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The Second Revolution in Informed Consent: Comparing Physicians to Each Other

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Articles

THE SECOND REVOLUTION IN INFORMED CONSENT: COMPARING PHYSICIANS TO EACH OTHER

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I. INTRODUCTION

Four decades have passed since the "informed consent" revolution—the recognition of a cause of action for a physician's failure to provide a patient with risk information concerning a medical procedure in conjunction with obtaining the patient's consent to the procedure.[1] Now, a second revolution in informed consent is brewing; this familiar cause of action has begun to transform itself dramatically.

The now-traditional informed consent cause of action is well established. It is clear that health care providers that do not adequately inform their patients of the risks associated with medical procedures are liable for the consequences of that failure. While there are still differing viewpoints as to the articulation of some of the parameters of this cause of action,[2] the

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[1] The first serious scholarly discussion clearly advocating an informed consent cause of action is Allan H. McCoid, *A Reappraisal of Liability for Unauthorized Medical Treatment*, 41 MINN. L. REV. 381, 426-30 (1957). Prior to the McCoid article there was no mention of informed consent in any of the major tort treatises. A California appellate court first coined the term "informed consent" in *Salgo v. Leland Stanford Jr. Univ. Bd. of Trustees*, 317 P.2d 170, 181 (Cal. Dist. Ct. App. 1957).

[2] Much of the debate surrounds the standards that should govern thé determinations regarding, first, which information should be provided and, second, whether the failure to provide this information caused the patient harm. As to the first point, in the early years of the informed consent doctrine, courts almost exclusively used the traditional tort medical malpractice standard—the "reasonable doctor" test—as the measure for appropriate disclosure. The case credited with giving birth to the informed consent doctrine, *Salgo*, 317 P.2d at 181, was vague as to the standard of disclosure. The court said that the physician has a duty to disclose "any facts which are necessary to form the basis of an intelligent consent by the patient to the proposed treatment." *Id.* The court went on, however, to grant the physician "a certain amount of discretion" with regard to the facts to be disclosed. Beginning with *Natanson v. Kline*, 350 P.2d 1093 (Kan. 1960), many courts held that the standard for medical disclosure was that which a reasonable medical doctor would provide under the circumstances. *See, e.g.*, Rush v. Miller, 648 F.2d 1075, 1076 (6th Cir. 1981); Shetter v. Rochelle, 409 P.2d 74, 86 (Ariz. Ct. App. 1965), *modi-*

differences are quite small from a practical perspective.[3] The existence of the informed consent cause of action has transformed medical practice. Patients are routinely given much more information about their medical decisions than previously. As we have noted elsewhere, this development may

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fied, 411 P.2d 45 (Ariz. Ct. App. 1966); Fuller v. Starnes, 597 S.W.2d 88, 89 (Ark. 1980); Ditlow v. Kaplan, 181 So. 2d 226, 228 (Fla. Dist. Ct. App. 1965); Laurent B. Frantz, Annotation, *Modern Status of Views as to General Measure of Physician's Duty to Inform Patient of Risks of Proposed Treatment*, 88 A.L.R. 3d 1008 (1978). This test almost invariably requires medical expert testimony as to what a prudent doctor would tell a similarly situated patient. *See, e.g.*, Riedisser v. Nelson, 534 P.2d 1052, 1055 (Ariz. 1975); Nishi v. Hartwell, 473 P.2d 116, 121 (Haw. 1970); Casey v. Penn, 360 N.E.2d 93, 101 (Ill. App. Ct. 1977); Bly v. Rhoads, 222 S.E.2d 783, 787-88 (Va. 1976). *But see* Leyson v. Steuermann, 705 P.2d 37 (Haw. Ct. App. 1985). *See generally* Daniel E. Feld, Annotation, *Necessity and Sufficiency of Expert Evidence to Establish Existence and Extent of Physician's Duty to Inform Patient of Risks of Proposed Treatment*, 52 A.L.R. 3d 1084 (1973). *Canterbury v. Spence*, 464 F.2d 772 (D.C. Cir. 1972), changed the contours of the physician's duty to disclose material risks to the patient. *Canterbury* defined a risk as material if a "reasonable person" in the patient's position would wish to know about it prior to making a decision. A patient's right to information was no longer dictated by the medical profession's assessment of which risks and alternatives to treatment are worthy of consideration. *Id.* at 785; *see also* Cobbs v. Grant, 502 P.2d 1 (Cal. 1972); Wilkinson v. Vesey, 295 A.2d 676 (R.I. 1972); Miller v. Kennedy, 522 P.2d 852 (Wash. Ct. App. 1974), *aff'd per curiam*, 530 P.2d 334 (Wash. 1975). For a review of authority adopting the "reasonable patient" standard for disclosure, see Armand Arabian, *Informed Consent: From the Ambivalence of Arato to the Thunder of Thor*, 10 ISSUES IN L. & MED. 261, 263-64 n.11 (1994). As to causation, a small minority of courts have adopted a subjective causation standard (*i.e.*, what would *this* patient have decided if provided with adequate information?). *See, e.g.*, Scott v. Bradford, 606 P.2d 554 (Okla. 1979); Arena v. Gingrich, 733 P.2d 75 (Or. Ct. App. 1987); Wilkinson, 295 A.2d at 690. Most courts have opted for an objective standard (*i.e.*, what would a reasonable patient in the patient's position have decided?). *See, e.g., Canterbury*, 464 F.2d at 790-91; Cobbs, 502 P.2d at 11-12; Reikes v. Martin, 471 So. 2d 385, 392-93 (Miss. 1985).

   [3] The overwhelming preference for the reasonable patient standard in determining causation has substantially limited the practical effect of the substantive right created by the disclosure standard. This view is almost unanimously shared by the commentators. *See, e.g.*, PAUL S. APPELBAUM ET AL., INFORMED CONSENT: LEGAL THEORY AND CLINICAL PRACTICE 122 (1987) ("By conditioning the availability of compensation on the congruence between the patient's own decision and what a so-called reasonable person would have decided, the objective test undercuts a patient's right of self-determination."). Other commentators have voiced similar criticism. *See, e.g.*, JAY KATZ, THE SILENT WORLD OF DOCTOR AND PATIENT 79-80 (1984); Richard A. Epstein, *Medical Malpractice: The Case for Contract*, 1976 AM. B. FOUND. RES. J. 87, 121 n.72 (1976) [hereinafter *Medical Malpractice*]; Joseph Goldstein, *For Harold Lasswell: Some Reflections on Human Dignity, Entrapment, Informed Consent, and the Plea Bargain*, 84 YALE L.J. 683, 691 (1975) [hereinafter *Reflections on Human Dignity*]; Leonard L. Riskin, *Informed Consent: Looking for the Action*, 1975 U. ILL. L. FORUM 580, 589-90 (1975) [hereinafter *Looking for the Action*]; David E. Seidelson, *Lack of Informed Consent in Medical Malpractice and Product Liability Cases: The Burden of Presenting Evidence*, 14 HOFSTRA L. REV. 621, 623-24 (1986); Marjorie Maguire Shultz, *From Informed Consent to Patient Choice: A New Protected Interest*, 95 YALE L.J. 219, 249-251 (1985) [hereinafter *From Informed Consent to Patient Choice*]; Eve R. Green Koopersmith, *Informed Consent: The Problem of Causation*, 3 MED. & L. 231 (1984). The authors of this Article have gone beyond the traditional criticism of causation doctrine and have argued that even the subjective test for causation is illusory. *See* Aaron D. Twerski & Neil B. Cohen, *Informed Decision Making and the Law of Torts: The Myth of Justiciable Causation*, 1988 U. ILL. L. REV. 607 (1988) [hereinafter *The Myth of Justiciable Causation*].

have increased patient autonomy,[4] but it may affect the decisionmaking process less than is generally assumed.

Several years ago, we suggested that a new and more robust doctrine of informed consent was in the offing.[5] We predicted that a new genre of cases would reach the courts, and that these cases would be very different from those that have thus far provided the staple for this type of litigation. With the advent of more extensive gathering and comparison of data, it has become possible to provide information to patients not only about the risks associated with the *procedures* for which consent was sought, but also about the relative risks associated with the medical *providers* who would perform those procedures. At the time we made this suggestion, one state had already published comparative provider statistics for open-heart surgery, ranking performance in terms of the risk of adverse outcome by utilizing a highly sophisticated statistical model to account for a host of risk variables.[6] Since that time, studies of a wide variety of procedures and di-

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[4] *See The Myth of Justiciable Causation, supra* note 3, at 648-64. The extent of those gains is arguable, however. Standardized written consent forms and risk statements for procedures and treatments are used prevalently by all types of medical providers despite widespread concern for their comprehensibility and thus for their effectiveness in eliciting truly "informed" consent. *See, e.g.*, T. M. Grundner, *On the Readability of Surgical Consent Forms*, 302 NEW ENG. J. MED. 900 (1980) (studying five "representative" surgical consent forms for readability, finding all five approximately equivalent to material intended for upper-division undergraduate or graduate students, and concluding that "thousands of persons may be undergoing surgery each year on the basis of inadequate consent"); Kenneth D. Hopper et al., *The Readability of Currently Used Surgical/Procedure Consent Forms in the United States*, 123 SURGERY 496 (1998) (finding that while "surgical consent forms are universally used by hospitals throughout the United States before surgery or invasive procedures," the majority of these forms "are not easily understood" and "do not list specific benefits or potential complications of the planned surgery/procedure"); Ian N. Olver et al., *Impact of an Information and Consent Form on Patients Having Chemotherapy*, 162 MED. J. AUSTL. 82 (1995) (studying 100 cytoxic chemotherapy patients' understanding of a "plain language" information/consent form and reporting that the requirements for informed consent may be too difficult to satisfy with forms written in "plain language").

[5] Aaron D. Twerski & Neil B. Cohen, *Comparing Medical Providers: A First Look at the New Era of Medical Statistics*, 58 BROOK. L. REV. 5 (1992) [hereinafter *Comparing Medical Providers*].

[6] *See* Edward L. Hannan et. al., *Adult Open Heart Surgery in New York State: An Analysis of Risk Factors and Hospital Mortality Rates*, 264 JAMA 2768 (1990). Statistics were also collected by the New York State Department of Health comparing the performance of heart surgeons throughout the state. These statistics were published in *Newsday*. David Zinman, *Heart Surgeons Rated: State Reveals Patient Mortality Records*, NEWSDAY, Dec. 18, 1991, at 3. For a more recent risk-adjusted study of one particular type of open heart surgery for hospitals, see CORONARY ARTERY BYPASS SURGERY IN NEW YORK STATE (Oct. 1998), *reprinted infra* Appendix A. That study also contains risk-adjusted statistics comparing the outcomes of surgeons who performed coronary bypass surgery. *See infra* Appendix C. The risk factors for the studies of both hospital and surgeon performance in the 1990 study included the following: age, gender, ejection fraction, previous myocardial infarction, number of open heart operations in previous admissions, diabetes requiring medication, dialysis dependence, disasters (acute structural defect, renal failure, cardiogenic shock, gunshot), unstable angina, intractable congestive heart failure, left main trunk narrowed more than 90%, and type of operation performed. Over the years other risk factors have been determined to be significant and are taken into account in assessing both hospital and surgeon performance. *See infra* Appendix A at 7.

agnostic categories[7] have been performed for both hospitals[8] and physicians.[9] Private organizations have also begun contributing to the growing

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[7] The following procedures have been used for comparison purposes in studies identified here: coronary artery bypass graft (CABG) surgery, angioplasty, valve repair, coronary artery catheterization, hip replacement, knee replacement, back surgery, colorectal resection, Cesarean-section (C-section), vaginal birth after C-section, solid organ transplants, carotid endarterectomy, hepatic resection, abdominal hysterectomy, and gastrointestinal operations. The following patient diagnostic categories have been used for comparison purposes in identified studies: nonsurgical heart cases (angina, heart failure and shock, myocardial infarction), cerebrovascular accident, congestive heart failure, pneumonia, obstructive airway disease, stroke, and gastrointestinal bleeding. For citations to studies that include these procedures and diagnostic categories, see *infra* notes 8, 9. The New York State Health Department is considering expanding current studies to include more procedures, for example, brain surgery and childbirth procedures. *See* Esther B. Fein, *Surgery Survey by New York Expanded,* N.Y. TIMES, Nov. 8, 1997, at B1.

[8] A large number of risk-adjusted studies comparing hospital performance for medical procedures have been published. *See, e.g.,* HEALTH CARE FINANCING ADMIN., MEDICARE HOSPITAL MORTALITY RATES (1991) (annual hardcopy report compiling Health Care Financing Administration (HCFA) data for all registered United States Medicare facilities, published annually 1987-91); MICHIGAN HEALTH & HOSPITAL ASS'N, MICHIGAN HOSPITAL REPORT (May 1998) (compiling data from 1994-96 on coronary bypass, valve repair, C-section, vaginal birth after C-section, nonsurgical heart care, hip replacement, knee replacement, and groups of selected medical and surgical cases for all Michigan hospitals); NEW YORK STATE DEP'T OF HEALTH, ANGIOPLASTY IN NEW YORK STATE 1995 (Oct. 1997) (expanding on the original New York bypass studies; the first study of angioplasty in 32 hospitals was released in 1997) [hereinafter NEW YORK STATE ANGIOPLASTY]; NEW YORK STATE DEP'T OF HEALTH, CORONARY ARTERY BYPASS SURGERY IN NEW YORK STATE 1994-1996 (1998) (this annual study of 31 hospitals originated in 1989) [hereinafter NEW YORK STATE REPORT]; PENNSYLVANIA HEALTH CARE COST CONTAINMENT COUNCIL, PENNSYLVANIA HEALTH CARE COST CONTAINMENT COUNCIL, CESAREAN SECTION DELIVERIES IN PENNSYLVANIA, 1995 (1997); PENNSYLVANIA'S GUIDE TO CORONARY ARTERY BYPASS GRAFT SURGERY (May 1997) (annual study of 43 hospitals modeled on New York's program began in 1992) [hereinafter PENNSYLVANIA CONTAINMENT COUNCIL]; Jennifer Daley et al., *Risk Adjustment of the Postoperative Morbidity Rate for the Comparative Assessment of the Quality of Surgical Care: Results of the National Veterans Affairs Surgical Risk Study,* 185 J. AM. C. SURGEONS 328 (1997) (comparing outcomes of 87,078 major noncardiac operations at 44 Veterans Affairs facilities identified by number); Ciaran S. Phibbs et al., *The Effects of Patient Volume and Level of Care at the Hospital of Birth on Neonatal Mortality,* 276 JAMA 1054 (1996) (comparing neonatal mortality rates for births at nonfederal California hospitals in 1990 and reporting mortality and birth weight outcomes for subgroups of hospitals which provide "Level I," "Level II," or "Level III" neonatal care); Michael Pine et al., *Predictions of Hospital Mortality Rates: A Comparison of Data Sources,* 126 ANNALS INTERNAL MED. 347 (1997) (comparing use of risk-adjusted administrative outcome data versus clinical data at 30 acute care hospitals for the following four diagnostic categories: myocardial infarction, cerebrovascular accident, congestive heart failure, or pneumonia); Leslie L. Roos et al., *Postsurgical Mortality in Manitoba and New England,* 263 JAMA 2453 (1990) (comparing outcome data for 11 procedures, including bypass and hip replacement, at New England Medicare hospitals and Manitoba hospitals, and reporting 30-day and 60-day mortality rate by hospital region); Gary E. Rosenthal et al., *Severity-Adjusted Mortality and Length of Stay in Teaching and Nonteaching Hospitals: Results of a Regional Study,* 278 JAMA 485 (1997) (comparing outcome data for six diagnostic categories, including stroke, heart attack, congestive heart failure, pneumonia, gastrointestinal bleeding, and obstructive airway disease, for 30 hospitals in northeast Ohio); J. H. Siber et al., *The Relationship Between Choice of Outcome Measure and Hospital Rank in General Surgical Procedures: Implications for Quality Assessment,* 9 INT'L. J. QUALITY HEALTH CARE 193 (1997) (comparing three types of outcome measure rankings, including "case-mix" and severity-adjusted mortality rate ranking, complication rate ranking, and "failure-to-rescue" rankings for 142 hospitals based on 74,647 patients who underwent general surgical procedures); *Gastrointestinal Surgery Safer at Major Hospitals* (visited May 27, 1998)

number of studies.[10] We predicted that it was only a matter of time before plaintiffs would utilize the existence of such statistics in informed consent litigation by arguing that they would not have agreed to undergo a procedure with a "riskier" physician had they been aware that a physician with a better track record was available. In *Johnson v. Kokemoor*,[11] discussed in Part II, the Wisconsin Supreme Court proved our prediction correct. The case is certain to take on landmark status, heralding the second revolution in informed consent law.

In the ensuing pages we argue that "comparative provider" cases, although new and revolutionary, are in fact theoretically more sound and practically easier to resolve than traditional informed consent cases that focus on comparing the risks of alternative modes of treatment. In Parts III and

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<http://nytsyn.com/imds> (reporting on study comparing outcome data for gastrointestinal operations at 51 Maryland hospitals from 1990-94).

[9] *See, e.g.*, NEW JERSEY DEP'T OF HEALTH AND SENIOR SERVICES, CORONARY ARTERY BYPASS GRAFT SURGERY IN NEW JERSEY 1994-1995 (Nov. 1997) (reporting mortality rate data for bypass surgeries by name); NEW YORK STATE REPORT, *supra* note 8 (reporting mortality rate data for surgeons by name since the studies began in 1989); NEW YORK STATE ANGIOPLASTY, *supra* note 8; PENNSYLVANIA CONTAINMENT COUNCIL, *supra* note 8 (reporting mortality rate data for bypass surgeons by name); G.P. Copeland et al., *Risk-Adjusted Analysis of Surgeon Performance: A 1-Year Study*, 82 BRIT. J. SURGERY 408 (1995) (reporting mortality rates as compared to expected mortality rates for each surgeon, identified by code letters, performing "non-day-case general surgery" at a single English hospital); J. Donald Easton & David G. Sherman, *Stroke and Mortality Rate in Carotid Endarterectomy: 228 Consecutive Operations*, 8 STROKE 565 (1977) (comparing stroke and mortality rates for 228 carotid endarterectomies by 11 surgeons at two Illinois hospitals); Peter M. Sagar et al., *Comparison of Individual Surgeon's Performance: Risk-Adjusted Analysis With POSSUM Scoring System*, 39 DIS. COLON & RECTUM 654 (1996) (comparing morbidity and mortality rates for 438 colorectal resections by each of five surgeons identified by code letters).

[10] Private organizations are increasingly joining the cottage industry growing out of medical provider statistics. Privately compiled studies geared toward the consumer market are published, often on the Internet, by these organizations for direct profit or as marketing tools for a particular provider's services. *See, e.g.*, Center for the Study of Services, *Consumer Hospital Guide* (visited June 18, 1998) <http://www.checkbook.org> (providing website database where, for a subscription fee, consumers can search for provider/outcome data, including risk-adjusted mortality and complication rates for nine different procedures and patient diagnostic categories for U.S. acute care facilities); Cleveland Clinic Foundation, *How to Choose a Doctor and Hospital* (visited June 20, 1998) <http://www.ccf. org> (publishing provider statistics for Cleveland Clinic centers on cardiac catheterization angioplasty, CABG, and retropubic prostatectomy and providing references for studies on outcome rates for similar procedures at other facilities for consumer comparison purposes); Mediqual Systems, Inc., *e-Book* (visited July 5, 1998) <http://www.mediqual.com> (website report providing mortality and complication rate data for heart attack patients, hip replacement surgery, knee replacement surgery, and stroke patients at all registered Medicare acute care facilities); *Report From the Field: Cardiology Networks Using Mortality Rates as Marketing Device*, 18 MED. OUTCOMES & GUIDELINES ALERT, Sept. 16, 1993, *available in* WL 3091644, (database reporting that two not-for-profit national networks of cardiologists and cardiovascular surgeons have banded together to sell their services on the strength of members' demonstrated low mortality rates and high performance volume for heart surgeries, including CABG and angioplasty; one service, the National Cardiovascular Network, claimed 700 physician members from 40 facilities).

[11] 545 N.W.2d 495 (Wis. 1996). For an interesting discussion of *Kokemoor*, see Richard A. Heinemann, Note, *Pushing the Limits of Informed Consent: Johnson v. Kokemoor and Physician-Specified Disclosure*, 1997 WIS. L. REV. 1079 (1997).

IV, we demonstrate that a host of causation issues that render traditional informed consent cases problematic are not problematic at all in the context of a comparative provider case. Thus, we propose that as part of the informed consent doctrine, courts recognize a cause of action for a physician's failure to give patients provider-risk information.

Having established that comparative provider statistics can support a robust informed choice case against an individual medical provider, we turn in Part V to the role that comparative provider statistics should play in the world of managed health care. This is an important context for application of our theory, both because of the increased role managed care organizations play in health care decisions and because of the unique relationship such organizations have to their patients. We conclude that managed care organizations, with access to massive amounts of information about their providers, may have an obligation to deliver provider-specific information to patients and that failure to deliver that information may leave them open to informed consent lawsuits.

II. OPENING THE DOOR TO COMPARATIVE PROVIDER LITIGATION: *JOHNSON V. KOKEMOOR*

The facts of *Johnson v. Kokemoor* provide a good starting point for our analysis. Donna Johnson went to see Dr. Richard Kokemoor, a neurologist and neurosurgeon in Chippewa Falls, Wisconsin, to determine the cause of her headaches. After reviewing computed tomography (CT) scans, Dr. Kokemoor determined that Johnson had an enlarged aneurysm at the rear of her brain and recommended surgery to clip the aneurysm. After some disclosure about the risks of this procedure, Johnson agreed to have Dr. Kokemoor perform it. The surgery did not go well; as a result of the surgery, Johnson was rendered an incomplete quadriplegic, unable to walk or to control her bowel and bladder movements.

Johnson eschewed bringing an action for negligent performance of the surgery.[12] Instead, she brought an action based on informed consent, presenting evidence that Dr. Kokemoor had substantially understated the magnitude of the risks of basal aneurysm surgery. In addition, the trial court admitted evidence that Kokemoor had failed to (1) divulge the extent of his experience in performing this type of surgery, (2) compare the morbidity and mortality rates for this type of surgery performed by experienced surgeons with the rates for inexperienced surgeons like himself, and (3) refer

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[12] The decision by plaintiff's counsel not to bring an action for negligent performance of the surgery served to blunt the defendant's argument that the plaintiff sought to transform a duty to reasonably inform the patient into a duty to reasonably perform the surgery even though no proof that the surgery was actually negligently performed had been presented. *See Kokemoor*, 545 N.W.2d at 504. The Court rejected the defendant's argument, noting that "while a jury might confuse negligent failure to disclose with negligent treatment, the likelihood of confusion is nonexistent or *de minimis* in this case. The plaintiff dismissed her negligent treatment claim before trial." *Id.* at 506.

the plaintiff to a tertiary care center staffed by physicians more experienced in performing the surgery.

Essentially, plaintiff's experts testified that master neurosurgeons had reported a morbidity and mortality rate of 10.7% when operating upon basilar bifurcation aneurysms comparable in size to that of the plaintiff, but that the rate for inexperienced surgeons such as the defendant would be "closer to the thirty percent range."[13] The plaintiff's experts further testified that a reasonable physician in the defendant's position would have advised the plaintiff of the existence of more experienced surgeons and would have referred her to them and to a hospital such as the Mayo Clinic, which had superior facilities and expertise in this type of surgery.

The defendant argued that the evidence comparing the risks associated with the procedure if performed by him with the risks of the same procedure if performed by other surgeons could not support a cause of action. He contended that the court should limit the informed consent doctrine to disclosures relating to significant complications of the proposed *procedure*. Failure to respect this limit, Dr. Kokemoor argued, would lead a jury to divert its attention from a consideration of whether the defendant made required *disclosures* regarding treatment to whether he had acted reasonably in *performing* the surgery. Allowing the plaintiff to base an informed consent claim on evidence concerning the relative risk associated with the procedure as performed by Dr. Kokemoor could, he argued, easily lead a jury to base its decision on an inference of negligent treatment, even though the plaintiff would not be required to demonstrate that the surgery was negligently performed.[14]

In a sharply worded opinion, Justice Abrahamson rejected the defendant's position. She found no warrant in Wisconsin law for a "bright line" rule limiting the informed consent doctrine to information relating to risks associated with the procedure itself; both Kokemoor's lack of experience and relative competence were highly relevant to whether Johnson had received adequate information to make an informed choice. Justice Abrahamson noted that Dr. Kokemoor had admitted that he had a duty to reveal the general risks associated with a particular surgery. Assuming that the general risk of paralysis is ten percent but climbs to forty percent when performed by a relatively inexperienced surgeon, Justice Abrahamson stated that "[i]t defies logic to . . . requir[e] . . . the first, almost meaningless statistic to be divulged to a patient while the second, far more relevant statistic should not be."[15]

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[13] *Id.* at 499.

[14] *See supra* note 12.

[15] *Kokemoor*, 545 N.W.2d at 507. In *Duttry v. Lewis Patterson*, M.D., 1999 WL 787656, *2 (Pa. Super. Ct.), the court relied on *Kokemoor* to find that a physician who had overstated his experience in performing esophageal surgery could be held liable for failing to obtain informed consent. The court

At the close of its opinion, the court took note of Dr. Kokemoor's contention that Johnson had offered no evidence that his failure to disclose his relevant experience had caused her harm, given that "even had the surgery been performed by a 'master,' a bad result may have occurred."[16] In a somewhat Delphic paragraph, the court noted that causation in an informed consent case is established when a jury finds that a "reasonable person in the patient's position would have arrived at a different decision about the treatment or surgery had he or she been fully informed of the risks and advantages of surgery."[17] It is clear, though, that the court understood that the defendant was pressing a somewhat different point. The defendant had argued that even if the plaintiff had chosen a master surgeon, a significant residuum of risk for basilar aneurysm surgery was present.[18] To this, the court responded that if the defendant was dissatisfied with the standard causation instruction in a case involving provider-specific evidence, he had not fully developed this contention in the court below.[19]

The case was remanded to the trial court for further proceedings consistent with the opinion. Prior to retrial, the parties settled. It is not clear from the Wisconsin Supreme Court opinion whether the defendant would have been free to raise his injury causation argument on remand. As we shall see, given that damages were not determined in the lower court, it is certainly possible that the lower court would have entertained defendant's causation argument in the damage assessment phase of the case. But that is getting ahead of the story. First, let us turn to a rigorous analysis of provider-specific informed consent, and in particular to a comparison with a traditional informed consent case grounded on failure to provide information about risks associated with a particular treatment.

III. COMPARING "TRADITIONAL" INFORMED CONSENT CASES WITH PROVIDER-SPECIFIC INFORMED CONSENT CASES

A. The Weak Causal Link in Traditional Cases

The elements of a traditional informed consent case, based on the failure of a physician to provide a patient with information concerning the relative risks of a given procedure and the possible alternative modes of therapy, pre-

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noted that the patient had inquired about the physician's experience and limited its holding to cases where a direct inquiry was made of the physician.

[16] *Id.* at 509.

[17] *Id.* at 509-10.

[18] The defendant's argument that the identical injury could have occurred at the hands of a master surgeon goes to the issue of "injury causation." *See infra* text accompanying note 23. The instruction that the court approved went to the issue of "decision causation." *See infra* text accompanying notes 20-22. Nonetheless, the court was aware that the defendant's argument was directed toward "injury causation." In *Kokemoor*, 545 N.W.2d at 509 n.36, the court referred to the discussion of this very issue that appears in *Comparing Medical Providers, supra* note 5, at 32.

[19] *See Kokemoor*, 545 N.W.2d at 510.

sent substantial obstacles to recovery for an aggrieved patient. Even assuming that a patient can establish that information regarding material risk was withheld, two difficult causation questions stand as barriers to recovery.

The first causation question concerns "decision causation." In most jurisdictions, in order to demonstrate that she did not give informed consent to a procedure, a plaintiff is required to establish that a hypothetical "reasonable patient" supplied with the desired information would have chosen against the procedure recommended by the physician.[20] But if the recommended procedure was so risky in comparison to its potential rewards that most reasonable patients would decline it, recommending the procedure was almost certainly negligence. Thus, a straightforward cause of action for negligent treatment would ensue rather than one for informed consent, which would be superfluous.

By contrast, a "pure" informed consent case (that is, one independent of a negligence claim) presupposes that the physician has acted reasonably in choosing the recommended treatment. In such a context, though, it is very difficult to establish decision causation. After all, reasonable patients generally follow the nonnegligent recommendations of their reasonable doctors. To prove decision causation, however, the patient would have to show that she would have made the opposite decision—to decline the recommended treatment.[21] It matters little that this causation requirement undercuts the goal of patient autonomy which is the *desideratum* of a rule requiring the physician to share with the patient information regarding material risks. That argument has been made *ad nauseam* with little success.[22] A patient must establish "decision causation" or else the action will fail.

A second causation problem—"injury causation"—is also operative in cases in which the claim is that the patient was provided with inadequate information about a medical procedure. This problem concerns whether the patient's decision to undergo the procedure caused any harm in comparison to the choice that otherwise would have been made. With the exception, perhaps, of cosmetic surgery, a decision not to undertake a procedure, or to undergo an alternate form of treatment, will itself present substantial risks. Thus, this causation question requires analysis of the risks of the course of

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[20] *See* sources cited *supra* note 2.

[21] *See Looking for the Action, supra* note 3, at 589-90; *From Informed Consent to Patient Choice, supra* note 3, at 249-50.

[22] *See* sources cited *supra* note 3. See also *The Myth of Justiciable Causation, supra* note 3, where the authors observe:

> In the pre-*Canterbury* era, courts established a narrower objective test for materiality ("reasonable doctor") and a broad-based test for causation ("subjective patient"). *Canterbury* appears to be a mirror image of the older case law. It created a broad test for materiality ("reasonable patient") and a narrower objective test for causation (what a "reasonable patient" would have chosen). Since the causation test is tied to the choice of a "reasonable patient" and such patients are usually heavily influenced by medical recommendations, the causation test is very much governed by a professional standard.

Id. at 615 n. 3.

treatment that the patient would have chosen (whether a different therapy or no therapy at all) had the withheld information been given.[23] Indeed, if the physician's recommendation was a reasonable one, it is likely that the risk of harm associated with a course of action different than that recommended by the physician would have been equal to or greater than that associated with the recommended course of action.

How, then, was the patient harmed? If the patient had chosen the alternate course of action, her risk of harm would likely have been no less.[24]

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[23] *See Medical Malpractice, supra* note 3, at 121-25; *From Informed Consent to Patient Choice, supra* note 3, at 288-91. Even with regard to decision causation, the problem of communicating risk in comparative terms is difficult. *See* Peter H. Schuck, *Rethinking Informed Consent,* 103 YALE, L.J. 899, 948-51 (1994) [hereinafter *Rethinking Informed Consent*]. Schuck's discussion focuses on unidimensional risk comparison. He argues:

> To make risk information more meaningful to patients, physicians need not transform their self-conceptions or roles, nor incur new time or other costs; they need only to change how they describe risk to patients. Suppose that physicians were to characterize risks to patients not in one of the absolute, more or less quantitative forms mentioned above but rather (or in addition) in explicitly *comparative* terms—that is, in terms that encourage the patient to assess the medical risk in light of other risks that are more familiar to her, risks that she has some basis for, and experience in, evaluating. For example, the physician might compare the medical risk to the risk of certain types of common accidents or other adverse outcomes (*e.g.,* collisions from driving at night, lung cancer from smoking, complications from drinking alcohol while pregnant) about which patients are more accustomed to appraising and making explicit or implicit choices.

Id. at 949. The next step in decision causation is to provide patients with comparative-risk assessment between different medical procedures. Only after decision causation has been decided favorably for a plaintiff does a court confront the problem of assessing damages for the differential between the risk of the procedure recommended by the physician and chosen by the patient and the risk presented by the alternative procedure that the patient would have chosen.

[24] Tort damages generally measure the differential or add on caused by the tortious conduct as compared with nontortious conduct. Valuing the differential requires a risk assessment of the alternative that the patient would have chosen. For the most part, such assessments are either unknown or unknowable. Placing a monetary value on the differential is simply not feasible. The analogy to "increased harm" arising out of products liability "crashworthiness" litigation is compelling. To successfully prosecute a crashworthiness case, plaintiff must establish that she suffered damages beyond that which would have resulted had the product been free from defect. *See* RESTATEMENT (THIRD) OF TORTS: PRODUCTS LIABILITY § 16(a)-(b) (1998). For extensive case law supporting this rule, see *id.,* Reporters' Note at 241-54. Where proof supports the amount of increased harm caused by the product defect, damages are limited to that amount. When plaintiff is only able to demonstrate that the defect was a substantial factor in causing increased harm but cannot quantify the differential, the majority of cases impose damages for all the harm suffered by plaintiff on the product seller.

With reference to injury causation in informed consent cases, there is no case law addressing the increased harm question. Scholars have addressed the problem. *See, e.g.,* Jon R. Waltz & Thomas W. Scheuneman, *Informed Consent to Therapy,* 64 Nw. U. L. REV. 628, 646-49 (1969). According to Waltz and Scheuneman, the proper damages are reflected by "the difference between . . . [the patient's] condition with no treatment and his condition after the undisclosed risk materialized." *Id.* at 649. Professor Richard Epstein concurs. He argues:

> The second causal question raised in informed consent cases concerns what might have happened to the patient if appropriate disclosures had led him to refuse the proposed treatment. While it might be tempting to hold the physician responsible for the harm caused by the treatment, that position is quite unsound if it does not take into account the harm that would have occurred in any event. In tort actions for harm caused to strangers, the plaintiff's pre-existing condition is usually not an issue, since such plaintiff is normally of sound mind and body. In those cases where he

The answer, of course, is that the harm consists of not only the physical injury, but also the fact that the patient was deprived of her autonomy. The problem here, however, is to evaluate hard tort damages which flow from the deprivation of autonomy occasioned by the failure to provide the patient with adequate information.[25] One cannot blithely assume that the right to patient autonomy is to be valued by the damages the patient actually suffered from the undertaken procedure. Autonomy is an independent interest with an independent value.[26]

B. *The Causal Link Will Typically Be Stronger in Cases Concerning Provider-Specific Information*

As explained above, there are serious conceptual and factual weaknesses in cases in which the information withheld from the patient is information about the risks associated with the *procedure* itself (independent of the provider). These weaknesses are absent, however, from cases in which the nondisclosed information concerns the risks associated with the particular *provider*. Indeed, as this section will demonstrate, the causal link between the omitted information and the injury in cases involving provider-specific information is much more likely to be susceptible of credible proof. The decision causation aspect of these cases (unlike traditional cases concerning risks associated with a medical procedure) will typically be quite strong, and the injury causation question, while not without its difficulties, will be more readily subject to credible and coherent resolution.

The decision causation question inherent in an informed consent claim can be articulated clearly: would the patient have made the decision to go forward had the omitted information been disclosed? As demonstrated ear-

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is not, the accepted view, whenever apportionment is possible, is to allow recovery only for the additional harm that was caused by the tortfeasor's conduct and not for the total amount of harm experienced thereafter. For those patients (doubtless a significant proportion) who were not healthy at the outset of treatment, their precarious condition carries with it the substantial risk of further harm if prompt corrective steps are not taken. We are not talking of remote or speculative possibilities. In the medical context the possible reduction in damages required by the application of the rule is likely to be substantial in many cases and total in others.

Medical Malpractice, supra note 3, at 121-22 (footnotes omitted). One might draw an analogy to the crashworthiness cases and allow a plaintiff who has proved some increased harm to recover full damages unless the defendant introduces credible evidence to specify the increased harm. *See* RESTATEMENT (THIRD) OF TORTS: PRODUCTS LIABILITY § 16(c) (1998). However, a plaintiff would still be required to prove that the harm actually suffered is greater than the harm that would have taken place if the alternative therapy had been chosen. Furthermore, a defendant would be free to introduce evidence that the risks of the alternative therapy were significant and should be considered in reducing the damages.

[25] For a full discussion of this issue, see *The Myth of Justiciable Causation, supra* note 3, at 620-21.

[26] *See id.* at 648-49. It should be noted that under any theory of informed consent, a patient is free to exercise her autonomy and refuse information that a physician would otherwise be obligated to provide. Thus, a physician would have a duty to disclose to a patient that comparative provider risk information is available and that the physician is willing to provide it to the patient. As with risks associated with procedures, if a patient indicates to the physician that she does not want to know about the comparative provider risk information, the physician would have no duty to insist that the patient listen to the information. *See* N.Y. PUB. HEALTH LAW § 2805-d(4)(b) (McKinney 1993).

lier, when the omitted information concerns the inherent risks of the procedure, it is difficult in most cases for a nonidiosyncratic patient to demonstrate credibly that she would have declined a procedure that it was reasonable for the provider to have recommended. After all, this traditional form of informed consent action is bounded on one side by malpractice[27] and on the other by triviality.[28] For the patient to prevail in a case that lies between those boundaries—that is, with respect to a procedure that is reasonable for the provider to select and recommend, but also risky enough that a reasonable patient might decline it—proof of decision causation is an uphill battle. In this narrow band of close cases, it is simply difficult to demonstrate credibly that the patient would, in fact, have declined to undergo the reasonably recommended procedure.

When the omitted information concerns risks associated with the particular *provider*, however, the decision causation element can be demonstrated credibly in a wide variety of cases. In these cases, the question is not whether the patient would have consented to the procedure in question (as opposed to some other procedure with a different risk matrix, or as opposed to the risk of undergoing no procedure at all). Rather, the question is whether the patient would have consented to the procedure to be performed by *this* provider with *this* provider's level of risk, as opposed to being performed by another provider with *that* provider's lower level of risk. Disputes concerning the identity of the provider do not, by their nature, necessarily inhabit the same narrow bounds as cases concerning the procedure itself. Rather, decision causation in this context can, and often will, be in the realm of "easy" cases.[29]

For example, let us imagine a case not unlike *Kokemoor*. Assume that it is uncontested that the patient needs a particular, relatively risky surgical procedure. Assume further that the risk associated with the procedure is not invariable, but rather highly dependent on the experience of the surgeon performing the procedure—that is, the risk of adverse outcome is significantly higher when the procedure is performed by a surgeon who encounters the procedure only occasionally, but is much lower when performed by

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[27] Recommending a procedure that is unreasonable under the circumstances is itself malpractice, without regard to disclosure of risks.

[28] In the case of a procedure that has such low risk that no reasonable patient would decline it because of that risk, failure to disclose that risk violates no duty and, in any event, would not have influenced the patient's decision. *See supra* note 2.

[29] *But see* Mary Anne Bobinski, *Autonomy & Privacy: Protecting Patients from Their Physicians*, 55 U. PITT. L. REV. 291, 343 (1994) [hereinafter *Autonomy & Privacy*]. The author notes that in an informed consent case, a plaintiff must first establish whether a risk is material and should have been communicated to the patient. *Id.* The jurisdictions are split as to whether the test for materiality is the "reasonable doctor" or reasonable patient test. *See* discussion *supra* note 2. Bobinski argues that in states adhering to the "reasonable doctor" standard, it will be more difficult to establish that reasonable physicians would have revealed "provider-associated" risks. However, she acknowledges that even in states following this more conservative approach, the barrier to recovery is not insuperable. *See Autonomy & Privacy*, at 343-44 n.188.

a surgeon who performs the procedure regularly.[30] In such a case, it hardly strains credulity to believe that a patient, having been informed of this risk differential, would have opted for the more experienced physician and the accompanying lower level of risk. While in any particular case other factors might influence the patient's decision (availability and cost of the more experienced surgeon, the patient's relationship with the riskier surgeon, etc.), there is little reason to be inherently skeptical of the statement, "Had I been made aware that I could have had the same procedure performed by a different provider with a much smaller risk of adverse outcome, I would have chosen that provider instead of the one who performed the procedure."

Thus, in the case of omitted information about the provider, the patient's burden—to demonstrate that, if fully informed about the level of risk, she would have selected a different provider—does not entail demonstrating anything unusual about the patient. For the patient to argue that she would have chosen the less risky way to pursue health is simply to argue

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[30] Studies consistently show an inverse relation between volume of procedures performed per provider (or of patients treated in a single diagnostic category) and adverse outcome rates (as measured by risk-adjusted mortality or complication rates), no matter what procedure is studied, and thus suggest that "practice makes proficiency." Don Colburn, *Practice Makes Proficiency in Bypass Surgery, Study Says*, WASH. POST, Nov. 18, 1997, at WH-5 (describing study of 274 cardiac surgeons in New York, Pennsylvania, and Wisconsin that reveals significantly lower mortality rates for cardiac surgeons performing higher numbers of bypass surgeries). *See also Autonomy & Privacy, supra* note 29, at 296 n.9 (reporting that "studies regularly indicate that success rates for heart transplants are better at institutions where more transplants have been performed"). Studies showing such risk-adjusted inverse volume/adverse outcome rates for hospital providers are numerous. *See, e.g.,* Edward L. Hannan et al., *Coronary Angioplasty Volume-Outcome Relationships for Hospitals and Cardiologists*, 277 JAMA 892 (1997) (finding that in percutaneous transluminal coronary angioplasties (PTCA) performed in the state of New York, both hospital volume and cardiologist volume are significantly inversely related to risk-adjusted mortality rates); Robert G. Hughes et al., *Hospital Volume and Patient Outcomes: The Case of Hip Fracture Patients*, 26 MED. CARE 1057 (1988) (finding that hip fracture patients achieve better mortality and complication rate outcomes at those hospitals, out of the 704 U.S. hospitals studied that treat larger numbers of such patients); Hans J. Kreder et al., *Relationship Between the Volume of Total Hip Replacements Performed by Providers and the Rates of Postoperative Complications in the State of Washington*, 79-A J. BONE & JOINT SURGERY 485 (1997) (finding a significant relationship between surgeons averaging fewer than two hip replacements annually and higher adverse outcome, as measured by rates of mortality, infection, revision surgery, and complications); Stephen E. Kimmel et al., *The Relationship Between Coronary Angioplasty Procedure Volume and Major Complications,* 274 JAMA 1137 (1995) (finding significant decrease in complication and mortality rates with increasing volume of percutaneous transluminal coronary angioplasty procedures performed at 48 provider centers and stating that "an inverse association between the number of CABG surgeries performed at a hospital and subsequent mortality rates has been well described . . . "); Mark A. Mattos et al., *Evolution of Carotid Endarterectomy in Two Community Hospitals: Springfield Revisited—Seventeen Years and 2243 Operations Later,* 21 J. VASCULAR SURGERY 719, 722 (1995) (reporting that "operative stroke rate of [31] surgeons who performed more than 12 CEAs per year was significantly lower than [rates of those surgeons who performed less than one CEA per month]" and that mortality rates were similar); Ciaran S. Phibbs et al., *The Effects of Patient Volume and Level of Care at the Hospital of Birth on Neonatal Mortality,* 276 JAMA 1054 (1996) (finding correlation between volume of high-risk neonatal cases treated at all non-federal California hospitals in 1990 and risk-adjusted mortality rates).

that she is a risk-averse, utility-maximizing actor—exactly the assumption on which most of law and life are based.

In sum, in cases in which it is reasonable (that is, not malpractice itself) to recommend that the patient undergo a procedure, information concerning the relative level of risk associated with the provider of the procedure is much more likely to influence a nonidiosyncratic patient than is information about the relative risk of the procedure itself. Thus, the decision causation element of the informed consent action will more often be credibly fulfilled when the omitted information concerns the provider rather than the procedure.[31]

The injury causation element of an informed consent case based on un-disclosed information about the provider is quite interesting. At one level, this element will be easier to demonstrate than in a typical informed consent case (in which the omitted information concerns the procedure rather than the provider). At another level, however, the case for injury causation is very challenging. For a patient to be harmed by a breach of a duty means that the patient is somehow worse off than if the duty had been fulfilled. As demonstrated above, in a traditional, pure informed consent case—in which recommending the procedure was not itself malpractice and the omitted information concerned the risks associated with the procedure—determining whether a patient is, in fact, in a worse situation as a result of the procedure (even with its adverse outcome) can be a daunting task. After all, we know what happened as a result of undergoing the procedure, but we don't know what to compare that result to. Would the patient have chosen no treatment, or an alternative procedure? Which alternative (and perhaps riskier) proce-dure would the patient have selected? Would the possible harm associated with the alternative procedure (or with no treatment at all) have occurred? Because the answers to those questions are, in most cases, unavailable, the comparison between the patient's actual condition resulting from the proce-dure chosen and the patient's hypothetical condition resulting from a differ-ent choice is impossible.

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[31] In the case where the disparity between providers is very great, one might bring an action for negligence against the provider for having undertaken to perform the procedure at all. This possibility is explored in *Comparing Medical Providers, supra* note 5, at 13-26. If negligence were established, a plaintiff would face the problem of proving that the negligence of the provider did, in fact, cause her harm. Since adverse results occur even in the hands of more skilled providers, the plaintiff would have to establish that the negligence of the physician in undertaking to perform the surgery was the actual cause of her injury. It would probably be necessary to resort to proportional causation to credibly assess damages. It is clear, however, that the informed consent cause of action is the preferred route for a plaintiff in prosecuting a comparative-provider cause of action. It is more difficult to establish that a provider who is licensed, and often board-certified, is negligent for undertaking to perform surgery within the physician's formal expertise. Furthermore, a plaintiff making a "negligent undertaking" ar-gument would be faced with the argument of the defendant in *Kokemoor* that a jury will confuse "negli-gent undertaking" with "negligent performance." That argument was blunted in *Kokemoor* because the plaintiff did not prosecute a negligence claim and instead pursued only her cause of action for informed consent. *See supra* notes 12-15 and accompanying text.

Where the issue relates to comparative *provider* statistics, however, the search for a way to assess the differential in the causation context will not be in vain. In cases involving provider-specific information, the causation question has fewer variables. Having resolved the decision causation issue, we are confident in our conclusion as to what the patient would have done had the information been disclosed: the patient would have undergone the same treatment, but with a different provider. We are also confident of the alternative outcome with which we are comparing the unfortunate outcome of the actual procedure: successful performance of the procedure. The remaining variable, though, is a large one: would the procedure, as performed by the alternative provider, actually have resulted in a successful outcome? The answer to that question is a resounding "maybe."

IV. INJURY CAUSATION AND "LOST CHANCE"

How should the legal system deal with this "maybe"? After all, even the alternate provider, who has a better success rate than the provider who performed the procedure, does not likely have a 100% success rate. Thus, the patient might have suffered the same adverse result even if the procedure had been performed by the alternate provider.[32] But while the patient might have suffered harm as a result of utilizing the services of the alternate provider, she also might have suffered no harm at all.[33]

One response to the "maybe," ultimately not very satisfying, is simply to observe that the legal system does not require certainty. In a civil lawsuit, a plaintiff is not required to prove that the defendant's action *definitely* caused the plaintiff's injury; all that the plaintiff is required to demonstrate is that it is more likely than not that the injury was caused by that action.[34] Of course, in an informed consent case, the question is more hypothetical. The question is not whether the defendant's actions are causally connected

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[32] Of course, if lower risks are associated with many providers other than the defendant, we must determine which such provider is the "alternate provider." The answer is the provider that the patient, armed with adequate information, would have chosen. Whether this provider is the least risky provider might well depend on factors other than the risk identified in the decision causation analysis. *See supra* text accompanying note 30.

[33] For the purpose of this portion of the discussion, we are assuming that only a patient who has suffered an adverse outcome will bring an informed consent action based on provider-specific information. An argument can be made that even a patient who does not suffer an adverse outcome nonetheless suffers a dignitary harm when a provider does not provide the appropriate information in obtaining the patient's consent to treatment. *See generally The Myth of Justiciable Causation, supra* note 3.

[34] Strictly speaking, the plaintiff's entire factual claim, not merely each element of it, must be demonstrated at this more-likely-than-not standard. *See, e.g., The Myth of Justiciable Causation, supra* note 3, at 644; *Medical Malpractice, supra* note 3, at 125-26. For simplicity of calculation and exposition, however, this Article assumes that the injury causation element of the plaintiff's claim is satisfied if that element is demonstrated at the more-likely-than-not level. The analysis can easily be adjusted to account for this slight simplification. As to probability theory and burdens of persuasion generally, see, e.g., Neil B. Cohen, *Confidence in Probability: Burdens of Persuasion in a World of Imperfect Knowledge*, 60 N.Y.U. L. REV. 385 (1985) [hereinafter *Confidence in Probability*].

to the plaintiff's injury—that is a given. Rather, the question is whether the patient would have suffered the same injury had the patient had the same procedure performed by the alternative provider instead.

Nonetheless, even this hypothetical comparison need not always be troubling. Assume that the defendant has a five-percent success rate with respect to the procedure in question—that is, ninety-five percent of the time the procedure, when performed by the defendant, has an adverse outcome. Further assume that the alternate provider has a ninety-five-percent success rate with respect to that procedure—that is, the adverse outcome occurs in only five percent of cases. Finally, assume that the plaintiff underwent the procedure performed by the defendant (who should have, but did not, disclose this relative risk information to the plaintiff) and that the adverse outcome occurred. It does not take sophisticated mathematics to conclude that it is more likely than not that, had the alternative provider performed the procedure, the adverse outcome would not have occurred.

What should the legal system do, however, if the relative success rates are twenty percent for the defendant and thirty percent for the alternative provider?[35] In this case, even the alternate provider has adverse outcomes in seventy percent of cases. It would be difficult or impossible to conclude that injury causation has been proven to the preponderance standard—that is, we cannot honestly say that it is more likely than not that, had the plaintiff gone to the alternate provider, the injury would not have occurred. In fact, even if the plaintiff had gone to the alternate provider, it is more likely than not that the plaintiff would have suffered the same adverse outcome.

Does this mean that the plaintiff should lose this case, even though the defendant failed to disclose information that there was a duty to disclose and the failure to disclose caused the plaintiff to choose the defendant to perform the procedure? This result would certainly be distasteful. After all, the defendant breached a duty, the plaintiff suffered an injury, and, had there been no breach, the plaintiff's probability of escaping the adverse outcome would have been higher. As one court so aptly put it: "A patient with cancer . . . would pay to have a choice between three unmarked doors—behind two of which were death, with life the third option. A physician who deprived the patient of this opportunity, even though only a one-third chance, would have caused her real harm."[36]

If one does not find this argument persuasive in the context of an individual case, consider a situation in which the defendant fails to disclose this information to a large number of patients—say, one hundred. Eighty of

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[35] For purposes of this example, it is assumed that this difference would have been enough to cause the plaintiff, had the relative risk information been disclosed, to choose the alternative provider. This assumption might not be true for a procedure with respect to which the adverse outcome is relatively minor, but certainly could be true if the adverse outcome is quite serious (as it was in *Kokemoor*, where the patient had been rendered an incomplete paraplegic).

[36] Wollen v. DePaul Health Ctr., 828 S.W.2d 681, 684 (Mo. 1992).

those patients will suffer adverse outcomes. If the alternate provider had performed all one hundred procedures, only seventy adverse outcomes would have occurred. Thus, ten patients will have suffered adverse outcomes from the defendant's procedure who would not have suffered those outcomes if the alternate provider had performed the procedure. In other words, for ten of the patients there will be injury causation as well as decision causation. Yet, because we do not know which of the one hundred patients are in this ten-patient group, each of the eighty lawsuits that might be brought[37] will look the same as the single-procedure case described in the previous paragraph. The implication of concluding that the single plaintiff cannot recover would be that none of the eighty plaintiffs can recover, even though ten of them satisfy all of the traditional elements of recovery and all eighty lost the opportunity to have the procedure performed with a higher chance of success.

Viewing the question from the perspective of multiple cases is not merely a conceptual construct, because the medical profession consists almost entirely of repeat players. Not only do individual physicians tend to perform a particular procedure many times, but hospitals and managed care organizations, by their very nature, repeatedly provide the same services.

If, in this multiple-case context, the legal system failed to allow recovery for tortious behavior that caused measurable damage, the result would not only be unfair and morally troubling, but would also remove the deterrent effect of tort law that maximizes proper behavior. Acknowledging such concerns, the legal system has striven to avoid these distasteful results. For example, a large body of case law supports the proposition that when physicians fail to diagnose an illness in a timely fashion, and as a result patients suffer a reduced chance of survival or optimal recovery, the law will allow recovery for the "lost chance," even when the patient cannot prove that survival would have been "more likely than not" had the proper diagnosis been made.[38] These lost chance cases are indistinguishable from the subject at hand. In both situations, the factfinder can confidently conclude that a larger number of patients, not individually identifiable, will suffer adverse consequences as a result of the tortious behavior. The legal system's willingness to go beyond an unduly cramped traditional assessment of causation in those cases is thus strong precedent for doing so here as well.

A. Assessing "Lost Chance" Damages—Current Doctrines

The decision that a patient is entitled to recover even when, more likely than not, the patient would have suffered the same adverse consequences at

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[37] This assumes that only patients who have suffered an adverse outcome will bring lawsuits. For more on this point, see discussion *supra* note 33.

[38] *See* authorities cited *infra* notes 46-49.

the hands of the alternate provider does not end the analysis.[39] A determination must be made as to the damages to which such a patient is entitled.

The lost chance cases are instructive here. The case law is somewhat divided as to the standard for valuing the lost chance interest. *Herskovits v. Group Health Cooperative of Puget Sound*[40] is illustrative. The patient had visited the defendant's hospital with complaints of chest pain and coughing in early 1974. In July 1975, the patient consulted a private physician who diagnosed lung cancer. The cancerous lung was surgically removed; however, the cancer metastasized and the patient died in 1977. Assuming the negligence of the defendant in failing to diagnose the cancer in 1974, the court was faced with a dilemma. Had the cancer been diagnosed in 1974, the patient's chances of surviving a "Stage One" lung cancer were thirty-nine percent. By the time the cancer was actually diagnosed it had become a "Stage Two" cancer, however, and the statistics for survival had dropped to twenty-five percent. Thus, the patient suffered a reduction in his chance of survival as a result of the negligent diagnosis. Under the standard causation formulation, a plaintiff must establish that, more probably than not, plaintiff's injury would have been avoided had the defendant not been negligent. If this formulation were to govern the plaintiff would lose, because even had the cancer been diagnosed in a timely manner, the probability that plaintiff would have died from cancer anyway was sixty-one percent. Neither the majority nor concurring opinions were prepared to countenance such a result, and they agreed that the plaintiff should prevail.

The opinions differed, however, as to how damages should be ascertained. The majority opinion decided to allow recovery for lost chance in negligent malpractice cases, but it simply allowed the jury to assess damages as it saw fit, taking all the circumstances of the case into account.[41] A more novel approach was suggested in the concurring opinion.[42] Relying on the work of a provocative law review article,[43] the concurring opinion suggested that damages be tailored to reflect the percentage of lost chance inflicted by the defendant's negligence.

1. "No Recovery" Cases. The case law since *Herskovits* breaks down into three categories. A significant minority of jurisdictions refuse outright to allow lost chance recovery unless a plaintiff can establish causation under the traditional tort rule that the negligence of the health care provider

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[39] *See, e.g.*, Weymers v. Khera, 563 N.W.2d 647, 652 (Mich. 1997) ("[T]he antithesis of proximate cause is the doctrine of lost opportunity. The . . . doctrine allows a plaintiff to recover when the defendant's negligence possibly, *i.e.*, a probability of fifty percent or less, caused the plaintiff's injury.").

[40] 664 P.2d 474 (Wash. 1983).

[41] *Id.* at 479.

[42] *Id.* at 487 (Pearson, J., concurring). *See also* Shelly E. Smith, Comment, *Lost Chance of Survival in Illinois: The Need for Guidance from the Illinois Supreme Court*, 23 LOY. U. CHI. L.J. 155, 159 (1991).

[43] Joseph H. King, Jr., *Causation, Valuation, and Chance in Personal Injury Torts Involving Preexisting Conditions and Future Consequences*, 90 YALE L.J. 1353 (1981).

more likely than not was the cause of the harm.[44] If the plaintiff can meet the standard, full recovery is allowed; if the standard cannot be met, the plaintiff gets nothing. The reasons for insisting on satisfaction of the traditional causation standard are well rehearsed in the case law.[45] The courts that opt for the traditional rule fully understand that some plaintiffs who have been deprived of a significant chance will be denied any compensation. They simply believe that it is wrong to single out the medical profession for a relaxed causation standard.

    2.   *"Jury Valuation" Cases.* A fair number of courts allow patients lost chance recovery without having to prove that there was a greater than fifty percent chance of a better result.[46] The decisions of some of these courts

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[44] *See, e.g.,* United States v. Cumberbatch, 647 A.2d 1098 (Del. 1994) (refusing to recognize loss of chance recovery in a wrongful death action); Gooding v. University Hosp. Bldg., Inc., 445 So. 2d 1015, 1020 (Fla. 1984) (finding that expert testimony did not establish that decedent had a better than even chance to survive in the absence of negligence); Manning v. Twin Falls Clinic & Hosp., Inc., 830 P.2d 1185, 1189-90 (Idaho 1992) (rejecting explicitly the doctrines of lost chance and increased risk of harm); Fennell v. Southern Md. Hosp. Ctr. Inc., 58 A.2d 206, 214 (Md. 1990) (declining to recognize either a pure loss of chance doctrine or a loss of chance approach to damages); Fabio v. Bellomo, 504 N.W.2d 758, 762 (Minn. 1993) (declining to recognize loss of chance in a medical malpractice action); Clayton v. Thompson, 475 So. 2d 439, 445 (Miss. 1985) ("Mississippi law does not permit recovery of damages because of mere diminishment of the 'chance of recovery.'"); Pillsbury-Flood v. Portsmouth Hosp., 512 A.2d 1126, 1130 (N.H. 1986) (concluding that relaxation of causation requirements is "ill-advised"); Sherer v. James, 351 S.E.2d 148, 151 (S.C. 1986) ("A defendant physician is entitled to put the medical malpractice plaintiff to proof equally as stringent as that required of plaintiffs in other negligence actions."); Jones v. Owings, 456 S.E.2d 371, 374 (S.C. 1995) (reaffirming *Sherer* and refusing to allow recovery for loss of chance); Kilpatrick v. Bryant, 868 S.W.2d 594 (Tenn. 1993); Volz v. Ledes, 895 S.W.2d 677, 679 (Tenn. 1995) (reaffirming *Kilpatrick* and unwilling to recognize a new cause of action for loss of chance); Kramer v. Lewisville Mem'l Hosp., 858 S.W.2d 397, 400 (Tex. 1993) (holding that "where preexisting illnesses or injuries have made a patient's chance of avoiding the ultimate harm improbable"—50% or less—recovery is totally barred).

[45] For a review of the various rationales offered by the courts, see Darrell L. Keith, *Loss of Chance: A Modern Proportional Approach to Damages in Texas,* 44 BAYLOR L. REV. 759, 790-92 (1992). *See also* Patricia L. Andel, *Medical Malpractice: The Right to Recover for the Loss of a Chance of Survival,* 12 PEPP. L. REV. 973, 976-977 (1985) (calling the "all-or-nothing" approach "harsh" and reporting that it has been widely criticized as "result[ing] in oscillation between overlavishness and niggardliness"); Leon L. Wolfstone & Thomas J. Wolfstone, *Recovery of Damages For the Loss of a Chance,* 28 MED. TRIAL TECH. Q. 121, 139 (1982) ("Most of the cases on loss of a chance . . . have held that compensation should be allowed on an all or nothing basis . . . ."); Jeffrey L. Benson, Comment, *The Dilemma of Chance in Medical Malpractice: Should Illinois Recognize a New Cause of Action for "Lost Chance" of Survivability,* 9 N. ILL. U. L. REV. 575, 586 (1989) ("Since the majority of jurisdictions award compensation on an 'all or nothing' basis, a defendant may be held liable for the full wrongful death damages even in cases where he only caused a portion of the loss."); Stephen F. Brennwald, Comment, *Proving Causation in "Loss of a Chance" Cases: A Proportional Approach,* 34 CATH. U. L. REV. 747, 781 (1985) ("The 'all-or-nothing rule' throws wrongful payments either entirely on defendants or entirely on plaintiffs.").

[46] *See, e.g.,* Thompson v. Sun City Community Hosp., Inc., 688 P.2d 605, 615 (Ariz. 1984); Hastings v. Baton Rouge Gen. Hosp., 498 So. 2d 713, 720 (La. 1986); Aasheim v. Humberger, 695 P.2d 824, 828 (Mont. 1985); Herskovits v. Group Health Coop., 664 P.2d 474, 479 (Wash. 1983); Ehlinger v. Sipes, 454 N.W.2d 754, 763 (Wis. 1990). *See also* Andel, *supra* note 45, at 982, 993 ("A minority of

adopt a lost chance approach to causation but fail to implement the theory in a coherent fashion. Having relaxed the standard of proof for causation, they submit the issue of proximate cause to the jury under a general proximate cause instruction. The jury is thus left to its own devices as to whether or how to discount damages. The net effect is that juries are empowered to grant full compensation or some reduced figure as they please.[47] We believe that this approach confuses the traditional deference given to juries to *value* a loss with the need to articulate a calculus as how to *translate* that amount into an appropriate award in lost chance.

3. *Reduction of Chance Cases and Threshold Requirements.* In the third category of post-*Herskovits* lost chance cases, juries are provided with the calculus that is missing in the jury valuation cases. Typically, they multiply the full damages that would have been awarded in a traditional causation case by the portion of the patient's chance of survival that was lost.[48] For example, the concurring opinion in *Herskovits* argued that the

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courts . . . have allowed a relaxed standard of proof of causation where the patient shows that the physician's negligent conduct in any way increased the risk of harm to the patient or deprived him of some chance of recovery," and that such recoveries have "received increasing approval by various courts over the years.'); Francis Wayne Thurman, Note, *Loss of Chance in Medical Malpractice Cases: A Contra View With an Examination of Tennessee's Current Position,* 20 MEMPHIS ST. U. L. REV. 81, 91 (1989) ("The loss of chance doctrine, as applied to medical malpractice, allows the plaintiff to recover for the loss of a less than even chance of survival or recovery or for an increased risk of harm.").

[47] *See, e.g., Sun City Community Hosp.,* 688 P.2d at 615 ("This formulation, of course, merely recognizes that juries often discount damages according to the statistical evidence in order to accurately evaluate the true loss."); *Ehlinger,* 454 N.W.2d at 763 ("If the defendant's negligence is found to have been a substantial factor in causing the harm, the trier of fact may also consider evidence of the likelihood of success of proper treatment in determining the amount of damages to be awarded."). *See also* Robert A. Reisig, Jr., *The Loss of a Chance Theory in Medical Malpractice Cases: An Overview,* 13 AM. J. TRIAL ADVOC. 1163, 1183 (1990) (reporting that one of the disadvantages of allowing the trier of fact to determine damages "without providing any real guidelines" is that "it is incompatible with one of the major goals of recognizing the loss of a chance theory–a more accurate loss allocation"); Brennwald, *supra* note 45, at 798-99 (describing the jury valuation approach as the simplest to apply and adequate where very little statistical medical evidence as to the lost chance exists but, where medical evidence is available, as running counter to the lost chance doctrine's goal of allocating damages more correctly). *But see* Smith, *supra* note 42, at 177 (reporting that this jury valuation approach gives "more leeway" than a straight percentage approach and that a possible benefit to this approach, despite considerable variation in expert testimony as to rates of survival, is that "the figure that a jury of twelve arrives at will be the result of a more complex valuation process" that includes an assessment of more factors than would be considered with a straight percentage approach).

[48] Almost all the cases in this category rely on the landmark article by Joseph H. King, Jr., *supra* note 43. *See, e.g.,* Mays v. United States, 608 F. Supp. 1476, 1483 (D. Colo. 1985); DeBurkarte v. Louvar, 393 N.W.2d 131, 135-37 (Iowa 1986); Delaney v. Cade, 873 P.2d 175, 186-187 (Kan. 1994); Falcon v. Memorial Hosp., 462 N.W.2d 44, 50 n.20, 52-53 nn.26-27 (Mich. 1990); Wollen v. DePaul Health Ctr., 828 S.W.2d 681, 683-84 (Mo. 1992); Perez v. Las Vegas Med. Ctr., 805 P.2d 589, 591 (Nev. 1991); Scafidi v. Seiler, 574 A.2d 398, 407-08 (N.J. 1990); Roberts v. Ohio Permanente Med. Group, Inc., 668 N.E.2d 480, 483-84 (Ohio 1996); McKellips v. Saint Francis Hosp., Inc., 741 P.2d 467, 476 (Okla. 1990). *See also* Reisig, *supra* note 47, at 1185 (reporting that most courts that have addressed the issue of how loss of chance damages should be valued have "used variations of King's sin-

plaintiff should receive only fourteen percent of a total recovery because the defendant's actions reduced the plaintiff's chances of survival from thirty-nine percent to twenty-five percent. Some courts limit such recovery to cases in which the loss was "substantial,"[49] while others do not impose such a requirement. It is not at all clear why a substantiality requirement should be imposed as a requisite for proportional recovery.[50] We suspect that those courts imposing such a requirement are concerned that small reductions of chance are not reliable enough to impose liability for damages.

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gle outcome approach"); Smith, *supra* note 42, at 176-77 (reporting that this method of valuing damages by the percentage of lost chance "has been widely accepted, in large part due to the influence of Professor King's article"). It should be noted that in toxic tort cases where the toxic agent caused an increased risk to persons exposed over and above the background risk indigenous to society at large, courts have suggested utilizing proportional causation to assess damage to "indeterminate plaintiffs." In these cases, it is impossible to determine whether a plaintiff's disease emanated from the background risk or was caused by the toxic agent. *See, e.g., In re* "Agent Orange" Products Liability Litig., 597 F. Supp. 740, 837-38 (E.D.N.Y. 1984). *See also,* PETER H. SCHUCK, AGENT ORANGE ON TRIAL: MASS TOXIC DISASTERS IN THE COURTS, 187-88 (1987).

[49] *See, e.g., Delaney,* 873 P.2d at 186 ("[E]vidence must show that the patient had a 'substantial' chance of survival or of a better recovery . . . "); *Perez,* 805 P.2d at 592 (expressing doubt that a "ten percent chance of survival . . . would be actionable"); *McKellips,* 741 P.2d at 474 (lost chance applies "where a health care provider deprives a patient of a significant chance for recovery . . . "); *Falcon,* 462 N.W.2d at 56 ("loss of a substantial opportunity"). *See also* Andel, *supra* note 45, at 988 ("[T]hese courts have added an additional complicating element—the 'substantial factor' test, under which the patient must still prove that the physician's negligence was a *substantial factor* in causing his injury."); Smith, *supra* note 42, at 178 (arguing that if the Illinois Supreme Court would limit lost chance recovery to those cases where the loss is "substantial," it would limit recovery to only "truly meritorious cases.").

[50] While courts that allow the jury free reign to evaluate lost chance damages (thus potentially allowing a jury to assess the full value of the claim against a physician who has deprived a plaintiff of a chance of recovery) might wish to impose a substantiality requirement to assure that such onerous damages are not extracted from a defendant without proof that the lost chance was not trivial, courts that allow only for proportional recovery have no good reason for imposing such a requirement. If the statistics supporting the lost chance are reliable, a plaintiff should not be denied recovery simply because the lost chance reduction is not "substantial." In many cases small reductions are not likely to result in significant damages. However, in the case of a young person who was deprived, for example, of a five percent chance of fifty years of survival, the damages could be meaningful even though the reduction was not substantial.

In the comparative provider setting, one could argue that the substantiality requirement is necessary to assure that the risk is material and is one that a reasonable physician would have provided or a reasonable patient would have desired before submitting to the procedure. Materiality must be established as an element of an informed consent action. The substantiality of the risk reduction is, however, a poor substitute for a straightforward evaluation of the materiality requirement. When, for example, the risk reduction is small but the consequence of a failed procedure is great, the information concerning provider performance may well be considered material to either a reasonable doctor or a reasonable patient. It is possible that the differential, though statistically significant, may be so small that a finder of fact would determine that neither reasonable doctors nor reasonable patients would consider the differential sufficiently important to take into account. It is likely that the materiality question will be resolved differently depending on whether a jurisdiction utilizes the reasonable doctor or reasonable patient standard. *See* discussion *supra* notes 2, 29. Laypersons may attach far greater significance to provider statistics than physicians. In any event, it would be unwise to utilize the substantiality of the reduction of risk as a substitute for a rigorous examination of the issue of materiality.

The reliability of the statistics is an issue that deserves careful attention.[51] Courts are free to apply statistical facts to set a threshold for determining that a meaningful difference exists between providers. It is possible that substantial observed differences may be based on too little data for the differences to be statistically significant,[52] or that the data may be flawed. The opposite is also true; small observed differences may be based on a large amount of reliable data. Once it is determined that the data support the inference of reduced chance, though, there seems to be no good reason that plaintiffs who have suffered a real, cognizable reduced chance should not be compensated, even if the reduction is small.

An additional reason for not engrafting a substantiality requirement onto the proportional recovery principle is that it will force individualized determinations of what constitutes "substantial." This issue is likely to engender considerable appellate review, given that satisfying the substantiality requirement would be a prerequisite to recovery. Appellate courts would have to grapple with an amorphous and almost indeterminable issue. It would appear far better to recognize proportional recovery for lost chance as an across-the-board doctrine and directly confront issues such as statistical significance and the reliability of data.

It may well be that even those courts that insist on utilizing a traditional causation test for liability in lost chance malpractice cases would be willing to adopt the proportionate liability standard in an informed-choice setting. As we noted earlier, some courts have had difficulty justifying limiting lost chance recovery to malpractice cases[53] because all cause-in-fact cases based on a hypothetical but-for test are at least theoretically susceptible to a lost chance analysis. After all, a defendant's negligence by definition always increases the risk of harm to a plaintiff; if not, it would not be negligent. Would a plaintiff who slipped and fell while running down an unlit stairway

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[51] In this context, we use "reliability of the statistics" to refer to a variety of potential problems associated with the proffered information—including inaccurate data, incomplete data, and faulty analysis of the data. For an interesting discussion of such problems, see SCHUCK, *supra* note 48, at 272.

[52] Choice of a level of statistical significance reflects important policy determinations as to the relative costs of wrongfully imposing liability and wrongfully denying it. *See Confidence in Probability, supra* note 34, at 410-17; Neil B. Cohen, *Conceptualizing Proof and Calculating Probabilities: A Response to Professor Kaye*, 73 CORNELL L. REV. 78, 94 (1987).

[53] *See, e.g.,* Sherer v. James, 351 S.E.2d 148, 151 (S.C. 1986) ("A defendant physician is entitled to put the medical malpractice plaintiff to proof equally as stringent as that required of plaintiffs in other negligence actions."); Kramer v. Lewisville Mem'l Hosp., 858 S.W.2d 397, 406 (Tex. 1993) ("[I]t is doubtful that there is any principled way we could prevent its application to similar actions involving other professions."). *But see* Richard Delgado, *Beyond Sindell: Relaxation of Cause-In-Fact Rules for Indeterminate Plaintiffs*, 70 CAL. L. REV. 881, 889 (1982) (arguing that "destruction of a chance" cases, including medical malpractice, seem superficially similar to toxic substance exposure cases, but that the lost chance rubric will fail to solve such cases because "unlike the surgical victim, the [exposure victim] do[es] not know that human causes are responsible, even in part, for their injury; they merely suspect it," and thus recovery in such cases would require "major extension of notions of standing and legal rights . . .").

have fallen anyway even if the light had been on?[54] Would a plaintiff who was injured when her defective brakes failed after going through a heavy stream of water have suffered a similar injury even if her brakes had not been defective, given the effect that water can have on brakes?[55] If, despite these conjectures, we must follow the traditional "more probable than not" rule in other tort settings, the argument goes, the negligent diagnosis setting should not mandate a different rule.

In the informed-choice setting, however, the underlying claim does not fit easily into the negligence rubric.[56] The plaintiff seeks recovery for a dignitary tort—the physician's invasion of one's body without having shared significant information before undertaking the medical procedure. Dignitary torts do not require actual damages as an element of the cause of action.[57] Comparative provider statistics would thus be utilized not to create a classic tort, but, rather, to measure damages for an offense that traditionally does not require a causal link to actual damages. This stretch is not quite so demanding.

To this point, we have concluded that provider-specific informed choice cases are more easily justiciable than procedure-directed cases. Decision causation is more easily established in the former, because it is highly credible that a patient would have opted for a medical provider whose performance was demonstrably better. In addition, injury causation is more directly analyzable, and lost chance doctrines provide a doctrinal umbrella for assessing liability. Yet, the case law to date has not, in our opinion, fully considered how to assess the measurement of liability in those cases.

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[54] Reynolds v. Texas & Pac. Ry. Co., 37 La. Ann. 694 (La. 1885).

[55] Midwestern V.W. Corp. v. Ringley, 503 S.W.2d 745 (Ky. Ct. App. 1973).

[56] Almost all courts treat informed consent cases as actions for negligently failing to provide the requisite information to the patient. *See* APPLEBAUM ET. AL., *supra* note 3, at 118 ("The dispute over whether a lawsuit alleging lack of informed consent ought to be treated as a battery or as professional negligence has slowly withered away. By the mid-1970s, almost all states that had considered the question had concluded that inadequate disclosure is actionable only as professional negligence, not battery."). *See, e.g.,* Cobbs v. Grant, 502 P.2d 1, 8 (Cal. 1972); Scott v. Bradford, 606 P.2d 554, 557 (Okla. 1979); Trogun v. Fruchtman, 207 N.W.2d 297, 312 (Wis. 1973). Occasionally, courts lapse into battery language. *See, e.g.,* Congrove v. Holmes, 308 N.E.2d 765, 770-71 (Ohio 1973); Cardwell v. Bechtol, 724 S.W.2d 739, 750 (Tenn. 1987) ("[W]hile determining whether the Defendant failed to obtain informed consent is dependent upon the standard of care of the profession . . . , [the absence of informed consent] is not negligence but battery . . ."). Nonetheless, almost all commentators have noted that the law of negligence does not provide an adequate framework when the true issue is the protection of a patient's autonomous right to make an informed decision. *See generally* APPLEBAUM ET. AL., *supra* note 3, at 122; Jay Katz, *Informed Consent—A Fairy Tale? Law's Vision*, 39 U. PITT. L. REV. 137 (1977); *Reflections on Human Dignity, supra* note 3, at 690-98; *Looking for the Action, supra* note 3; *From Informed Consent to Patient Choice, supra* note 3.

[57] *See* Marcus L. Pante, *An Analysis of "Informed Consent,"* 36 FORDHAM L. Rev. 639, 666-667 (1968); *Looking for the Action, supra* note 3, at 584-85; *From Informed Consent to Patient Choice, supra* note 3, at 225, 232.

B. *Getting Proportional Recovery Right*

As noted above,[58] deciding to allow recovery for lost chance damages reflects an understanding that the failure to do so would immunize negligent providers from the effects of their negligence and deny all patients recovery when some of them were damaged by the provider's tortious conduct. Deciding to allow recovery for lost chance, though, is not the same thing as deciding how to measure that recovery. After all, allowing a full recovery for the adverse outcome in every lost chance case would overcompensate plaintiffs and penalize defendants.[59] The previous section surveyed the approach to damages in existing lost chance cases. This section addresses that question analytically, seeking to develop an appropriate rule that neither unfairly penalizes defendants nor undercompensates plaintiffs.

The appropriate rule, we believe, is one that would, over the long run of cases, result in total damages assessed against defendants equaling the total losses suffered by plaintiffs. Accomplishing this result, of course, is made more difficult by the fact that we do not know whether any *particular* plaintiff was actually hurt by the defendant's failure to obtain the plaintiff's informed consent. We can determine probabilistically, however, the expected total damage over a large number of similar cases.

For purposes of this analysis, four paradigm cases will be used. In each case, it is assumed that the differences between the success or failure rates[60] of the providers would be sufficient to cause a reasonable patient to select the more proficient provider.[61] It is also assumed in each case that

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[58] *See* sources cited *supra* notes 35-38 and accompanying text.

[59] Consider, for example, the situation in which the defendant's success rate for the procedure in question is 20%, while the success rate of the alternate provider is 30%, and the defendant performed the procedure on 100 patients. If each of the 80 patients who suffered the adverse outcome were awarded full recovery, there would be 80 full recoveries even though 70 of those 80 patients would have suffered the same adverse outcome from the alternate provider. *See also* Brennwald, *supra* note 45, at 777 (arguing that courts which fail to limit compensation proportionally "expose tortfeasors to liability greatly in excess of culpability").

[60] For these purposes, we are using the term "success rate" for the percentage of cases in which the procedure, as performed by the provider in question, will yield a successful result, and the term "failure rate" for the percentage of cases in which the procedure, as performed by the provider in question, will yield an unsuccessful result. For simplicity, we assume a binomial distribution—*i.e.*, all outcomes are either "successes" or "failures."

[61] Of course, in the real world of imperfect data collection and methodological disputes about risk adjusting, it is likely that defendants will challenge any asserted success or failure rates as inaccurate or imperfect and thus not capable of supporting a cause of action. Yet, such a challenge is inappropriate for decision causation purposes. The point is not whether the withheld information is perfect; no information is perfect. Rather, the question is whether reasonable patients would have relied on that information, however imperfect, in choosing a provider. Such reliance need not be based on concepts of statistical significance at traditional thresholds, such as the $p \leq 0.05$ level (equivalent to a 95% confidence level) typically used in epidemiological and social science research. The choice of such a rigorous standard is based on an implicit value judgment that it is very important to avoid "Type I" (*i.e.*, false positive) error and that the risk of "Type II" (*i.e.*, false negative) error is of less concern. In this context, it would reflect a value judgment that it is very important to avoid concluding incorrectly on the basis of

$100,000 would compensate the plaintiff for the difference between an adverse outcome and a successful outcome.

The paradigms are as follows:

Paradigm One ("Stark Difference"): Provider A (the defendant) has a twenty-percent failure rate for the procedure in question, while Provider B (the alternative provider) has an eight-percent failure rate.

Paradigm Two ("Moderate Difference"): Provider A (the defendant) has a twenty-percent failure rate for the procedure in question, while Provider B (the alternative provider) has a twelve-percent failure rate.

Paradigm Three ("Slight Difference"): Provider A (the defendant) has a twenty-percent failure rate for the procedure in question, while Provider B (the alternative provider) has a seventeen-percent failure rate.

Paradigm Four ("Slim Chance"): Provider A (the defendant) has a ninety-percent failure rate for the procedure in question, while Provider B (the alternative provider) has a seventy-five-percent failure rate.

It should be noted from the outset that, for each paradigm, there will be patients of Provider A (the defendant) who do not suffer an adverse outcome. While, as we have argued elsewhere, there is a dignitary element in informed consent cases that might entitle plaintiffs to compensation for the failure to disclose appropriate information even in the absence of injury causation,[62] it is unlikely that patients of Provider A who do not suffer adverse outcomes will bring suit for the failure to obtain informed consent. Accordingly, our analysis proceeds on the assumption that the damages attributable to losses suffered because of injuries caused by the failure to obtain informed consent (that is, cases in which there is both decision causation and injury causation) will be available only to plaintiffs who have

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the available data that a provider with the higher observed failure rate actually has a higher risk of failure, but of less concern that this might result in failing to reach that conclusion when it is, in fact, true. A patient's choice, though, is not between reaching or not reaching a conclusion as to the relative risk associated with two providers—it is between choosing one provider or the other provider. Making no choice is not an option. To illustrate the difference, consider a pre-election presidential poll that showed the Democratic candidate with 54% of the vote and the Republican candidate with 46% of the vote. The pollsters have noted that at the 95% confidence level ($p \leq 0.05$), those figures are plus or minus 6%. If one were asked, "Can you confidently predict who will win the election?" the answer would likely be "no." If, on the other hand, circumstances *forced* one to make a prediction as to which candidate was most likely to win, the answer would be easy—the Democrat. A patient's choice as to which provider to utilize is more like the second scenario than the first; making no choice is not an option. Accordingly, a rational patient would be likely to utilize differences in success or failure rates for alternative providers in her decision process even if those differences would not lead an epidemiologist to conclude at the 95% confidence level that the differences are significant. *See generally* Cohen, *Confidence in Probability, supra* note 34, at 385.

[62] *See* Twerski & Cohen, *The Myth of Justiciable Causation, supra* note 3, at 655-64.

suffered adverse outcomes. Damages for dignitary harm should be considered separately.[63]

Consider Paradigm One. Imagine that one hundred patients undergo the procedure in question performed by Provider A. The information provided tells us that twenty of those patients will have an adverse outcome. Had those patients undergone the procedure with Provider B, however, only eight of them would have suffered the adverse outcome. In other words, twelve out of the twenty patients of A who suffered adverse outcomes would not have suffered such outcomes with B. A little calculation reveals that, for each patient of A who suffered an adverse outcome, the chances are twelve out of twenty, or sixty percent, that the patient would not have suffered an adverse outcome from B's treatment. Sixty percent is, of course, greater than fifty percent; thus, it is more likely than not that A's failure to disclose caused each patient's losses.

A good example of Paradigm One can be found in existing studies of risk-adjusted mortality rates (RAMR) for angioplasty.[64] In New York's 1997 study of these rates, for example, one hospital provider ("Hospital One") had a RAMR of 1.31, while that of another hospital provider ("Hospital Two") was 0.40.[65] This translates to approximately thirteen deaths per thousand angioplasties at Hospital One, while there are only four per thousand at Hospital Two.[66] Thus, for every thirteen patients who die from angioplasties performed at Hospital One, nine would have survived at Hospital Two. In other words, the probability that each unfortunate patient who died at the hands of Hospital One would have survived at the hands of Hospital Two is nine out of thirteen, or approximately sixty-nine percent. This probability is, of course, greater than fifty percent.[67]

At first blush, one might simply decide that, since each patient who suffered an adverse outcome at Provider A or Hospital One in these examples can meet the preponderance standard of civil litigation, each should recover full compensation for losses associated with that outcome. Further calculation, though, reveals problems with such a rule. That rule would, for

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[63] *See id.* at 661-63.

[64] *See* NEW YORK STATE, ANGIOPLASTY, *supra* note 8. A chart prepared by the New York State Department of Health summarizing its findings appears in Appendix B. For purposes of the illustrative paradigms in this article, we have assumed the methodological and statistical validity of the risk-adjusted mortality rates. For a more extensive analysis of that issue, see Jesse Green, *Problems in the Use of Outcome Statistics to Compare Health Care Providers*, 58 BROOK. L. REV. 55 (1992).

[65] The hospitals noted as One, Two, and Three in the text do not follow the order of the hospitals as set forth in the New York study. They were chosen among the hospitals in the study to document how lost chance calculations can be made as between different providers in a real-world setting.

[66] This assumes, of course, that all providers are normalized to the same risk level of patients in accordance with the RAMR methodology.

[67] This illustration provides a good example of a case in which the absolute difference between the numbers in question (1.31 and 0.40) is small, but, if one assumes the validity of the data, the probabilistic effect is quite meaningful.

example, require Provider A to pay damages equal to the losses associated with twenty adverse outcomes, even though A's failure to disclose caused only twelve adverse outcomes that would not also have occurred with Provider B. Thus, plaintiffs as a class would be overcompensated, and A would end up paying more in damages than the losses he or she actually caused. Thus, the "preponderance rule" is inappropriate for Paradigm One.

The preponderance rule would be equally inappropriate for Paradigm Two. In that paradigm, assuming again that one hundred patients of Provider A undergo the procedure (and, therefore, that there are twenty adverse outcomes), eight out of the twenty patients of Provider A who suffered adverse outcomes would not have suffered such outcomes with Provider B. Here, calculation reveals that, for each patient of A who suffered an adverse outcome, the chances are eight out of twenty, or forty percent, that the patient would not have suffered an adverse outcome from B's treatment. Forty percent is, of course, less than fifty percent; thus, it is *not* more likely than not that A's failure to disclose caused each patient's losses. The RAMR studies for angioplasty provide a good example here, as well. This time, let us compare Hospital One, with its RAMR of 1.31, with Hospital 3, which has a risk factor of 0.97. This translates to 131 deaths per ten thousand patients at Hospital One and ninety-seven deaths per ten thousand patients at Hospital Three. Thus, thirty-four of every 131 patients who died at Hospital One, or approximately twenty-six percent, would have survived at Hospital Three. This number is, of course, less than fifty percent.

Under a preponderance rule, one might simply decide that, since patients in Paradigm Two who suffered an adverse outcome would not be able to meet the preponderance standard of civil litigation, they should not recover compensation for losses associated with the adverse outcome. But such a rule would result in Provider A paying *no* damages for adverse outcomes, even though Provider A's failure to disclose caused eight adverse outcomes. Thus, plaintiffs as a class would be undercompensated, and Provider A would end up paying less in damages than the losses he or she actually caused. Thus, the preponderance rule is also inappropriate for Paradigm Two, and similar analysis demonstrates that it is inappropriate as well for Paradigms Three and Four.

If the preponderance rule is inappropriate, though, what should take its place? The answer is a proportionate causation rule in which the total compensation paid by the nondisclosing providers to patients suffering adverse outcomes would, in the long run of cases, equal the total losses suffered by those patients that would have been avoided had the alternate, less risky provider performed the procedure. This rule, by definition, would neither undercompensate nor overcompensate plaintiffs as a class, and it would assess against defendants the actual costs of their misconduct. While proportionate causation damages for lost chance cases has been adopted by some

courts, the damage calculus in those cases have not reflected these twin goals of avoiding both overcompensation and undercompensation.[68]

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[68] The discussion in *McKellips v. Saint Francis Hosp., Inc.*, 741 P.2d 467, 477 (Okla. 1990), sets forth the calculation utilized by the courts for proportional recovery:

> To illustrate the method in a case where the jury determines from the statistical findings combined with the specific facts relevant to the patient that the patient originally had a 40% chance of cure and the physician's negligence reduced the chance of cure to 25%, 15% (40%-25%) represents the patient's loss of survival. If the total amount of damages proved by the evidence is $500,000, the damages caused by defendant is 15% x $500,000 or $75,000.

Under this formula, however, for every 100 patients treated by the negligent physician, 75 would have adverse outcomes. Sixty patients would have died even if an alternate provider had performed the procedure; 15 extra deaths are, therefore, attributable to the negligent physician. In our view, the patient is thus entitled to 15/75, or 20%, of full damages rather than the 15% suggested by the court in *McKellips*.

The basic formula for this miscalculation of damages was set forth in Joseph H. King's article, *supra* note 43, at 1382: "A better method of valuation would measure a compensable chance as the percentage probability by which the defendant's tortious conduct diminished the likelihood of achieving some more favorable outcome." This miscalculation was repeated first in the concurring opinion in *Herskovits v. Group Health Co-op.*, 664 P.2d 474, 486 (Wash. 1983) (Pearson, J. concurring); and subsequently in *McKellips*, 741 P.2d at 476 n.25 (citing the concurring opinion of *Herskovits* and quoting King's illustration of the formula, King, *supra* at 1382:

> To illustrate, consider a patient who suffers a heart attack and dies as a result. Assume that the defendant-physician negligently misdiagnosed the patient's condition, but that the patient would have had only a 40% chance of survival even with a timely diagnosis and proper care. Regardless of whether it could be said that the defendant caused the decedent's death, he caused the loss of chance and that chance-interest should be completely redressed in its own right. Under the proposed rule, the plaintiff's compensation for the loss of the victim's surviving the heart attack would be 40% of the compensation value of the victim's life had he survived (including what his earning capacity would otherwise have been in the years following death) . . . .).

The miscalculation has been repeated by courts with some frequency. *See, e.g.*, Mays v. United States, 608 F. Supp. 1476, 1482-83 (D. Colo. 1985) (holding that where the court measured the reduction by negligent medical care of patient's chance as 25%, a 40% chance reduced to a 15% chance, and where damages were governed by state statutory "pecuniary loss" measurement, plaintiffs were entitled to 25% of the net pecuniary loss measurement in damages); Delaney v. Cade, 873 P.2d 175, 187 (Kan. 1994) (recommending King's approach to damage valuation as the "most logical," citing *McKellips*, 741 P.2d at 467, and reporting that the same formula was employed by the federal district court in Boody v. United States, 706 F. Supp. 1458 (D. Kan. 1989), which concluded that the "proportional damage method was the most reasonable approach . . ."); Falcon v. Memorial Hosp., 462 N.W.2d 44, 49, 57 (Mich. 1990) ("By not inserting the intravenous line, the physician deprived [plaintiff-decedent] of a 37.5% opportunity of surviving the embolism . . . 37.5% times the damages recoverable for wrongful death would be an appropriate measure of damages."); Scafidi v. Seiler, 574 A.2d 398, 408 (N.J. 1990) (instructing a lower court to "mold [its] verdict" to limit defendant's liability to the value of lost chance; reaffirming its acknowledgment in an earlier New Jersey Supreme Court decision, *Evers v. Dollinger*, 471 A.2d 405 (N.J. 1988), of Professor King's analysis as the appropriate method of resolving such cases; and citing King's illustration of the formula); Roberts v. Ohio Permanente Med. Group, Inc., 668 N.E.2d 480, 484-85 (Ohio 1996) (citing King's approach as the "most rational" one and instructing a lower court to compute damages using that approach by "ascertain[ing] the percentage of the patient's lost chance of survival or recovery; and . . . multiply[ing] that percentage by the total amount of [wrongful death] damages"). *See also* Brennwald, *supra* note 45, at 768 (discussing the concurring opinion in *Herskovits* and advocating Judge Pearson's reasoning as "the clearest judicial understanding to date of the notion of recovery for loss of a chance" and as the solution that should be used as a model by other courts "desiring to provide their jurisdictions with a more rational framework in which to evaluate damages for loss of a chance . . ."); Howard Ross Feldman, *Chances as Protected Interests: A Recovery for the Loss of a Chance and Increased Risk*, 17 BALTIMORE L. REV. 139, 155-56 (1987) (outlining Profes-

Constructing the appropriate model is not difficult, though. All that needs to be done is to calculate the fraction of adverse outcomes occurring from procedures performed by the defendant that would not have occurred had the procedure been performed by the alternate provider, and then multiply that fraction by the loss suffered by the patient in question. This rule will result, in the long run, in damages assessed against defendants equaling the losses that result from the additional adverse outcomes caused by their failure to disclose.

For example, in Paradigm One, twelve out of twenty (or sixty percent) of the patients of Provider A who suffered adverse outcomes would not have suffered such outcomes with Provider B. Thus, in Paradigm One, patients suffering adverse outcomes from procedures performed by A should receive sixty percent of the $100,000 damages, or $60,000. With this rule, twenty patients (out of a hypothetical one hundred) of A would receive $60,000 each, for a total of $1,200,000. A's failure to disclose was responsible for twelve of those twenty adverse outcomes. Thus, A caused 12 x $100,000 in loss—or $1,200,000. Thus, with this formula, plaintiffs as a class have been accurately compensated, and the defendant pays aggregate damages equal to the loss he or she caused. Applying the preponderance rule, on the other hand, would have resulted in all twenty patients of A who suffered adverse consequences receiving $100,000, for a total of $2,000,000. With that rule, plaintiffs as a class would have been overcompensated by $800,000, and Provider A would have paid $800,000 in excess damages.

Similar analysis works for Paradigm Two, in which eight out of twenty (or forty percent) of the patients of Provider A who suffered adverse outcomes would not have suffered such outcomes with Provider B. Thus, patients suffering adverse outcomes from procedures performed by A should each receive forty percent of the $100,000 damages, or $40,000. With this rule, twenty patients (out of a hypothetical one hundred) of A would receive $40,000 each, for a total of $800,000. A's failure to disclose was responsible for eight of those twenty adverse outcomes. Thus, A caused 8 x $100,000 in loss—or $800,000. Thus, with this formula, plaintiffs as a class have been accurately compensated and the defendant pays aggregate damages equal to the loss he or she caused. Applying the preponderance rule, on the other hand, would have resulted in *none* of the twenty patients of A who suffered adverse consequences receiving damages. With that rule, therefore, plaintiffs as a class would have been undercompensated by $800,000, and Provider A would have received an $800,000 windfall.

In Paradigm Three, the difference between the success or failure rates of Provider A and Provider B is relatively small, which might lead some courts to either decline to find a violation of informed consent standards or decline to award damages. Yet, if the determination of the twenty percent

sor King's method of valuation of chance and calculation of damages and advocating it as the "preferable" method).

failure rate of A and the seventeen percent failure rate of B is based on reliable data, one can certainly imagine decisions about medical treatment for which reasonable patients would choose B over A.[69] Using data from the RAMR studies for angioplasty by way of example,[70] would a fully informed patient choose Hospital One, with its RAMR of 1.31, or Hospital Four, with its RAMR of 1.17, for a procedure for which failure meant painful death? If it is decided in a particular case that, had Provider A or Hospital One disclosed such information, the patient would have chosen the alternative provider, there is no reason not to use the calculus described above.

In Paradigm Three, three out of twenty (or fifteen percent) of the patients of Provider A who suffered adverse outcomes would not have suffered such outcomes with Provider B. Thus, in Paradigm Three, patients suffering adverse outcomes from procedures performed by A should each receive fifteen percent of the $100,000 damages, or $15,000. With this rule, twenty patients (out of a hypothetical 100) of A would receive $15,000 each, for a total of $300,000. A's failure to disclose was responsible for three of those twenty adverse outcomes. Thus, A caused 3 x $100,000 in loss—or $300,000. Thus, with this formula, plaintiffs as a class have once again been accurately compensated and the defendant pays aggregate damages equal to the loss he or she caused. Applying the preponderance rule, on the other hand, would have resulted in *none* of the twenty patients of A who suffered adverse consequences receiving damages. With that rule, plaintiffs as a class would have been undercompensated by $300,000, and Provider A would have received a $300,000 windfall.

Finally, consider Paradigm Four. Under the preponderance rule, no matter what Provider A's success or failure rate is, none of his or her patients could recover a penny. This is the case because Provider B's failure rate of seventy-five percent leads to the conclusion that it is more likely than not that the patient would have suffered the same adverse consequence from Provider B's treatment. Paradigm Four is, of course, *Herskovits*.[71] Yet, as we have already demonstrated, failure to impose liability in such cases would undercompensate plaintiffs.

Under our rule, on the other hand, patients of Provider A who suffered adverse outcomes would, as a class, be accurately compensated. Of ninety patients of A who suffer adverse consequences, fifteen of them would not suffer adverse consequences from Provider B's treatment. Thus, each of those ninety should receive fifteen ninetieths (or sixteen percent) of the $100,000 damages, or $16,666.67. Once again the total loss suffered by plaintiffs of $1,500,000 (representing fifteen additional adverse outcomes

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[69] *See supra* note 61 with respect to reliability data.

[70] *See infra* App. B.

[71] See *supra* text accompanying note 40.

suffered as a result of treatment by A) would equal the total damages assessed against Provider A.[72]

V. MEDICAL PROVIDER STATISTICS AND MANAGED CARE

To date, comparative provider statistics have been collected primarily by state and federal agencies who have sought to monitor performance of hospitals and physicians with regard to selected medical procedures. It is clear, however, that over time the greatest repository of comparative provider performance information for surgical and diagnostic procedures will be the managed health care industry.[73] Once courts recognize a cause of

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[72] Our rule can be reduced to a formula. Each patient of Provider A who suffers an adverse outcome should receive damages equal to his or her full loss multiplied by a fraction the numerator of which is the failure rate of Provider A minus the failure rate of Provider B and the denominator of which is the failure rate of Provider A. Symbolically:

$D = L * (FA - FB)/FA$

where

D = damages assessed

L = plaintiff's loss

FA = failure rate of Provider A

FB = failure rate of Provider B.

[73] Although MCOs are not yet routinely self-reporting comparative provider specific data to the public, reports suggest that collection and internal use of such data is widespread. *See* Edward Doyle, *New Breed of Report Cards Turn Up the Heat on Doctors,* ACP OBSERVER (visited June 18, 1998) <http://www.acponline.org/journals/news/jan95/reptcard.htm> (reporting that one HMO, United Healthcare, has been amassing vast amounts of unreleased data on individual physician performance rates and is not alone in such practice). In the first such statewide disclosure, Pennsylvania's Health Care Cost Containment Council included mortality rates for each of 34 health plan providers in addition to more ordinary per physician mortality rates in its annual study of heart surgery provider outcomes. PENNSYLVANIA HEALTH CARE COST CONTAINMENT COUNCIL, *supra* note 8. *See also* Anita J. Slomski, *How the Clinton Plan Would Judge Your Performance,* 71 MED. ECON. 83 (1994) (describing a bill proposed by the Clinton administration that would require all health plans and HMOs to collect and publish a variety of provider-specific performance and quality data, including RAMR, noting that the administration's proposals for such data collection were modeled on programs already in place at HMOs such as Kaiser Permanente, United Healthcare, and U.S. Healthcare). Evidence that MCOs are collecting such provider-performance data abounds. For example, the Joint Commission on Accreditation of Healthcare Organizations (JCAHO) is an organization which accredits approximately 18,000 healthcare organizations, including some 40 "health plans," which are defined as including HMOs, PIAs, MCOs, PPOs, PHOs, and PSNs. *See* JCAHO (visited Sept. 14, 1998) <http://www.jcaho.org/acr_orgs/h_hlthpl.htm> [hereinafter JCAHO]. *See also* Telephone Interview by Kim Houghton with Julie Roberts, Communications Division, JCAHO, Oakbrook Terrace, Ill. (Sept. 24, 25, 1998) (discussing the inclusion of MCO and HMO health plans among accredited organizations that will be required to comply with JCAHO's ORYX measurement and reporting initiative in the near future). The JCAHO has instituted an ORYX initiative which will require over time that all of its accredited health care organizations, including MCOs, comply by selecting and maintaining some form of "performance measurement system." *See id. See also* Iameter Inc. (visited Sept. 15, 1998) <http://iameter.com/html/JCAHO&ORYX.html> (website of software company marketing provider performance measurement software system that provides "reliable risk-adjusted physician profiling" to JCAHO participating organizations; website explains compliance with JCAHO's initiative); JCAHO, *supra.* To comply with ORYX, the health care organizations are allowed to choose at least two from an approved list of performance measures that their system must maintain. This list includes measures such as risk-adjusted mortality outcomes. *See* JCAHO, *supra*, at <http://www. jcaho.org/perfmeas/oryx/1pmseval/htm>. Further,

action for failure to provide comparative provider statistics, it is inevitable that managed care organizations (MCOs) will become targets for plaintiffs claiming that they were not given comparative provider information and thus are entitled to compensation for failure to obtain informed consent.[74]

The obstacles to recovery will be substantial. First, depending on the form of the MCO, plaintiffs may face the argument that MCOs are not primary medical care providers who owe direct duties to patients. Second, as we discuss in more detail below, plaintiffs will have to overcome the contention that such claims are barred or preempted by the federal Employment Retirement and Income Security Act of 1974 (ERISA).[75] Despite these obstacles, it is our opinion that the concentration of critical decision information in the hands of the MCOs will serve as the engine to drive the recognition of a duty on the part of MCOs to furnish comparative provider information to their members. Once the tort duty is given clear recognition, ERISA will not stand in the way of recovery.

A. Establishing an MCO's Duty to Disclose Provider Statistics

Before the recent managed care revolution in American health care, most patients and doctors were involved in what can be called a "traditional" health care relationship. Individual physicians treated individual patients who paid for medical services either directly to the physician or through an indemnity-based health insurance policy. In general, the legal relationship

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vendors of commercially available software performance measurement systems designed for MCOs, hospitals, and physician groups advertise MCOs as clients of their performance data collection programs on their commercial websites. *See, e.g.,* QuadraMed Corp. (visited Sept. 4, 1998) <http://www.quadramed.com.html. hra_clients.html> (website advertising company's healthcare management software lines, which includes capabilities for collecting risk-adjusted outcomes measures, and listing clients of its software, including "provider networks" and "integrated delivery systems"); Apache Medical Systems (visited Sept. 15, 1998) <http://www. apache-msi.com/ pepremier.htm> (website advertising software program, which includes risk-adjusted outcomes measurement, and identifying clients, including MCOs).

[74] Commentators have recently questioned the premises of traditional informed consent law in the environment of managed care. *See, e.g.,* PAUL T. MENZEL, STRONG MEDICINE: THE ETHICAL RATIONING OF HEALTH CARE 145 (1990) (physician should be required to provide information that could realistically be acted on by patient); E. HAAVI MORREIM, BALANCING ACT: THE NEW MEDICAL ETHICS OF MEDICINE'S NEW ECONOMICS 115 (1991) (disclosure required if there is a realistic possibility that patient could arrange for alternate treatment); *Rethinking Informed Consent, supra* note 23, at 941 ("[P]olicymakers . . . may view as an insupportable extravagance a doctrine requiring physicians to spend more time engaging in more extensive dialogues with patients about alternatives that are no longer practically available to them . . . ."). Comparative provider statistics, especially if made available to choose between providers that are within a given managed care network, would allow a patient a choice between physicians and hospitals that could be highly significant. Such comparative statistics would also respond to Professor Schuck's suggestion that informed consent include presenting comparative risk information to patients. *See* Shuck, *Rethinking Informed Consent, supra* note 23, at 948-51. Even the harshest critic of an individual-autonomy-based theory of informed consent would likely agree that comparative provider statistics should be revealed to patients about to undergo a procedure. *See* Roger B. Dworkin, *Medical Law and Ethics in the Post-Autonomy Age,* 68 IND. L.J. 727, 741 (1993).

[75] 29 U.S.C. §§ 1001-1461 (1994). *See infra* text accompanying notes 92-107.

was clearly defined. Physicians had the duty to act reasonably in treating their patients, and patients decided what treatment, and how much of it, to pursue, depending on the limits of the indemnity policy or the patients' ability to pay. Although traditional health care insurers may have been in possession of some provider-specific information, the indemnitor-indemnitee relationship did not in itself suffice to trigger a duty to disclose such information to all insureds. The insurer had no formal relationship with the health care provider and made no representations of any kind as to the competence of any provider. The insurer did not provide any incentive to the insured to choose any given provider. Finally, the number of providers covered by a traditional plan was limitless. An insured could consult any physician and be reimbursed for the monies expended in receiving medical services. The open-ended nature of the coverage and the arm's-length relationship between insurer and insured made the imposition of a direct duty on the part of an insurer to disclose comparative medical provider data to its insured both jurisprudentially unsound and practically unworkable.

All of this has changed in the managed care environment. Today, a patient's access to health care providers and treatment options is affected by the rules and incentive structure of the patient's MCO. In this new environment, the question of whether an MCO's possession of provider-specific information imposes on the MCO the same duty of disclosure as that imposed on a traditional direct provider is more nuanced.

The answer is clearest for the "staff model" health maintenance organization (HMO) in which all the medical providers are employees of the HMO.[76] Under *respondeat superior* principles, the HMO is responsible for the legal consequences of the failure of its employees to make appropriate disclosures. If a physician fails to obtain informed consent and is therefore liable for negligence, the employer is liable. What if, however, the HMO itself has the relevant information but has not made it available to the physician in question? It is clear that the HMO, as the direct provider of health care services, has a duty of disclosure under these circumstances. An employer cannot immunize itself from liability by keeping its employees ignorant of information critical to the employees' ability to perform their assigned responsibilities non-negligently.[77]

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[76] *See* CHARLES G. BENDA & FAY A. ROSOVSKY, MANAGED CARE AND THE LAW § 1.3, at 1-7, § 2.4.1, at 2-11 (1997) (describing both a "closed staff" model HMO, which limits "the participation of physicians, and consequently the choice of members, to physicians who are employees of the HMO or members of a specified contract group," and an "open staff" model HMO, which "opens physician participation, and member choice, by contracting with an array of individual physicians in a community either directly or through an individual practice association (IPA)").

[77] *See* U.C.C. § 1-201(27) (1998) (stating that notice to an organization is effective from the time it would have been communicated to the person conducting the transaction for the organization if the organization exercised due diligence, *i.e.*, the maintenance of reasonable routines for communicating significant information to the person conducting the transaction). *Cf.* Fisher v. Philadelphia Elec. Co., 994 F.2d 130, 135 (3d Cir. 1993) (employers should identify to employees which persons are authorized to

The analysis is more difficult for other forms of MCOs such as "group model" HMOs,[78] "network model" HMOs,[79] "preferred provider organizations" (PPOs),[80] or "point of service plans" (POSs).[81] In these forms of MCO the physician is not employed by the MCO, and thus the *respondeat superior* doctrine does not apply. Furthermore, the MCO is not the direct provider of health services, and a duty to disclose cannot be pegged solely on the MCO's contractual responsibility to provide access to medical providers on agreed economic terms. If the law is to recognize a duty to disclose, it must emanate from a different source.

Some courts have sought to impose liability on MCOs for physician malpractice based on a theory of apparent authority.[82] The viability of such

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communicate important information about employee benefits plans and plan changes, and "[employer] obligations cannot be circumvented by building a 'Chinese wall' around those employees on whom the plan participants reasonably rely for important information and guidance about retirement . . . "). *See also* John M. Vine, *The Supreme Court's Downsizing Decisions: How To Do It and How Not To Do It*, 548 PLI/LIT 589, 609 (1996) (citing Bixler v. Central Pa. Teamsters Health & Welfare Fund, 12 F.3d 1292, 1300 (3d Cir. 1993) (employees have an "affirmative duty to inform when fiduciary knows that silence might be harmful")).

[78] *See* BENDA, *supra* note 76, § 2.4.1, at 2-11 ("The group model HMO contracts with a physician group that can provide all of the physician services required by the enrolled members . . . . The physicians are employees of the group practice, not the HMO . . . [T]he HMO and the physician group may be independent entities, [or] the HMO may have created the group, or the group may have established (and own) the HMO.").

[79] *See id.* at 2-11, 2-12 ("[T]he network model HMO contracts with multiple group practices to provide the services required by enrolled members . . . . It operates very similar to the group model HMO.").

[80] *See id.* § 2.4.2, at 2-12, 2-13 ("PPOs are organizations of providers contracted by an insurer, employer, or administrator to deliver care for individuals covered by a participating health plan . . . . Plan members are not prohibited from using other providers as they are under HMOs, although there are usually financial incentives to discourage this.").

[81] *See id.* § 2.4.3, at 2-14 ("POS plans involve a basic HMO or PPO approach with the option to receive care from providers who are not part of the HMO or PPO network of providers . . . . Members typically have a choice of using nonparticipating providers or obtaining unauthorized services but are required to pay much higher deductibles and copayments . . . the [POS] typically has higher monthly [premium] rates for members than do the [HMO or PPO] plans.").

[82] Apparent authority is defined as "the power to affect the legal relations of another person by transactions with third persons, professedly as agent for the other," and as resulting from "a manifestation by a person that another is his agent, the manifestation being made to a third person . . . ." RESTATEMENT (SECOND) OF AGENCY § 8 (1958). Further, liability for the lack of skill or care of an apparent agent may be imposed on those who represent to others that the apparent agent is their servant or other agent, thereby causing justifiable reliance by a third person on the care or skill of that apparent agent. *See id.* § 267. For courts' reasoning in imposing liability on HMOs based on these principles, see, for example, *Petrovich v. Share Health Plan*, 696 N.E.2d 356, 364 (Ill. App. Ct. 1998) (plaintiff was precluded from sufficient discovery of HMO defendant's "advertising materials" which would "go to the [ostensible agency] elements of 'holding out' and justifiable reliance," and thus grant of summary judgment in favor of defendant HMO was "premature"). *See also* Decker v. Saini, No. 88-361768, 1991 WL 277590, at *3 (Mich. Cir. Ct. Sept. 17, 1991) ((i) refusing to grant summary judgment to defendant HMO on ostensible agency claim; (ii) concluding that plaintiff had provided sufficient evidence of HMO holding itself out as health care provider, of plaintiff's reliance on that representation, and of plaintiff's reasonable belief that doctor who failed to timely diagnose a tumor resulting in partial arm amputation was acting as agent of the HMO; and (iii) noting that "lack of precedent does not preclude

a theory depends on the representations and marketing of the health care plans by the MCO in question. If an apparent authority theory stands up to scrutiny, it would, in our opinion, support MCO liability for failure to disclose comparative provider information even when the treating physician did not have the relevant data and could not provide it to the patient. The heart of an apparent authority theory in a tort case is that the principal, by holding out another person as its agent, is responsible for that person's acts.

Once apparent authority (or actual authority) is found, the principal is treated, for purposes of tort law, essentially as if the agent were part of the principal's organization. In our context, this would transform the MCO, for liability purposes, into the equivalent of a staff model HMO. As we argued above, there should be no difficulty in placing responsibility on such an HMO for the consequences of failure to disclose information at its disposal.

Most courts, however, have been unwilling to impose tort liability on an MCO based on an apparent authority theory.[83] Thus, we must face the

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[the court] from imposing liability on [an HMO] under a theory of ostensible agency if the facts so warrant"); McClellan v. Health Maintenance Org., 604 A.2d 1053, 1058 (Pa. Super. Ct. 1992) (following *Boyd* and reinstating claim of liability against HMO based on ostensible agency theory where primary care physician who allegedly failed to timely diagnose a fatal melanoma was "held out as agent of [HMO]," and where the "[HMO] represented that their primary care physicians were carefully screened and fully qualified physicians who would render competent medical care to HMO members . . ."); Boyd v. Albert Einstein Med. Ctr., 547 A.2d 1229, 1235 (Pa. Super. Ct. 1988) (citing to RESTATEMENT (SECOND) OF AGENCY § 267 in reversing summary judgment of lower court that had refused to recognize liability of HMO based on "ostensible agency" theory and thus allowing trial to resolve material issue of fact as to liability based on agency theory). *See also* Jim M. Perdue & Stephen R. Baxley, *Cutting Costs—Cutting Care: Can Texas Managed Health Care Systems and HMOs Be Liable for the Medical Malpractice of Physicians?*, 27 ST. MARY'S L.J. 23, 34 (1995) ("[A]pparent agency liability should arise when a patient receives treatment in an HMO clinic and reasonably believes that the attending physician is an employee or agent of the facility. In addition, if the facility, rather than the patient, selects the physician, courts should find that an apparent agency relationship exits. Finally, courts should consider the billing method in applying the concept of apparent agency."); Mark G. Cooper, Comment, *A "New" Approach to Medical Malpractice: The Liability of HMOs for Member Physician Negligence*, 1994 DET. C.L. REV. 1263, 1288-90 (1994) (outlining factors that courts analyze when considering HMO liability under agency theories, including appearance conveyed to the enrollee by the HMO; indications that the HMO exercises a "significant" level of control over the member physician; HMO contract language indicating that all care must be "provided, arranged or authorized" by an HMO physician, which conveys that HMO is responsible for delivery of the care; and method by which HMO pays the physician, especially if it includes "capitation" disincentives for additional testing).

    [83] *See, e.g.*, Pomeroy v. Johns Hopkins Med. Servs., 868 F. Supp. 110, 116 (D. Md. 1994) (holding claims against HMO, including one based on "ostensible agency," preempted by ERISA and recognizing that such holding leaves plaintiff with no claim against defendant and possibly without any adequate remedy at all); Raglin v. HMO Ill., Inc., 595 N.E.2d 153, 155 (Ill. App. Ct. 1992) (affirming summary judgment in favor of HMO defendant in claim based on apparent authority by finding that HMO did not hold itself out as exerting control over its physicians in a manner that would lead a third person to conclude that physicians were employees of HMO, and that there was no evidence plaintiff relied on HMO's representation in selecting physician just because plaintiff was required to, and did, choose from list of physicians); Gugino v. Harvard Community Health Plan, 403 N.E.2d 1166 (Mass. 1980); Chase v. Independent Practice Ass'n, 583 N.E.2d 251, 255 (Mass. App. Ct. 1991) (holding plaintiff's statement that she was not made aware that her doctors were not employees of the HMO was insufficient to support her claim of ostensible agency because plaintiff failed to establish that she believed doctors were

question of whether there is a duty on the part of an MCO to disclose comparative provider information independent of *respondeat superior* or apparent authority theories. Numerous analogies in the law of torts support the imposition of such a common law duty to disclose information critical to a patient's health even in the absence of actual or apparent agency.[84]

Employers, for example, frequently require prospective employees to undergo physical examinations and blood tests. These examinations and tests are performed solely for the benefit of the employer. Yet failure to disclose findings about serious health dangers to the employee can result in the imposition of liability on both the physician and the employer, even if the physician was an independent contractor and thus not liable under *respondeat superior*.[85] The rationale behind such a duty to disclose is that, while an employer has no duty to provide a health examination for its employees, once it elects to do so an employee is entitled to rely "on the ex-

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employees of the HMO); Williams v. Good Health Plus, Inc.-Health Amer. Corp., 743 S.W.2d 373, 378-79 (Tex. Ct. App. 1987) (granting HMO's motion for summary judgment on claim of ostensible agency, saying that HMO exercised no right of control over physicians that treated plaintiff). *See also* Dominick C. DiCicco, Jr., *HMO Liability for the Medical Negligence of Member Physicians*, 43 VILL. L. REV. 499, 511-13 (1998) (noting *Williams* as the first case in which a court considered imposing liability on an HMO for malpractice under ostensible agency theory).

[84] The vast disparity of knowledge between the MCO and its member may suffice to create a duty to disclose comparative provider information. *See* MARSHALL S. SHAPO, THE DUTY TO ACT: TORT LAW, POWER & PUBLIC POLICY 3, 4, 13, 154 (1977) (establishing legal imposition of duty to act as arising generally out of relationships where one party has power over the other and the "power holder already has done something in a way that engenders reliance on the part of the injured party or has created a generalized sense of security with reference to the [injured party's] physical integrity," and arguing that duties arise specifically from medical relations because power is leveraged against the patient "owing to his ignorance of medical knowledge generally and how it applies to the facts that have been developed in his particular case"). In other areas of the law, disparity of knowledge often serves as a sufficient predicate to disclose information. *See, e.g.*, Miles v. McSwegin, 388 N.E.2d 1367, 1370 (Ohio 1979) (finding real estate broker had duty to disclose known termite damage despite lack of "special relationship between vendor's agent and vendee . . ."); Quashnock v. Frost, 299 Pa. Super. 9, 23 (1982); Obde v. Schlemeyer, 353 P.2d 672, 674-75 (Wash. 1960) (holding home vendors had duty to speak where termite-infested house was "dangerous to property, health, or life of the tenant, which defects are known to the landlord when the lease is made, but unknown to the tenant, and which a careful examination on his part would not disclose . . .") (quoting Perkins v. Marsh, 37 P.2d 689, 690 (1934)). Similarly, securities dealers have a duty to disclose information because of their superior access to information. *See, e.g.*, Keenan v. D.H. Blair & Co., 838 F. Supp. 82, 89 (S.D.N.Y. 1993) ("a securities dealer must have an adequate and reasonable basis in order to recommend a security, and must disclose facts of which he has knowledge or that are easily ascertainable" (citing Hanly v. Securities & Exch. Comm'n, 415 F.2d 589, 597 (2d Cir. 1969))).

[85] Union Carbide Carbon Corp. v. Stapleton, 237 F.2d 229 (6th Cir. 1956) (employer that had its medical staff take x-ray of employee for employment purposes had a duty to reveal diagnosis of tuberculosis to employee); Coffee v. McDonnell-Douglas Corp., 503 P.2d 1366 (Cal. 1972) (employer who subjected pilot to pre-employment blood test had a duty to disclose results showing disease); Dormak v. Lafayette Gen. Hosp., 399 So. 2d 168 (La. 1981) (hospital that subjected employee to pre-employment x-ray had duty to disclose evidence of tuberculosis); Wojcik v. Aluminum Co. of America, 183 N.Y.S.2d 351 (Sup. Ct. 1959) (employer who subjected employees to x-rays had a common law duty to disclose to employee finding of tuberculosis).

pectation that he would be told of any dangerous condition actually disclosed by that examination."[86] A similar duty has also been held to apply to an insurer who performs a health examination on an insured.[87]

We have demonstrated that comparative medical provider statistics can reveal significant dangers to patients. By choosing a less competent over a more proficient provider, a patient may substantially increase the risk of serious medical injury or death. Just as an employer who possesses critical health information about an employee has a duty to disclose that information to the patient, MCOs that amass data of critical importance to the patient should have a similar duty to disclose. Indeed, the argument for imposing a duty to disclose is much stronger in the case of the MCO. Not only do patients have no reason to assume that physicians on an MCO list are not of equal proficiency, but they have no way of gaining access to the comparative provider data. Furthermore, by providing a list of in-network physicians that patients must utilize exclusively, MCOs sharply limit the patient's role in choosing among physicians. Even those plans that allow a patient to choose a physician out-of-network do so only if the patient pays more. In either case, the MCO creates substantial incentives for the patient to use physicians that are enrolled in the plan. The MCO's exclusive control of information, heavy patient reliance on the judgment of the MCO in choosing in-network physicians, and significant financial incentives to choose in-network physicians who can reasonably be assumed to be fungible all create a set of conditions that cry out for the recognition of a duty of the MCO to disclose critical comparative provider information to its members.

Furthermore, courts have already imposed duties on MCOs to disclose certain information to their customers. In *Shea v. Esensten*,[88] the United States Court of Appeals for the Eighth Circuit held that an MCO violated its fiduciary duty to disclose all material facts affecting the health care interests of a participant in a health plan governed by ERISA, because the MCO failed to inform the plan participant of an incentive structure which worked to discourage patients from seeking providers out of the plan's physician

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[86] *Stapleton*, 237 F.2d at 232-33.

[87] *See* Meinze v. Holmes, 532 N.E.2d 170, 173 (Ohio Ct. App. 1987) (insurer has a duty to disclose to patient material information discovered by insurer's medical examiner). Courts are more reluctant to impose a duty to disclose on life insurance companies who undertake routine health examinations prior to issuing a policy. *See* Hannah E. Greenwald, Note, *What You Don't Know Could Save Your Life: A Case for Federal Insurance Disclosure Legislation*, 102 DICK. L. REV. 131 (1997).

[88] 107 F.3d 625 (8th Cir. 1997). Recently a court has gone beyond requiring that an HMO inform subscribers about possible conflicts in exercising their fiduciary responsibilities and has found that an HMO that both owned and administered a health insurance plan breached its fiduciary duty when the owner-physicians received a bonus from minimizing diagnostic tests and utilizing only their own hospital facilities. *See* Herdrich v. Pegram, 154 F.3d 362 (7th Cir. 1998), *reh'g denied*, 170 F.3d 683, *cert. granted*, No. 98-1949, 1999 WL 386669 (Sept. 28, 1999).

network.[89] The court relied in part on its decision in *Varity Corp. v. Howe*,[90] in which the Eighth Circuit concluded that an ERISA fiduciary must communicate any material facts that could adversely affect a plan member's interest.[91] Surely, if a failure to disclose the existence of an MCO's incentive structure constitutes breach of the common law duty of loyalty, so should a failure to disclose provider statistics which are even more material to a patient's interests.

In our view, the argument for recognizing an informed consent duty of disclosure for provider-specific information in the possession of MCOs is strong. It is important, however, to indicate what we are *not* advocating. We do not suggest that MCOs (or their providers) have a duty to independently collect information about nonaffiliated providers in order to compare them with the MCO's providers. Nor do we suggest that an MCO (or other provider) has a duty to analyze or process any raw data in its possession.[92] We argue only that a provider or MCO that has risk information in a form from which comparative inferences can be drawn—whether the MCO developed that information itself or obtained it from another source, such as the government—has the same duty to disclose this information as it does to disclose information about risks associated with the procedure.

B. ERISA Preemption

Once a common law duty to reveal provider statistics is imposed upon MCOs, ERISA presents the last remaining obstacle to plaintiffs' recovery. ERISA contains two provisions that ostensibly carve out the preempted causes of action. First, there is the civil enforcement provision, which preempts any cause of action brought by a plan participant or beneficiary to recover benefits due, enforce rights, or clarify future benefits under the plan.[93] Second, there is the so-called "preemption clause," which supplants "all state laws insofar as they . . . . *relate to* any employee benefit plan" covered by the act.[94] Despite this broadly restrictive language, courts are besieged

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[89] *But see* Weiss v. Cigna Healthcare, Inc., 972 F. Supp. 748, 755 (S.D.N.Y. 1997) ("ERISA imposes no affirmative obligation upon [an HMO] to inform plan participants about its financial arrangements with participating physicians . . . .").

[90] 36 F.3d 746 (1994), *aff'd* 515 U.S. 1186 (1995). *See also* Mertens v. Hewitt Assocs., 508 U.S. 248, 262 (1993) ("ERISA, however, defines 'fiduciary' not in terms of formal trusteeship, but in *functional* terms of control and authority over the plan . . . thus expanding the universe of persons subject to fiduciary duties . . . ."); Clifford A. Cantor, *Fiduciary Liability in Emerging Health Care*, 9 DEPAUL BUS. L.J. 189 (1997).

[91] *See Shea*, 107 F.3d at 628 (quoting *Howe*, 36 F.3d at 754).

[92] Whether such a duty exists is beyond the scope of this Article.

[93] 29 U.S.C. § 1132 (1988). *See* Metropolitan Life Ins. Co. v. Taylor, 481 U.S. 58, 66-67 (1987).

[94] 29 U.S.C. § 1144(a) (1988) (emphasis added).

by plaintiffs with state law claims against their MCOs who argue that ERISA does not preempt their action.[95]

The civil enforcement provision of ERISA allows a state cause of action against an MCO to be automatically removed to federal court.[96] Because remedies under the civil enforcement provision are only equitable in nature, plan participants injured as a result of an MCO's wrongful denial of benefits due under the plan are often left with no legal recourse.[97] There has, however, been a movement to interpret the nature of the civil enforcement provision more narrowly. In *Dukes v. U.S. Healthcare*,[98] plaintiffs who were participants in an ERISA-governed health plan brought claims alleging both vicarious liability of the MCO for medical malpractice of its physicians and direct liability of the MCO itself for negligent selection, retention, screening, monitoring, and evaluation of those physicians. In determining whether a claim should fall under ERISA's civil enforcement provision and thus trigger removal, the court focused on the distinction between the quality of the health care provided and the quantity of benefits. The *Dukes* court held that plaintiffs' claims were not completely preempted because plaintiffs were not attempting to recover benefits or enforce or clarify rights due under the ERISA-governed plan; rather, plaintiffs were exercising their right to be "free from medical malpractice."[99]

Even if a plan participant's cause of action is not subject to ERISA's civil enforcement provision, it still must survive ERISA's preemption clause. The "relates to" language of the preemption clause was interpreted by the Supreme Court in the "normal sense of the phrase" to mean "in connection with" or "with reference to" an ERISA-governed plan.[100] Of course, any imposition of liability under state tort law is bound to have some impact on the financial health of the MCO and thus "relates to" an employee benefit plan. However, in *New York State Conference of Blue Cross & Blue Shield*

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[95] *See* Robert Pear, *Hands Tied, Judges Rue Law That Limits H.M.O. Liability*, N.Y. TIMES, July 11, 1998, at A1.

[96] 29 U.S.C. § 1132(e)(1) (1988). *See also Metropolitan Life*, 481 U.S. at 66-67 (removal is automatic notwithstanding the well-pleaded complaint rule because, ostensibly, the claim was to recover benefits due, to enforce rights, or to clarify future benefits.).

[97] *See infra* notes 102-03 and accompanying text.

[98] 57 F.3d 350 (3d Cir. 1995).

[99] *Id.* at 357-58. *Accord* Crum v. Health Alliance-Midwest, Inc., 47 F. Supp. 2d 1013 (C.D. Ill. 1999) (claim based on nurse's misdiagnosis of heart attack over telephone not preempted); Moscovitch v. Danbury Hosp., 25 F. Supp.2d 74 (D. Conn. 1998) (claim based on suicide of transferred psychiatric patient not preempted).

[100] Shaw v. Delta Air Lines, Inc., 463 U.S. 85, 97 (1983). *See also* New York State Conference of Blue Cross & Blue Shield Plans v. Travelers Ins. Co., 514 U.S. 645, 656 (1995) (upholding the definition of "relates to" applied by the *Delta* court while simultaneously dismissing that language as "unhelpful"). For an extensive discussion of the preemption doctrine see Peter D. Jacobson & Scott D. Pomfret, *Form, Function, and Managed Care Torts: Achieving Fairness and Equity in ERISA Jurisprudence*, 35 HOUS. L. REV. 985 (1998). *See also* Larry J. Pitman, *ERISA's Preemption Clause and the Health Care Industry: An Abdication of Judicial Law-Creating Authority*, 46 FLA. L. REV. 355 (1994).

Plans v. Travelers,[101] the Court interpreted ERISA's preemption clause more narrowly, holding that state laws with indirect economic effects on ERISA plans are not necessarily preempted. The Court pointed out that while things like quality control in hospitals and workplace regulations will affect the cost of services to some extent, Congress clearly did not intend to eviscerate such classic state regulation of health care.[102]

Applying one or the other of these principles, the district courts are split on whether ERISA preempts medical malpractice claims.[103] Several leading circuit court cases have drawn a distinction between "utilization review," in which an HMO denies benefits, and the liability of an HMO that holds out a physician as its agent or is negligent in arranging for or supervising medical treatment. Preemption, they argue, applies only to utilization review and not to common law negligence claims against an HMO in its role as principal or in its negligence in arranging for or supervising care.[104]

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[101] 514 U.S. 645 (1995).

[102] *See id.* at 660-61. *See also* DeBuono v. NYSA-ILP Med. and Clinical Servs. Inc., 520 U.S. 806 (1997) (holding that state gross receipts of health care facilities operated in field generally regulated by the states and was not preempted by ERISA). *Accord* Pappas v. Asbel, 724 A.2d 889, 893 (Pa. 1999) (relying on the *"Travelers* line of cases" and holding negligence claim based on quadriplegia caused by delay in hospital transfer for treatment not preempted, because decision to delay treatment involved "provision of safe medical care").

[103] *See* Pacificare of Okla., Inc. v. Burrage, 59 F.3d 151, 153 n.2 (10th Cir. 1995).

[104] *See id.* at 155 (holding that malpractice claim against HMO that held out a doctor as its agent "does not involve the administration of benefits or the level or quality of benefits promised by the plan" but only negligent medical care, and thus the claim was not preempted); Dukes v. U.S. Healthcare, 57 F.3d 350, 360 (3d Cir. 1995) (drawing distinction between "utilization review" and role of HMO in "arranging for medical treatment."); Rice v. Panchal, 65 F.3d 637, 646 (7th Cir. 1995) (holding that a claim by a plan participant who sought damages for medical malpractice because he became handicapped after treatment by the preferred provider of a PPO and an out-of-network referral physician was not a claim "to enforce his rights under the terms of a plan that is within the scope of ERISA," and thus the claim was not completely preempted under the civil enforcement provision). *See also* Nealy v. United States Healthcare HMO, 711 N.E.2d 621 (N.Y. 1999). In that case, plaintiff's husband, who had a history of heart problems, had consulted a primary care physician, Dr. Yung, under the U.S. Healthcare HMO and asked for referral to an out-of-network cardiologist because he was suffering from renewed chest pain. Dr. Yung delayed ten days in completing the necessary form. Further time passed and U.S. Healthcare declined referral to an out-of-network cardiologist. By the time arrangements were made to see an in-network cardiologist, the patient suffered a severe heart attack and died. Plaintiff brought an action against U.S. Healthcare and Dr. Yung. The action against U.S. Healthcare was removed to federal court and dismissed on the ground that it was preempted by ERISA. *See* Nealy v. United States Healthcare HMO, 844 F. Supp. 966 (S.D.N.Y. 1994). Dr. Yung, who had not been served with a summons and complaint, did not take part in the removal motion. The federal court remanded the case against him to the New York State Supreme Court, stating that ERISA did not cut off malpractice claims against the treating physician. The New York Court of Appeals rejected Dr. Yung's argument that his function in failing to submit referral forms on a timely basis was an administrative function to be performed by a physician under the plan and was thus barred under ERISA. The court found that the claim was one of malpractice in failing to take timely action to treat the patient and was thus too peripheral to the benefit plan to "relate to" the plan within the meaning of ERISA. *Id.* at 975.

Absent legislative intervention,[105] the final arbiter as to the scope of ERISA preemption will be the Supreme Court of the United States. *Travelers* points to a less expansive reading of ERISA preemption. When the plaintiff's claim concerns primary negligence in the delivery of medical care by an MCO, the argument against preemption is especially strong. The claim in *Dukes* that the defendant MCO was negligent in selection, retention, screening, and monitoring of physicians on its roster appears to be closely analogous to the classic state regulation of hospitals through quality control that *Travelers* finds not to be preempted. In light of *Travelers* and *Dukes*, a claim for an MCO's failure to disclose comparative provider information should not be preempted. After all, such a claim is very much akin to the regulation and monitoring of physicians. Indeed, the development of comparative provider statistics by New York was undertaken in 1990 because the New York State Commissioner of Health believed that peer review of the medical profession was not adequate to the task of accomplishing quality control. It was the Commissioner's view that public availability of comparative provider statistics would be far more effective than peer review in elevating the quality of medical care by both hospitals and physicians.[106]

It might be argued, though, that a duty of MCOs to inform their members of the relative risks associated with their medical care providers would be so onerous as to have a direct effect on benefit plans, and thus that this duty should be preempted by ERISA under the *Travelers* principle. A duty

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[105] A Senate bill introduced last year aimed at amending ERISA to allow medical malpractice actions, S. 1136, noted "there is a split among the United States Courts of Appeals on whether ERISA preempts medical malpractice suits against employer-sponsored health insurers," S. 1136, 105th Cong. (1997). *See also* William E. Milks, Annotation, *Liability of Health Maintenance Organizations (HMOs) for Negligence of Member Physicians,* 51 A.L.R. 5th 271 (1997); Corey J. Ayling, *New Developments in ERISA Preemption and Judicial Oversight of Managed Care,* 31 CREIGHTON L. REV. 403, 415-20 (1998).

[106] In 1990, Dr. David Axelrod, the New York State Commissioner of Health, met with the authors of this Article to discuss his plan to make available to the public risk-adjusted mortality rates for open heart surgery. In that meeting, Dr. Axelrod expressed the views set forth herein. Regrettably, shortly after the release of the statistics to the public, Dr. Axelrod suffered a serious stroke and was totally incapacitated until his death several years later.

The ineffectiveness of peer review is much discussed in the literature. *See, e.g.,* Mark R. Chassin, *Improving the Quality of Care (Quality of Health Care): Part 3,* 335 NEW ENG. J. MED. 1060 (1996) (reporting that physicians "may be forgiven if they are dubious" of a recent call by the HCFA and the JCAHO for "a more cooperative effort to enhance quality" because physicians have "heard it before," "in the 1970s, [when] peer review was supposed to improve the quality of care," and in the 1980s with "quality assurance," both of which left only a legacy of "punitive, sometimes humiliating sanctions" that "make physicians' practicing lives difficult" but "rarely" deal with issues regarded as "important for patient care"); Henry A. Waxman, *Medical Malpractice and Quality of Care,* 316 NEW ENG. J. MED. 943, 944 (1987) ("Challenges to the value of peer review [are] based on evidence that it has often served the self-interest of physicians or a hospital rather than the public interest. Witnesses at congressional hearings described as common the practice of giving physicians known to be incompetent an assurance of silence, or even a positive recommendation, in exchange for their resigning from the hospital or moving out of town.").

to disseminate information to patients admittedly goes well beyond the traditional duty to use reasonable methods to check and retain competent medical personnel. These concerns notwithstanding, we find it unlikely that MCOs will be afforded the immunity of ERISA preemption to shield them from the consequences of failing to share with their members readily available information about the risks associated with their providers. Once a duty to disclose provider-specific information is firmly established, it will be very difficult to argue that ERISA eviscerates this principle by allowing the organizations with the greatest cache of such information to keep it secret from its members.

It should be noted that current bills in Congress aimed at managed care reform also address ERISA's preemptive power, and some would also require that certain types of risk data be disclosed.[107] While Republicans and Democrats are most sharply divided over the right to sue MCOs, recent polls indicate that managed care reform is an important issue to voters, making it likely that some form of managed care reform legislation will be passed.[108]

VI. CONCLUSION

The availability and sophistication of provider-specific risk information with respect to both hospitals and physicians is likely to continue growing. The case for an informed consent cause of action when providers do not share this information with their patients as part of the decision-making process is compelling; indeed, as we have demonstrated, failure to disclose this sort of information is much more likely to have an impact on a patient's decision and ultimate welfare than failure to disclose procedure-specific information. Thus, our proposal that this cause of action be recognized stands on firmer conceptual ground than the well-accepted cause of action for failure to disclose procedure-specific information.

Indeed, the case for recognizing a duty on the part of direct health care providers to disclose provider-specific information is so strong that the more intriguing questions relate to the operation of this duty in the context

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[107] The Democratic minority bill, H.R. 3605, and its companion Senate bill, S. 1890, both entitled the "Patients' Bill of Rights Act of 1998," would amend Section 514 to allow state medical malpractice actions against MCOs. Both would also require MCOs to collect "uniform quality data" that include, among other things, data on quality indicators and health outcomes. H.R. 3605, 105th Cong. (1998); S. 1890, 105th Cong. (1998). Alternatively the House Republican leadership bill, H.R. 4250, as well as the companion Senate bill, which was placed on the Senate calendar on July 29, 1998, would not amend ERISA to allow state medical malpractice actions against MCOs. H.R. 4250 would allow for civil penalties of up to $500 per day for the denial of medical care, plus costs including attorney's fees, if an MCO receives an adverse judgment in federal court. These Republican proposals would also require that a report by the Institutes of Medicine be submitted to the Secretary of Health and Human Services, which would include, among other things, "recommendations for the disclosure of information on health care professionals, including the competencies and professional qualifications of such practitioners, to better facilitate patient choice, quality improvement, and market competition." H.R. 4250, 105th Cong. (1998); S. 4250, 105th Cong. (1998).

[108] *See* Robert Pear, *Eye on Polls, G.O.P. Offers a Patients Bill*, N.Y. TIMES, July 16, 1998, at A1.

of managed health care. MCOs that, unlike staff model HMOs, are not direct health care providers, are (and will increasingly become) the repositories of significant comparative data about their affiliated physicians and hospitals—data that the MCOs may not share with those physicians and hospitals. We believe that courts will recognize a duty on the part of these MCOs to share this risk information with their members and that ERISA will not preempt this duty or its enforcement through tort law.

We recognize that our conclusions will engender controversy because they may lead to significant changes in the delivery of health care.[109] Of course, similar controversy engulfed the first revolution in informed consent a generation ago. Yet, the medical profession eventually adapted to the changes in practice that the revolution brought about. Not only can the medical profession adapt to the more effective disclosures required in our proposal, but there is much more reason to believe that these disclosures will translate into patient benefits. We are confident that this second revolution will be recognized as a positive development in the evolution of modern health care.

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[109] For a comprehensive discussion of the impact of the adoption of the authors' proposal, see Lynn M. LoPucki, *Twerski and Cohen's Second Revolution: A Systems/Strategic Perspective*, 94 NW. U. L. REV. 55 (1999).

APPENDIX A
New York State Department of Health,
Coronary Bypass Surgery in New York State 1994-1996 (1998)

1996 HOSPITAL RISK-ADJUSTED MORTALITY FOR CORONARY BYPASS SURGERY

The table in Appendix A was published as Table 2 in New York State Report. The table presents the 1996 CABG surgery results for the 32 hospitals performing this operation in New York. The table contains, for each hospital, the number of isolated CABG operations (CABG operations with no other major heart surgery) resulting in 1996 discharges, the number of in-hospital deaths, the observed mortality rate, the expected mortality rate based on the statistical model presented in Table 1 of New York State Report, the risk-adjusted mortality rate and a 95% confidence internal for the risk-adjusted rate.

Definitions of key terms follow:

The OBSERVED MORTALITY RATE (OMR) is the number of observed deaths divided by the total number of patients who underwent isolated CABG surgery.

The EXPECTED MORTALITY RATE (EMR) is the sum of the predicted probabilities of death for all patients divided by the total number of patients.

The RISK-ADJUSTED MORTALITY RATE (RAMR) is the best estimate, based on the statistical model, of what the provider's mortality rate would have been if the provider had a mix of patients identical to the statewide mix.

CONFIDENCE INTERVALS for the risk-adjusted mortality rate indicate which hospitals had significantly more or fewer deaths than expected given the risk factors of their patients. Hospitals with significantly higher rates than expected after adjusting for risk are those with confidence intervals entirely above the statewide rate. Hospitals with significantly lower rates than expected given the severity of illness of their patients before surgery have confidence intervals entirely below the statewide rate.

As indicated in table in Appendix A, the overall mortality rate for the 20,078 CABG operations performed at the 32 hospitals was 2.44%. Observed mortality rates ranged from 0.86% to 6.38%. The range in expected mortality rates, which measure patient severity of illness, was from 1.38% to 3.45%.

The risk-adjusted mortality rates, which are used to measure performance, ranged from 1.10% to 5.93%. One hospital, St. Joseph's, had a risk-adjusted mortality rate that was significantly lower than the statewide rate. Three hospitals, St. Vincent's, St. Luke's-Roosevelt and Lenox Hill, had significantly higher risk-adjusted rates than the statewide average.

APPENDIX A: HOSPITAL OBSERVED, EXPECTED AND
RISK-ADJUSTED MORTALITY RATES (RAMR) FOR CABG
SURGERY IN NEW YORK STATE, 1996 DISCHARGES
(LISTED ALPHABETICALLY BY HOSPITAL)

Hospital	Cases	Deaths	OMR	EMR	RAMR	95% CI for RAMR
Albany Medical Center	1136	14	1.23	1.88	1.60	(0.87, 2.69)
Arnot-Ogden	135	6	4.44	1.83	5.93	(2.16, 12.90)
Bellevue	94	6	6.38	3.45	4.52	(1.65, 9.83)
Beth Israel	428	7	1.64	2.35	1.70	(0.68, 3.50)
Buffalo General	1227	33	2.69	2.38	2.76	(1.90, 3.88)
Ellis Hospital	548	9	1.64	1.78	2.25	(1.03, 4.27)
Erie County	259	3	1.16	1.84	1.53	(0.31, 4.48)
Lenox Hill	860	32	3.72	2.49	3.64*	(2.49, 5.14)
LIJ Medical Center	407	9	2.21	2.27	2.38	(1.08, 4.51)
Maimonides	821	28	3.41	2.91	2.86	(1.90, 4.14)
Millard Fillmore	873	25	2.86	2.19	3.20	(2.07, 4.72)
Montefiore-Moses	378	14	3.70	2.27	3.97	(2.17, 6.67)
Montefiore-Weiler	321	8	2.49	2.61	2.33	(1.00, 4.59)
Mount Sinai	494	14	2.83	2.83	2.45	(1.34, 4.10)
New York Hospital-Cornell	798	15	1.88	2.91	1.58	(0.88, 2.60)
New York Hospital-Queens	94	1	1.06	1.38	1.88	(0.02, 10.46)
NYU Hospitals Center	585	15	2.56	3.20	1.96	(1.09, 3.23)
North Shore	831	15	1.81	2.62	1.68	(0.94, 2.77)
Presbyterian	689	12	1.74	2.45	1.73	(0.89, 3.03)
Rochester General	1007	35	3.48	3.10	2.74	(1.91, 3.81)
St. Francis	1814	31	1.71	2.30	1.81	(1.23, 2.57)
St. Joseph's	812	7	0.86	1.91	1.10**	(0.44, 2.27)
St. Luke's-Roosevelt	430	17	3.95	2.27	4.25*	(2.48, 6.81)
St. Peter's	741	13	1.75	1.93	2.22	(1.18, 3.80)
St. Vincent's	522	23	4.41	2.49	4.32*	(2.74, 6.48)
Strong Memorial	448	18	4.02	2.69	3.64	(2.16, 5.75)
United Health Serv.	409	11	2.69	2.88	2.28	(1.14, 4.08)
Univ. Hosp. of Brooklyn	217	8	3.69	3.00	3.00	(1.29, 5.91)
Univ. Hosp.-Stony Brook	498	11	2.21	2.59	2.08	(1.04, 3.72)
Univ. Hosp.-Upstate	494	12	2.43	2.38	2.50	(1.29, 4.36)
Westchester County	924	22	2.38	2.55	2.28	(1.43, 3.44)
Winthrop Univ. Hosp.	784	16	2.04	2.38	2.09	(1.20, 3.40)
Total	20078	490	2.44			

* Risk-adjusted mortality rate significantly higher than statewide rate based on 95 percent confidence interval.
** Risk-adjusted mortality rate significantly lower than statewide rate based on 95 percent confidence interval.

APPENDIX B
New York State Department of Health,
Angioplasty in New York State 1995 (1997)

1995 HOSPITAL RISK-ADJUSTED MORTALITY FOR ANGIOPLASTY

The table in Appendix B was published as Table 3 in New York State Angioplasty. The table presents the 1995 angioplasty mortality results for the 32 hospitals performing angioplasty in New York in 1995. The table contains, for each hospital, the number of angioplasties resulting in 1995 discharges, the number of in-hospital deaths, the observed mortality rate, the expected mortality rate based on the statistical model presented in Table 1 of New York State Angioplasty, the risk-adjusted mortality rate and a 95 percent confidence interval for the risk-adjusted rate. Also, it contains each hospital's risk-adjusted mortality rate for elective patients. Nonelective patients are defined to be patients in shock, a state of hemodynamic instability (very blow blood pressure) or patients who experienced a heart attack within 24 hours prior to undergoing angioplasty. The hospital risk-adjusted rates for elective angioplasty patients are provided because many studies are confined to this group of patients, and because these patients comprise the majority of all angioplasty patients (92.1% in 1995).

Definitions of key terms are as follows:

The OBSERVED MORTALITY RATE (OMR) is the number of in-hospital deaths divided by the number of patients.

The EXPECTED MORTALITY RATE (EMR) is the sum of the predicted probabilities of death for all patients divided by the total number of patients.

The RISK-ADJUSTED MORTALITY RATE (RAMR) is the best estimate, based on the statistical model, of what the provider's mortality rate would have been if the provider had a mix of patients similar to the statewide mortality rate (0.89% for all angioplasty patients).

CONFIDENCE INTERVALS indicate which hospitals had significantly more or fewer deaths than expected given the risk factors of their patients. Hospitals with significantly higher rates than expected after adjusting for risk are those with confidence intervals entirely above the statewide rate. Hospitals with significantly lower rates than expected given the severity of illness of their patients before the angioplasty have confidence intervals entirely below the statewide rate.

The overall mortality rate for the 21,707 angioplasties performed at the 32 hospitals was 0.89 percent. Observed mortality rates ranged from 0.00 percent to 2.39 percent. The range in expected mortality rates, which measure patient severity of illness, was between 0.44 percent to 1.86 percent. Based on confidence intervals for risk-adjusted rates, no hospital had a significantly higher risk-adjusted mortality rate than the statewide rate.

One hospital, St. Francis, had a significantly lower risk-adjusted mortality rate than the statewide rate.

The last column of the table in Appendix B presents the hospital risk-adjusted mortality rates for elective cases only (based on the statistical model presented in Table 2 of New York State Angioplasty). As presented in the last row, the statewide mortality rate for elective cases is 0.43 percent, which is comparable to rates reported in the literature for these cases. The range of risk-adjusted rates was from 0.00 percent to 2.43 percent. One hospital, Arnot-Ogden, had a significantly higher risk-adjusted mortality rate than the statewide rate. No hospitals had a significantly lower risk-adjusted mortality rate than the statewide rate.

APPENDIX B: HOSPITAL OBSERVED, EXPECTED AND
RISK-ADJUSTED MORTALITY RATES (RAMR) FOR ANGIOPLASTY
IN NEW YORK STATE—1995 DISCHARGES

	All Cases						Elective Cases
	Cases	Deaths	OMR	EMR	RAMR	95% CI	RAMR
Albany Medical Center	630	7	1.11	0.62	1.61	(0.65, 3.32)	0.81
Arnot-Ogden	251	6	2.39	1.26	1.69	(0.62, 3.68)	2.43*
Bellevue	136	0	0.00	0.83	0.00	(0.00, 2.92)	0.00
Beth Israel	388	5	1.29	0.62	1.86	(0.60, 4.34)	0.81
Buffalo General	518	0	0.00	0.44	0.00	(0.00, 1.45)	0.00
Crouse-Irving	484	2	0.41	0.47	0.78	(0.09, 2.82)	0.00
Ellis Hospital	362	2	0.55	0.58	0.86	(0.10, 3.09)	0.47
Erie County	133	1	0.75	0.48	1.40	(0.02, 7.81)	0.00
Lenox Hill	1498	24	1.60	1.09	1.31	(0.84, 1.95)	0.44
LIJ Medical Center	411	5	1.22	0.70	1.55	(0.50, 3.61)	0.95
Maimonides	900	6	0.67	0.76	0.78	(0.29, 1.70)	0.27
Millard Fillmore	658	6	0.91	1.04	0.79	(0.29, 1.71)	0.22
Montefiore-Moses	338	2	0.59	1.24	0.43	(0.05, 1.54)	0.00
Montefiore-Weiler	437	10	2.29	1.10	1.86	(0.89, 3.43)	1.30
Mount Sinai	993	15	1.51	1.01	1.34	(0.75, 2.21)	0.55
New York Hospital-Cornell	674	6	0.89	0.90	0.89	(0.32, 1.93)	0.48
NYU Medical Center	516	6	1.16	1.11	0.94	(0.34, 2.04)	0.60
North Shore	1464	8	0.55	0.91	0.54	(0.23, 1.06)	0.27
Presbyterian	426	4	0.94	1.53	0.55	(0.15, 1.40)	0.32
Rochester General	1497	12	0.80	0.92	0.78	(0.40, 1.36)	0.31
St. Francis	2114	9	0.43	0.94	0.40**	(0.18, 0.77)	0.18
St. Joseph's	1078	10	0.93	0.85	0.97	(0.47, 1.79)	0.35
St. Luke's/Roosevelt	426	3	0.70	0.82	0.76	(0.15, 2.23)	0.29
St. Peter's	774	3	0.39	0.73	0.47	(0.10, 1.39)	0.62
St. Vincent's	824	6	0.73	0.50	1.30	(0.47, 2.83)	0.58
Strong Memorial	387	9	2.33	1.38	1.51	(0.69, 2.86)	0.00
United Health Services	621	4	0.64	1.05	0.55	(0.15, 1.40)	0.25
Univ. Hosp. of Brooklyn	251	2	0.80	0.61	1.17	(0.13, 4.24)	1.13
Univ. Hosp.-Stony Brook	518	3	0.58	0.67	0.78	(0.16, 2.27)	0.57
Upstate Medical Center	112	2	1.79	1.07	1.50	(0.17, 5.40)	0.00
Westchester County	1025	8	0.78	1.03	0.68	(0.29, 1.33)	0.59
Winthrop Univ. Hosp.	863	8	0.93	0.90	0.92	(0.39, 1.81)	0.66
Total	21707	194	0.89	0.89	0.89		0.43

* Risk-adjusted mortality rate significantly higher than statewide rate.
** Risk-adjusted mortality rate significantly lower than statewide rate.
OMR - observed mortality rate
EMR - expected mortality rate
RAMR - risk adjusted mortality rate
CI - confidence interval

APPENDIX C

OBSERVED, EXPECTED AND RISK-ADJUSTED HOSPITAL AND SURGEON[+] IN-HOSPITAL MORTALITY RATES FOR CABG SURGERY IN NEW YORK STATE IN 1994-96

The table in Appendix C was published as Table 3 in New York State Report. This table provides the number of isolated CABG operations, number of CABG patients who died in the hospital, observed mortality rate, expected mortality rate, risk-adjusted mortality rate and the 95% confidence interval for the risk-adjusted mortality rate for 1994-96 for each of the 32 hospitals performing CABG surgery during the time period.

	Cases	No. of Deaths	OMR	EMR	RAMR	95% CI for RAMR
Albany Medical Center Hospital						
1[#]	600	5	0.83	1.75	1.18	(0.38, 2.76)
2	528	14	2.65	2.42	2.71	(1.48, 4.55)
Total	3466	53	1.53	2.04	1.86**	(1.40, 2.44)
Arnot-Ogden Medical Center						
3	157	3	1.91	2.55	1.86	(0.37, 5.43)
4	260	8	3.08	2.36	3.23	(1.39, 6.37)
Total	570	13	2.28	2.49	2.27	(1.21, 3.88)
Bellevue Hospital Center						
5[#]	114	4	3.51	2.04	4.27	(1.15, 10.93)
6[#]	78	2	2.56	2.24	2.84	(0.32, 10.26)
Total	290	17	5.86	2.35	6.19*	(3.61, 9.92)
Beth Israel Medical Center						
7	147	1	0.68	1.72	0.98	(0.01, 5.45)
8	772	17	2.20	2.66	2.05	(1.20, 3.29)
Total	1053	19	1.80	2.52	1.78	(1.07, 2.77)

Buffalo General Hospital						
9	723	10	1.38	2.31	1.49	(0.71, 2.73)
10	643	14	2.18	1.94	2.79	(1.52, 4.68)
Total	3631	93	2.56	2.32	2.74	(2.21, 3.36)
Ellis Hospital						
11	444	7	1.58	2.11	1.85	(0.74, 3.82)
12##	526	10	1.90	1.64	2.87	(1.37, 5.28)
Total	1457	22	1.51	1.86	2.01	(1.26, 3.05)
Erie County Medical Center						
13#	636	8	1.26	1.74	1.79	(0.77, 3.53)
14#	2	0	0.00	5.26	0.00	(0.00, 86.40)
Total	638	8	1.25	1.75	1.78	(0.76, 3.50)
Lenox Hill Hospital						
15#	353	11	3.12	2.38	3.24	(1.62, 5.80)
16	1285	52	4.05	2.68	3.75*	(2.80, 4.92)
Total	2208	81	3.67	2.56	3.55*	(2.82, 4.41)
Long Island Jewish Medical Center						
17	562	12	2.14	2.07	2.56	(1.32, 4.47)
18	454	8	1.76	2.18	2.01	(0.86, 3.95)
Total	1210	24	1.98	2.12	2.32	(1.48, 3.45)
Maimonides Medical Center						
19#	370	16	4.32	2.42	4.43*	(2.53, 7.19)
20#	1133	33	2.91	3.18	2.27	(1.56, 3.19)
Total	2504	86	3.43	3.01	2.83	(2.26, 3.50)
Millard Fillmore Hospital						
21	542	15	2.77	2.21	3.10	(1.73, 5.12)
22#	591	19	3.21	2.18	3.65	(2.20, 5.70)
Total	2240	75	3.35	2.13	3.90*	(3.07, 4.89)

Montefiore Medical Center, Moses Division						.
23	394	12	3.05	1.87	4.05	(2.09, 7.07)
24	308	6	1.95	1.42	3.41	(1.25, 7.43)
Total	1181	36	3.05	1.76	4.29	(3.01, 5.95)
Montefiore Medical Center, Weiler Division						
25#	410	7	1.71	2.16	1.96	(0.78, 4.03)
26	373	15	4.02	3.02	3.31	(1.85, 5.46)
Total	923	25	2.71	2.44	2.76	(1.78, 4.07)
Mount Sinai Hospital						
27	528	8	1.52	2.89	1.30	(0.56, 2.57)
28	441	21	4.76	3.59	3.29	(2.03, 5.03)
Total	1518	51	3.36	3.36	2.48	(1.85, 3.27)
New York Hospital - Cornell						
29	774	15	1.94	2.54	1.89	(1.06, 3.12)
30	706	19	2.69	2.94	2.27	(1.37, 3.55)
Total	2670	63	2.36	2.78	2.11	(1.62, 2.69)
New York Hospital - Queens						
31#	70	0	0.00	1.48	0.00	(0.00, 8.75)
32#	3	0	0.00	1.32	0.00	(0.00, 100.0)
Total	94	1	1.06	1.47	1.79	(0.02, 9.95).
NYU Hospitals Center						
33	401	3	0.75	2.64	0.70**	(0.14, 2.05)
34	2.94	6	2.04	3.52	1.44	(0.52, 3.13)
Total	1859	61	3.38	3.35	2.43	(1.86, 3.12)

North Shore University Hospital	'					
35	796	9	1.13	2.53	1.11**	(0.51, 2.11)
36	579	12	2.07	2.29	2.24	(1.16, 3.91)
Total	2082	34	1.63	2.33	1.74	(1.21, 2.43)
Presbyterian Hospital - City of New York						
37	424	13	3.07	2.88	2.64	(1.40, 4.51)
38	654	10	1.53	2.57	1.48	(0.71, 2.71)
Total	1873	41	2.19	2.46	2.21	(1.58, 2.99)
Rochester General Hospital						
39	863	29	3.36	3.55	2.35	(1.57, 3.37)
40	969	25	2.58	2.80	2.28	(1.48, 3.37)
Total	3066	97	3.16	2.93	2.68	(2.17, 3.27)
St. Francis Hospital						
41	919	16	1.74	2.15	2.01	(1.15, 3.26)
42	1079	17	1.58	2.51	1.56	(0.91, 2.49)
Total	5123	89	1.71	2.44	1.74**	(1.40, 2.15)
St Joseph's Hospital Health Center						
43	621	10	1.61	2.30	1.73	(0.83, 3.19)
44	639	7	1.10	2.75	0.99**	(0.40, 2.04)
Total	2334	21	0.90	2.20	1.01**	(0.63, 1.55)
St. Luke's Roosevelt Hospital - St. Lukes Division						
45	545	11	2.02	1.75	2.86	(1.43, 5.12)
46	422	13	3.08	3.09	2.47	(1.31, 4.22)
Total	1399	44	3.15	2.28	3.42*	(2.48, 4.59)

St. Peter's Hospital						
47[#]	570	10	1.75	2.05	2.12	(1.01, 3.90)
48[##]	610	6	0.98	1,94	1.26	(0.46, 2.74)
Total	1981	34	1.72	2.17	1.97	(1.36, 2.75)
St. Vincent's Hospital and Medical Center						
49	558	9	1.61	3.66	1.09**	(0.50, 2.08)
50	541	18	3.33	2.14	3.85	(2.28, 6.08)
Total	1656	56	3.38	2.76	3.04	(2.30, 3.95)
Strong Memorial Hospital						
51	631	17	2.69	2.79	2.39	(1.39, 3.83)
52	641	21	3.28	2.19	3.72	(2.30, 5.68)
Total	1278	39	3.05	2.49	3.03	(2.16, 4.15)
United Health Services - Wilson Division						
53	393	7	1.78	2.50	1.77	(0.71, 3.64)
54	397	11	2.77	3.07	2.24	(1.12, 4.01)
Total	1173	28	2.39	2.69	2.20	(1.46, 3.18)
University Hospital of Brooklyn						
55[#]	153	6	3.92	2.88	3.37	(1.23, 7.34)
56[#]	340	10	2.94	2.67	2.73	(1.31, 5.02)
Total	709	23	3.24	2.75	2.93	(1.86, 4.39)
University Hospital (Stony Brook)						
57[#]	431	4	0.93	2.21	1.04	(0.28, 2.66)
58	373	8	2.14	2.56	2.08	(0.90, 4.10)
Total	1457	32	2.20	2.66	2.05	(1.40, 2.89)

University Hospital Upstate Medical Center						
59	311	8	2.57	1.86	3.43	(1.48, 6.76)
60	342	8	2.34	1.73	3.36	(1.45, 6.62)
Total	1304	33	2.53	1.81	3.47	(2.39, 4.87)
Westchester County Medical Center						
61	493	10	2.03	2.09	2.40	(1.15, 4.42)
62	427	4	0.94	2.83	0.82**	(0.22, 2.10)
Total	2456	70	2.85	2.52	2.81	(2.19, 3.55)
Winthrop - University Hospital						
63	421	8	1.90	2.18	2.17	(0.93, 4.27)
64	505	13	2.57	2.77	2.30	(1.22, 3.94)
Total	1939	55	2.84	2.88	2.44	(1.84, 3.18)

[+] Condensed to show only the two surgeons at each hospital who performed the greatest number of procedures. Each surgeon is referred to by number.

* Risk-adjusted mortality rate is significantly higher than statewide rate.

** Risk-adjusted mortality rate is significantly lower than statewide rate.

[#] Performed operations in another New York State hospital.

[##] Performed operations in two or more other New York State hospitals.

OMR = the observed mortality rate is the number of observed deaths divided by the number of patients.

EMR = the expected mortality rate is the sum of the predicted probabilities of death for each patient divided by the total number of patients.

RAMR = the risk-adjusted mortality rate is the best estimate, based on the statistical model, of what the provider's mortality rate would have been if the provider had a mix of patients identical to the state-wide mix. It is computed as the quotient of the OMR and the EMR (OMR/EMR) multiplied by the statewide mortality rate for the time period.