mental anxiety. Doctors may also avoid talking with patients about adverse possibilities, however, because it is a time-consuming, difficult, and unpleasant task and because they fear losing a patient's trust and being blamed or, perhaps, sued. It has also been suggested that the current medical culture, in which error is often automatically equated with professional incompetence or inadequacy, makes admissions to either patients or colleagues difficult.[4] Many studies show, however, that failure to provide information, an explanation, and an apology increases the risk of litigation and erodes the patient-doctor relationship.[5] After an adverse event, patients want disclosure of the event, admission of responsibility, an explanation, an apology, and prevention of similar errors in the future; in some cases, they also want the offender to be punished and to obtain financial compensation.[5]

The practice of medicine can never be free of errors.[4] Changes are required in the attitudes of both patients and members of the medical profession, with a realistic understanding of the limitations of doctors and medicine and more blame-free openness between doctors and patients.

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Contributors: The original idea for the study arose in a meeting of the three authors. GV and MH designed and piloted the questionnaire. All three authors collected data and wrote the paper. MH performed the statistical analysis. MH acts as the guarantor of the paper.

References

1 Brennan TA, Leape LL, Laird NM, et al. Results of the Harvard medical practice study. I. Incidence of adverse events and negligence in hospitalized patients. N Engl J Med 1991;324:370-376.
2 Laurance J. Doctors warned on care of patients. Independent 1998 May 20;5.
3 General Medical Council. Good medical practice. London: GMC; 1998.
4 Leape L. Error in medicine. JAMA 1994;272:1851-1857.
5 Vincent C, Young M, Phillips A. Why do people sue doctors? a study of patients and relatives taking legal action. Lancet 1994;343:1609-1613.

COMMENTARY
Do physicians have a duty to disclose mistakes?

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If doctors believe they may have injured their patients in the course of medical treatment, should they tell the patients? The intriguing paper by Hingorani et al. reports on a survey of British ophthalmologists and ophthalmology patients on this point.[1] When asked whether a patient should routinely be informed about a significant complication of cataract surgery, posterior capsular rupture, 92% of the 246 patients surveyed said yes, but only 60% of the 48 physicians surveyed agreed. (Posterior capsular rupture may or may not be the result of avoidable physician error in any given case.) The British General Medical Council has recently concluded that, although British courts have not required doctors to disclose serious medical accidents to patients, good medical practice requires disclosure and an apology. Does that practice make sense in the United States?

In fact, courts in several states, including California, have long said that doctors have a duty to make such disclosures.[2] These cases come up in an odd context, namely when a patient seeks to extend the statute of limitations, the time limit for bringing a lawsuit, on the grounds that the defendant "fraudulently concealed" the accident. Fraudulent concealment usually requires some affirmative deceptive act by the defendant to hide his or her role in the plaintiff's injury, but when the defendant is a "fiduciary," charged with looking after patient's best interests, mere nondisclosure can become "constructive fraud" and thus stop the running of the statute of limitation. The same doctrine has been used to extend the statute of limitation in cases of alleged malpractice by lawyers.

This legal duty to disclose is obscure and seems never itself to have been the basis of litigation. Nor does it appear to have been the grounds for disciplinary proceedings against physicians. Do American physicians disclose adverse events to their patients? I can find no study of American physicians or patients similar to that of Hingorani et al., but there is surely reason to doubt that such disclosure is common.

Hingorani cites a variety of reasons given by physicians for not disclosing adverse events. These include the desire not to increase the patient's anxiety, concern about decreasing the patient's trust in the doctor, increasing the likelihood of litigation, and reluctance within the culture of medicine to admit mistakes—all reasons that exist to the same or a greater extent in the United States. The increasing use of patient satisfaction surveys by managed care organizations and physician groups adds yet another reason to avoid an embarrassing disclosure.

Should American physicians disclose adverse events to their patients? When the knowledge of the adverse event is relevant to the patient's future medical treatment or health status, the answer is clearly yes. If the adverse event requires some additional treatment, its existence becomes part of the explanation of, and informed consent for, the additional treatment. Similarly, if the adverse event means that the patient needs special monitoring in the future, the patient needs to know.

But must doctors disclose that the reason for the future medical treatment or monitoring is their own mistakes? And should disclosure be made if there are no continuing consequences for future medical treatment? In these cases as well, the answer should be yes. Putting patients'—or clients'—interests first is the essence of a fiduciary's duty. The bond between professionals and their clients should require com-

plete honesty and responsibility for errors whether the professional is a physician, a lawyer, or a tax accountant. The fiduciary should disclose what reasonable patients or clients would want to know under the circumstances. Reasonable patients will often want to know about significant problems in their treatment to plan future medical care, to consider litigation, or just to help decide whether to change doctors. Hingorani's patient survey showed that patients overwhelmingly expected disclosure of the posterior capsular rupture.

As Hingorani et al. indicate, disclosure may prevent further problems in some cases. Various studies show that good doctor-patient communications reduce the risks of liability. Patients who feel misled may well feel bitterness toward their physicians; patients who believe they have been dealt with honestly may be more willing to accept that in medicine, as in every other human activity, accidents happen. We cannot, though, jump to the happy conclusion that disclosure will always lead to sweetness and light. Some patient relationships will be shattered by disclosure, sometimes at great cost to the physician. The temptation not to disclose will often be great. An ethical requirement that will be met only by saints is of doubtful value; a full disclosure rule may ask more of American physicians than can be expected under the circumstances.

One response is to change the circumstances. Those circumstances include not only an expensive, sometimes arbitrary, and always unpleasant liability system but also cultures—both popular and medical—with unrealistic expectations for medical care. Mistakes will always happen, minimizing them requires accepting their existence and learning from them. The willingness to admit mistakes to patients (and to ourselves) should be not only an ethical requirement but a practical prerequisite to minimizing future errors. We should complement the ethical requirement to disclose error with a healthcare system that encourages disclosure rather than punishes it.

References
1 Hingorani M, Wong T, Vafidis G. Patients' and doctors' attitudes to amount of information given after unintended injury during treatment. West J Med 1999;171(30).
2 See, for instance, Stafford v. Shultz, 42 Cal.2d 767, 776, 270 P.2d 1 (1954); Guy v. Schuldt, 236 Ind. 101, 138 N.E.2d 891 (1956); Nardone v. Reynolds, 333 So. 2d 25 (Fla. 1976); and Roberts v. Francis, 128 F.3d 647 (8th Cir. 1997) (applying Arkansas law).

Cirrhosis mortality and per capita consumption of distilled spirits, United States, 1949-1994: trend analysis

ABSTRACT ● **Objective** To describe, evaluate, and suggest interpretations for an observed aggregate-level relation between trends in mortality from cirrhosis and per capita consumption of distilled spirits in the United States. ● **Design** Trend analysis using data on US cirrhosis mortality and per capita alcohol consumption. ● **Results** There is a consistent long-term trend relation between mortality from cirrhosis and per capita consumption of distilled spirits in the United States from 1949 to 1994. Two instances of comparatively sharp drops in the consumption of spirits in the 1940s generated mixed results in predicting changes in cirrhosis mortality. ● **Conclusions** An aggregate-level relation between trends in long-term cirrhosis mortality and the consumption of spirits falls considerably short of establishing a direct causal link between the two for individuals. Moreover, two sharp drops in the consumption of spirits generated only mixed results with respect to the short-term trend in cirrhosis. Nevertheless, the observed relation between the consumption of spirits and cirrhosis mortality merits further investigation.

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Introduction

This paper presents new epidemiological evidence of an aggregate-level relation between trends in per capita consumption of distilled spirits and death from cirrhosis in the United States. Such data may help us understand why a long rise in the trend of deaths from cirrhosis after the Second World War unexpectedly fell after 1973, even as the trend in total per capita consumption of alcohol continued to rise until the early 1980s. Although evidence of an aggregate-level correlation between the consumption of spirits and death from cirrhosis falls short of showing a direct or causal relation between the use of spirits and the risk of cirrhosis for individuals, it suggests that there is value in pursuing further multidisciplinary investigations to discern the links between the consumption of specific alcoholic beverages and cirrhosis.

Mortality from cirrhosis in the United States rose by 75% from 1950 to 1973 (from 8.5 to 14.9 deaths per 100,000 population), accounting for 33,350 deaths in the peak year of 1973. After this time, cirrhosis mortality began a long slow decline, falling to 7.9 deaths per 100,000 by 1993, roughly half of the 1973 rate and marginally below the rate in 1950