation. Your carrier—and the hospital's—seeks a settlement.

An Rh-negative primigravida obtains amniocentesis at 18 weeks' gestation, and a major chromosomal abnormality is diagnosed. After diligent, time-intensive counseling on your part, the patient opts for an abortion, which you perform. Postoperatively, the hospital staff fails to record and carry out your verbal telephone order for Rh₀(D) immune globulin. A year later, the patient's first live-born child needs an exchange transfusion. At your deposition, you profess ignorance of the error. Again, your carrier settles.

An elderly, mentally competent patient with undiagnosed, chronic lower gastrointestinal tract bleeding is about to undergo colonoscopy. You explain to the patient the reasons for the procedure, as well as its risks and benefits, and he assents. During the procedure, you identify local angiodysplasia of the ascending colon as the bleeding source. Attempted electrocautery of the lesion results in bowel perforation. Peritonitis ensues, and the patient dies. The family files suit. Despite the extra time you spent educating the patient, your records show no documentation of informed consent.

These cases are by no means atypical. Perhaps as much as one third of malpractice claims can be traced to communication errors, especially failure to inform patients of material risks and to document informed consent.

All we can ascertain from the data of Reynolds and colleagues is that, at least in dollar terms, 39% of defensive medicine reflects extra time with patients; 41% reflects

additional follow-up visits; and 20% goes to extra record keeping. We cannot conclude that longer visits automatically mean better doctor-patient relations,³ nor that more follow-up visits automatically prevent breakdowns in communication.⁴ Nor do we know whether physicians' record keeping, now estimated to cost \$31 000 annually per practitioner,¹ reflects effective risk-management practices.

Medicolegal scholars have long questioned whether our system of tort liability genuinely results in improved diagnosis and treatment. Their concern is that actions taken to reduce the risk of an adverse judgment are not equivalent to actions taken to reduce the risk of disease. In particular, physicians may forego certain indicated procedures because of the risk of a lawsuit. High premiums and malpractice risks may also influence specialty choice. These "disincentive effects" of professional liability, which are not addressed by Reynolds and colleagues, also impinge on the cost of medical care.

By their first method of computation, Reynolds et al estimate that the cost of professional liability contributed 63% of the overall 1983 to 1984 increase in expenditures for physicians' services. By the same method, I compute that increased defensive medicine *alone* would be responsible for about half of the 1983 to 1984 rise in physicians' expenditures. Some readers may interpret this finding to mean that the malpractice system contributes significantly to health care expenditures. The relationships between professional liability and cost containment, however, are much more complex.

You are the primary physician for a woman with severe atherosclerotic vascular disease that is compromising circulation in the lower extremities. A consulting surgeon recommends a graft prosthesis at the aortic-common iliac bifurcation. As part of its prospective review program, the patient's third-party payer approves the admission for surgery. Due to

a stormy initial postoperative course, both you and the operating surgeon recommend an additional eight-day hospital stay to monitor wound integrity and graft patency. The third-party payer approves only four days. The patient is, accordingly, discharged after four days and incurs complications at home that ultimately result in an amputation. You are sued. Should you have kept the patient longer? Should the third-party payer be held liable? Cases of this sort are now percolating up through our courts.⁵

Defensive medicine may indeed be a large, expensive enterprise. Still, we have little systematic evidence concerning its effects on either the quality of care or the risk of malpractice actions. As a problem for research, we need to probe behind the survey responses analyzed by Reynolds and colleagues to uncover the microanatomic detail of defensive medicine.

As a problem for policy, however, we need not wait for more research results. The challenge to the medical profession—and to health care providers generally—is to learn cost-effective, high-quality "defenses" to malpractice risk. More extensive education on risk management should be a central concern among professional societies, hospital staffs, and licensure boards.

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1. Reynolds RA, Rizzo JA, Gonzalez ML: The cost of medical professional liability. *JAMA* 1987;257:2776-2781.
2. Robertson WM: *Medical Malpractice: A Preventive Approach*. Seattle, University of Washington Press, 1985.
3. Peabody FW: The care of the patient. *JAMA* 1927;88:877-882.
4. McKinlay JB: Who is really ignorant—physician or patient? *J Health Soc Behav* 1975;16:3-11.
5. *Wickline v California*, 228 Cal Rptr 661 (Ct App 1986), review granted, 231 Cal Rptr 560 (1986).