Health Care Organizations and Their Environments

Profit-Seeking, Corporate Control, and the Trustworthiness of Health Care Organizations: Assessments of Health Plan Performance by Their Affiliated Physicians

Mark Schlesinger, Nicole Quon, Matthew Wynia, Deborah Cummins, and Bradford Gray

Objective. To compare the relative trustworthiness of nonprofit and for-profit health plans, using physician assessments to measure dimensions of plan performance that are difficult for consumers to evaluate.

Data Source. A nationally representative sample of 1,621 physicians who responded to a special topics module of the 1998 Socioeconomic Monitoring System Survey (SMS), fielded by the American Medical Association. Physicians assessed various aspects of their primary managed care plan, defined as the plan in which they had the largest number of patients.

Study Design. Plan ownership was measured as the interaction of tax-exempt status (nonprofit versus for-profit) and corporate control (single state versus multistate health plans). Two sets of regression models are estimated. The dependent variables in the regressions are five measures of performance related to plan trustworthiness: two related to deceptive practices and three to dimensions of quality that are largely hidden from enrollees. The first set (baseline) models relate plan ownership to trustworthy practices, controlling for other characteristics of the plan, the marketplace for health insurance, and the physician respondents. The second (interactive) set of models examines how the magnitude of ownership-related differences in trustworthiness varies with the market share of nonprofit plans in each community.

Data Collection. The 1998 SMS was fielded between April and September of 1998 by Westat Inc. The average time required for a completed interview was approximately 30 minutes. The overall response rate was 52.2 percent.

Principal Findings. Compared with more local nonprofit plans, for-profit plans affiliated with multistate corporations are consistently reported by their affiliated physicians to engage in practices associated with reduced trustworthiness. Nonprofit plans affiliated with multistate corporations have more physician-reported practices associated with trustworthiness than do for-profit corporate plans on four of five outcomes, but appear less trustworthy than locally controlled nonprofits on two of the five measures. The magnitude of these ownership-related differences declines as the market share of

nonprofit plans rises: for two of the five measures, ownership-related differences in practices related to trustworthiness are entirely eliminated when the nonprofits enroll more than 30 percent of the local market.

Conclusions. The combination of for-profit ownership and multistate corporate control appears to consistently and substantially reduce physician-reported measures related to the trustworthiness of health plans. Because this is the fastest growing form of managed care, these results raise concerns about further erosion of trust in American health care. Preserving a substantial market niche for nonprofit plans appears to reduce this erosion and should be considered by policymakers as a strategy for restoring trust in the health care system.

Key Words. For-profit ownership, managed care, trust, multistate corporations, utilization review

Over the past decade, interest has burgeoned in the role of trust in the health care system. Between 1980 and 1995, 764 articles in the medical and health services literatures referred to trust or trustworthiness. Between 1995 and mid-year 2003, by contrast, 1,612 articles were devoted to these topics. Nor is trust simply an academic concern: "since the late 1990s, erosion of trust has been a central theme in press coverage of the health care industry" (Bloche 2002, p. 922). This attention reflected concerns that the medical profession was failing to ensure that physicians practiced in a trustworthy manner (Krause 1996; Stevens 2001; Schlesinger 2002).

The quest for trustworthy health care will surely persist in the foreseeable future as both consumers and purchasers search for more reliable practitioners (Gray 1997a). Although this pursuit has led to calls for stronger professional norms (Freidson 2001), enhanced regulation (Bloche 2002), or greater efforts to empower consumers to detect untrustworthy performance (Mechanic 1998), each of these proposed strategies has been challenged as being either ineffective or counterproductive (Rodwin 1993; Hall 2002; Rosenthal and Schlesinger 2002).

Given the perceived importance of trust in medical settings, and the difficulty in identifying policies that enhance trustworthiness, it behooves policymakers to consider alternative approaches. One potentially promising strategy

Address correspondence to Mark Schlesinger, Ph.D., Room 304, LEPH, Yale University School of Medicine, New Haven, CT 06520. Nicole Quon is with Yale University, New Haven, CT. Matthew Wynia is with the Institute for Ethics, American Medical Association, San Diego, CA. Deborah Cummins is with the University of Illinois, College of Medicine, Chicago, IL. Bradford Gray is with the The Urban Institute, Washington, DC.

involves policies promoting a larger role for nonprofit ownership of health care organizations. But this approach has been largely ignored, at a time when state and federal officials have adopted literally hundreds of regulations designed to make medical care more trustworthy (Miller 1998; Sloan and Hall 2002). Indeed, while proponents of the nonprofit sector plaintively repeat their promises of trustworthy performance (Lawrence, Mattingly, and Ludden 1997; Kuttner 1998, 1996a, b; Woolhandler et al. 2003), most policymakers have turned their backs while investor ownership has spread among a number of health services previously provided under nonprofit auspices (Gray and Schlesinger 2002).

Of course claims by advocates cannot always be taken at face value. The purported trustworthiness of nonprofit health care providers has been questioned by many scholars (Brown 1995; Bloche 1998; Sloan 1998; Kramer 2000; Needleman 2001; Malani, Philpson, and David 2003). But these skeptical conclusions rest more on theoretical predictions or rhetorical assertions than on compelling evidence. While the prevalence, nature, and determinants of trust in health care have been topics of extensive empirical research (Hall et al. 2001; Goold and Klipp 2002), evidence on trustworthiness is far scarcer. Only a handful of studies examine the link between ownership and trustworthiness; they rely on proxies for trustworthy practices that are open to challenge.

We believe that the link between ownership and trustworthy behavior merits greater scrutiny. But this requires new empirical techniques for identifying trustworthy practices and the factors that shape their prevalence. In this paper, we explore one such method, using reports from physicians to characterize the performance of the health plans with which they are affiliated. Our findings suggest that nonprofit health plans are distinctly more trustworthy than their for-profit counterparts, although lower trustworthiness is limited to for-profit plans that are affiliated with large national corporations. Our analyses also suggest that the frequency of untrustworthy practices among for-profit plans is much reduced when they operate in markets in which 20 percent or more of their competitors are nonprofit plans.

WHAT IS KNOWN ABOUT THE TRUSTWORTHINESS OF NONPROFIT HEALTH CARE PROVIDERS?

Although “trustworthiness” has become an increasing concern for consumers and purchasers of medical care, as well as policymakers, the term is often used in a vague or inconsistent manner. One can discern three distinct versions, each embodying a different threshold of expectations for health care

providers: (1) avoiding deception, by not making inflated claims or false promises about the consequences of treatment or the scope of benefits, (2) foregoing exploitation of purchasers or consumers who are ill-informed, by not shirking on aspects of quality or benefits that they cannot readily assess, or (3) counteracting ignorance, by fully revealing to consumers and purchasers all the information they need to make informed decisions, even if they do not request such information.

We will refer to these three aspects of trustworthiness as nondeceptive practices, nonexploitive practices, and disclosure practices. These criteria embody very different expectations for health care providers. The first criteria implies little more than self-restraint, whereas the third could entail substantial commitments of resources and effort. For this reason, there is likely to be disagreement about which criteria represent reasonable prerequisites for trustworthiness. Many observers might endorse the first standard, since false advertising is typically illegal and always violates codes of good conduct for business. Many might reject the third as too demanding, since for only a limited number of commodities are sellers under a legal obligation to fully reveal information (e.g., prescription drugs) or ascertain if purchasers understand this information (e.g., federally insured mortgages, and in some states, automobile sales).

Yet a reasoned case could be made for or against all three criteria. Deceptive practices sound universally pernicious, until one recognizes the clinical value of optimistic prognoses, placebo effects and other forms of benign misrepresentation. Conversely, disclosure practices sound unduly demanding, until one appreciates the parallels with expectations for legal testimony, in which witnesses are admonished to tell the truth, the *whole* truth, and nothing but the truth. Several types of managed care regulations explicitly require disclosure (Sloan and Hall 2002).

The academic literature identifies several ways in which nonprofit ownership might affect the trustworthiness of medical providers. Some of these involve "organization-level" effects, related to the different incentives or constraints under which nonprofit and for-profit enterprises operate. Others involve "market-level" effects, involving the interaction of for-profit and nonprofit providers operating in the same local markets.

The Organization-Level Effects of Ownership on Trustworthiness

The claim that nonprofit organizations provide health care in a more trustworthy manner dates back to Arrow (1963). It was articulated in its most

influential form by Hansmann (1980), first tested empirically by Weisbrod and Schlesinger (1986), and given its first careful theoretical exposition by Easley and O'Hara (1988), with later refinements by Chillemi and Gui (1991), Holmstrom and Milgrom (1994), and Glaeser and Schliefer (2001). There are two distinct reasons why one might expect nonprofit health care organizations to provide medical care in a more trustworthy manner. The first involves incentives. Because nonprofit firms cannot share their surplus with those who are affiliated with the enterprise, physicians and administrators have less motivation to aggressively pursue practices that generate financial returns, since they cannot personally benefit. The second involves constraints. Because nonprofit agencies in general have more open governance arrangements (Kanter and Summers 1987; Gray 1991; Krashinsky 1997), and nonprofit health care providers in particular are more open to the influence of the local community through their board and governance practices (Young 1996/1997; Schlesinger 1998a; Proenca, Rosko, and Zinn 2000),¹ nonprofits may be more constrained in their potential for deception or exploitation of vulnerable consumers, because there is a greater risk that unethical practices will be detected and reported throughout the community.

Either differential incentives or constraints could make nonprofit health care more trustworthy. But both these predictions are open to challenge. If consumers or purchasers choose among health care providers on the basis of reputation, for-profit firms may eschew untrustworthy practices to avoid tarnishing their public image (Ortmann and Schlesinger 1997). The constraints imposed by community control may be attenuated when organizations affiliate with national corporations, which can reduce the role of local actors in governance decisions (Whiteis 1997; Alexander, Weiner, and Succi 2000; Young, Desai, and Hellinger 2000). Whether nonprofits are, in practice, more trustworthy or less so is thus a question that requires empirical verification.

Measuring the Organization-Level Effects of Ownership on Trustworthiness

Testing hypotheses about trustworthiness poses a challenge. Aspects of quality for which trustworthiness is most important are by definition those that are most difficult to observe. Consequently, measures of quality typically used to compare the performance of nonprofit and for-profit health care are *not* the most appropriate measures for judging trustworthy practices. If researchers can measure them, consumers or purchasers use them (Malani, Philpson, and David 2003).

Researchers have pursued four strategies for addressing this challenge. The first approach is based on Hansmann's (1980) early observation that if

nonprofits are indeed more trustworthy, then less-informed consumers should seek out nonprofit providers where they are less at risk of exploitation (Hirth 1997). A second strategy compares the *experiences* of consumers who are at risk of exploitation with those who are less vulnerable (Schlesinger, Gray, and Bradley 1996). A third strategy assesses the prevalence of outcomes that could be seen as a *consequence* of exploitation (Weisbrod 1988). A fourth approach compares the magnitude of ownership-related differences for observable aspects of quality to aspects that consumers find hard to assess (Hirth, Chernew, and Orzol 2000).

The Distribution of Vulnerable Consumers. Studies of nursing homes suggest that nonprofit facilities are more heavily populated by consumers who are ill-informed or who have characteristics that one would expect to be correlated with reduced consumer information, such as limited education, limited experience with the service in question, or limited support for making decisions (Holtmann and Ullman 1993; Hirth 1999; Chou 2002). Although these findings are quite consistent, this first approach rests on some questionable assumptions: first, that ill-informed consumers are sufficiently *aware* of their information deficits to recognize their own vulnerability and second, that these same consumers are sufficiently informed about the meaning of nonprofit ownership that they predict the comparative trustworthiness of nonprofit and for-profit enterprise.

Experiences of More Vulnerable Consumers. A second strategy for studying trustworthiness avoids these limitations by focusing on the experiences of vulnerable populations in nonprofit and for-profit plans. Studies of this sort have found that: (1) there were no ownership-related differences in health plan quality as reported by relatively healthy enrollees, but for sicker enrollees—who are more vulnerable because they are less likely to switch plans when dissatisfied with their care (Schlesinger, Druss, and Thomas 1999)—for-profits provide significantly worse quality of care (Tu and Reschovsky 2002), and (2) there were no ownership-related quality differences in nursing homes for residents who had family members to act as their advocates, but residents without these family advocates experienced significantly worse care in for-profit than nonprofit homes (Chou 2002). These findings are consistent with greater for-profit exploitation, but may also reflect other factors, including patterns of consumer preference or treatment cost.

Consumer Responses to Perceived Exploitation. The third approach has examined the prevalence of complaints about quality filed with state agencies, on the

grounds that people complain only when their expectations have been violated—in our earlier language, when they have been exploited. Studies of nursing home care (Riportella-Mueller and Slesinger 1982; Weisbrod and Schlesinger 1986; Allen 2001) and psychiatric hospitals (Mark 1996) have found that complaints were more common among clients in for-profit facilities than in otherwise comparable nonprofit organizations. This finding is again consistent with the idea of higher levels of exploitation by for-profit providers. But differing rates of complaints may reflect differences in trust rather than differences in trustworthiness—if consumers trust nonprofit providers more than their for-profit counterparts, they may be more likely to excuse their failings without blaming them for bad outcomes and voicing those concerns to the state (Rosenthal and Schlesinger 2002).

Comparing Dimensions of Quality That are Difficult to Assess with Those Easily Observed. The final approach compares the performance of nonprofit and for-profit providers for dimensions of quality that are less observable to consumers. Hirth (1999) found that there were no ownership-related differences in the range of services offered by facilities (arguably, a dimension that can be assessed before a facility is selected) but that there were significant differences in the amount of services that residents actually received. Weisbrod and Schlesinger (1986) found no ownership-related differences in regulatory violations in nursing homes (information that was made available to consumers), but a significantly larger number of complaints about quality filed by residents of for-profit facilities. Hirth, Chernew, and Orzol (2000) found that in renal dialysis facilities, for-profits scored higher than nonprofits on easy-to-assess “amenities” but lower on measures of “technical quality” that would be harder for consumers to judge. But all three studies assert that consumers are more aware of some aspects of quality, without validating this claim.

Taken together, these findings are all consistent with the prediction that for-profit health care providers will be less trustworthy. But each measure is subject to challenge. Equally important, all these studies focus on only one of our three aspects of untrustworthy practices—consumer exploitation. There have been no studies examining the link between ownership and deceptive practices, or ownership and the revelation of complete information about treatment practices. Nor have these studies considered how ownership-related differences in trustworthiness might be mediated by the contexts within which the organizations operate.

The Market-Level Effects of Ownership on Trustworthiness

Here again, there are two pathways through which the ownership mix in a market could alter the relative trustworthiness of nonprofit and for-profit health plans. The first involves a sorting of consumers between nonprofit and for-profit providers (Hirth 1997). If consumers expect nonprofit providers to behave in a more trustworthy manner, then the most vulnerable consumers should seek out nonprofit settings for their medical care. We have already seen some evidence of this sorting in the studies cited earlier. Such self-selection has implications for the behavior of for-profit firms operating in these markets. Even if they were predisposed to exploit poorly informed consumers, their incentives to do so are limited when the most vulnerable consumers gravitate to nonprofit settings. Under these circumstances, the average consumer of for-profit services is now relatively well-informed, and thus quicker to discern when he or she has been misled (Ortmann and Schlesinger 1997). For-profit providers will thus *appear* to be more trustworthy when they directly compete with nonprofit firms, given fewer opportunities to behave opportunistically.

Organizational sociologists have identified a second pathway, arguing that external pressures may induce nonprofits and for-profits to behave more alike, particularly when notions of “good quality” services remain vague (DiMaggio and Anheier 1990). Certainly uncertainties and local norms do shape medical care, where notions of appropriate clinical practice vary dramatically from one locale to the next (Evans 1990; Alemayehu, et al. 1991; Davidson 1993; Wennberg et al. 1996). Under these circumstances, the presence of nonprofit providers in a community can alter the standards by which for-profits are judged, either through mimetic isomorphism (administrators in for-profit settings copy the practices of their nonprofit counterparts because they are not otherwise sure how to operate), normative isomorphism (health care professionals adopt the practices found in local nonprofit agencies and practice in the same manner when they treat patients in for-profit settings), or coercive isomorphism (large purchasers use nonprofit practice as the norm for deciding when for-profit medical care is worth buying). This third aspect of isomorphism is equivalent, in economic terms, to having the presence of nonprofits alter the demand for medical services, and thus the market incentives facing for-profit providers.

Measuring the Market-Level Effects of Ownership on Trustworthiness

There have been no studies that directly test the relationship between the ownership mix in local markets and the trustworthiness of for-profit health

care providers. Several studies do relate ownership mix in a market to quality of care in particular facilities. But unlike the studies of ownership effects at the organization level, none of the market-level studies establish any pattern of effects unique to dimensions of quality that are difficult to measure, let alone more proximate measures of exploitive or deceptive practices.

Three of these studies examined care in nursing homes (Hirth 1993; Spector, Selden, and Cohen 1998; Grabowski and Hirth 2003). Each of these studies found, using a variety of measures of quality, that nonprofit facilities on average had higher quality of care than otherwise comparable for-profit homes. Two of these studies (Hirth 1993; Grabowski and Hirth 2003) found that in those localities in which the nonprofit market share was higher, the quality of care in for-profit homes was better. But the study by Spector and colleagues did not find any such market-level effects. Outside of long-term care, Garg et al. (1999) found that for-profit dialysis centers that had a nonprofit competitor in the same county had significantly lower mortality rates (15 versus 29 percent) and higher referral rates (44 versus 14 percent) for kidney transplantation (which leads to better patient outcomes than continued dialysis, but also reduces the dialysis center's future revenues and profitability; Schlesinger, Cleary, and Blumenthal 1989) than did for-profit centers that had no local nonprofit competitors.

The Need for More Comprehensive Measures of Trustworthy Behavior

Limitations of Existing Studies. Although the empirical findings to date are largely consistent with ownership-related differences in trustworthiness, the studies have serious limitations. Assessments of ownership at the organization level examine only one of three forms of untrustworthy practices (exploitation) and may conflate differences in consumers' *trust* in nonprofits with differences in trustworthiness. Assessments of ownership at the market level have not even managed plausible measures of exploitation, looking only at differences in overall quality. Because ownership-related differences in quality may be driven by factors unrelated to deception, exploitation, or full revelation of information, these studies tell us little about trustworthiness. And the evidence on both levels comes primarily from the long-term care, which displays a different pattern of ownership-related performance than is found for other health services (Marmor et al. 1987; Schlesinger and Gray 2004).

An Alternative Focus for Research on Trustworthy Practices. To more adequately assess whether nonprofit health care is more trustworthy, one needs to more

comprehensively measure trustworthy practices, do so in a manner not biased by consumers' expectations, and apply these measures to the mainstream of American medicine. In this study, we take on all three tasks.

We develop measures of deceptive, exploitive, and disclosure practices and apply them to the comparative performance of nonprofit and for-profit managed care plans. Managed care is a promising context, because (a) over the past 20 years, this aspect of American medicine has been transformed from an industry of locally controlled, nonprofit plans into one dominated by large investor-owned corporations (Gabel 1997; Kuttner 1998; Gray and Schlesinger 2002), (b) this transformation has been accompanied by growing fears of untrustworthy practices, as exemplified in the "managed care backlash" (Blendon et al. 1998; Mechanic 2001; Reed and Trude 2002), and (c) despite the availability of report cards and other measures of plan performance, individual consumers and collective purchasers still seek health plans that they consider "trustworthy" (Gray 1997a; Mechanic and Rosenthal 1999; Goold and Klipp 2002; Zheng et al. 2002).

To measure dimensions of plan performance that are hard for consumers to assess, we turn to physicians who are affiliated those plans. Physician reports have been used in past research to compare the performance of nonprofit and for-profit hospitals (Alexander, Morrissey, and Shortell 1986; Mussachio et al. 1986; Schlesinger et al. 1987; Alexander and Weiner 1998). More recently, physician surveys have come into increasing use as measures of the performance of managed care plans generally (Feldman, Novack, and Gracely 1998; Foulke et al. 1998; Grumbach et al. 1998; Reschovsky et al. 2001) and the behaviors of specific health plans in particular (Williams, Zaslavsky, and Cleary 1999; Smith et al. 2001; Christianson et al. 2003; Wholey et al. 2003), although none have previously explored trustworthy practices.²

EMPIRICAL METHODS

Sources of Data for this Study

To compare health plan performance using physician assessments, it is essential to have representative data about doctors' experiences with managed care plans. Such information was collected as part of the AMA's Socioeconomic Monitoring Survey (SMS) in 1998. Telephone surveys were completed with a random sample of practitioners drawn from the AMA Physician Masterfile, which includes all licensed allopathic physicians in the United States,

not simply those who are members of the AMA. The 1998 SMS was fielded between April and September of 1998 by Westat Inc. The average time required for a completed interview was approximately 30 minutes. The overall response rate for the 1998 SMS was 52.2 percent.

The 1998 SMS collected data from a total of 3,826 physicians or proxy respondents (typically office managers or head nurses). Most of the questions that we used came from a special topics section of the survey were asked only of those respondents who had experience dealing with a managed care plan. Respondents were asked about their experiences with “the managed care plan that enrolls the largest number of patients” from the physician’s practice. Just over 90 percent of the sample that had at least one managed care contract was able to identify a primary plan, defined in this manner (1,621 respondents). Because many of the questions used in this study required a nuanced assessment of the impact of practices on patients, proxy respondents are excluded from our analyses, reducing the effective sample to 1,274.

Measures of Trustworthiness

Recall that “trustworthiness,” as used in health policy, is an amalgam of three different threshold expectations for providers, limiting deceptive or exploitive practices, while enhancing disclosure. We asked physicians about their plan’s communications with enrollees to assess the first and third forms of trustworthiness, and inquired about managed care techniques that were generally hidden from enrollees to identify exploitive practices.

Deception, Disclosure, and Communication with Consumers. The special topics section of the 1998 SMS asked about two aspects of consumer information. The first question used here as a measure of deceptive practices, involving false claims about the plan’s benefits. Respondents were asked, on a five-point scale, how frequently advertising by their primary health plan “created inaccurate impressions about plan benefits.” Assessments were mixed. Forty-three percent reported that their primary plan had “never” or “rarely” created such false impressions (Table 2). But 26 percent judged that their primary plan had made false claims “often” or “always.”

The second measure was designed to capture disclosure practices. Respondents were asked how frequently patients who were enrolled in their primary health plan were “confused about their benefits.” (Of course, many factors other than plan practices may contribute to confusion, but this question can be viewed as a measure of the extent to which plans were

successful in overcoming these barriers to adequate understanding.) On this measure, respondents' assessments were more bleak. Forty-eight percent reported that their patients were often or always confused (Table 2). Just over 15 percent observed confusion about benefits only rarely or never among their patients enrolled in their primary health plan.

Hidden Aspects of Quality and Enrollee Exploitation. As in earlier studies of trustworthiness, our measures of exploitation involve aspects of quality that are difficult for consumers to assess and vulnerable populations who are less able to respond to problematic practices. In the context of managed care plans, interactions between the plan and its affiliated physicians constitute aspects of quality "hidden" to most consumers. During the mid-1990s, the spread of utilization review was perceived by clinicians to threaten quality of care (Schlesinger, Gray, and Perreira 1997; Kaiser Family Foundation 1999; Wickizer and Lesser 2002), leading to extensive regulation of these practices (Noble and Brennan 1999). But these consequences will be difficult for the patient to recognize or ascribed to the plan (Cunningham, Denk, and Sinclair 2001). Physicians occasionally recommend that patients switch plans to avoid administrative requirements and payment problems (Wynia et al. 2002), but often do not inform patients of the restrictions that their plans may impose on their treatment (Wynia et al. 2003). Nor do most purchasers have the capacity to assess the impact of review practices on the overall quality of care in the plan (Hargraves and Trude 2002).

Two questions on the SMS asked respondents to assess the utilization review process used by their primary health plans. The first asks physicians to rate "the utilization review criteria and protocols" in their primary health plan on a five-point scale, ranging from "poor" to "excellent." As documented in Table 2, physicians' overall assessments were mixed, tending toward the negative: 22.3 percent rated the utilization review criteria as either excellent or good, whereas 44.4 percent rated them as fair or poor. But physician's assessments of external review may reflect implications for their practice or staff, rather than quality of care for their patients (Schlesinger 1998b). To focus more on the quality implications, respondents were asked how frequently their primary plan "forced you to compromise your standards of appropriate treatment." Responses were again on a five-point scale, in this case ranging from "never" to "always." More responses were positive on this measure. As Table 2 reveals, more than two-thirds of respondents reported that they never or rarely had to compromise their

standards of care in their primary health plan. Just over 7 percent reported that they had to do so often or always.

Vulnerable Populations and Enrollee Exploitation. Enrollees with chronic conditions are most vulnerable to quality shirking. Managed care plans face financial incentives to cut quality for enrollees with persisting, expensive medical needs (de Beyer 1999) because those enrollees are costly and least likely to switch health plans when dissatisfied, since such a switch could disrupt the continuity of care with their physicians (Schlesinger, Druss, and Thomas 1999). Maltreatment of this group is consistent with our definition of exploitation of ill-informed clients, since (a) most enrollees choose health plans prior to the onset of these conditions, and thus have little motivation to evaluate alternative health plans in these terms and (b) once the condition emerges, their need for continuity of care makes it difficult for them to switch to competing plans, so that they have a limited opportunity for judging how their plan compares with the alternatives in their community.

Physicians on the SMS were therefore asked how suitable their primary health plan was for “patients with serious chronic illness” compared with other managed care plans. (Managed care was not defined for respondents, but they were instructed to include Medicaid plans, which were identified by name for the state in which they practiced.) The primary plan could be rated either more suitable, less suitable, or about the same as other plans. More than 29 percent of the respondents rated their primary plan as more suitable than average while 17 percent of respondent rated this plan as less suitable (Table 2).

Measuring the Effects of Ownership

The literature suggests that (a) there may be differences in the trustworthiness of health plans, related to their form of ownership (nonprofit versus for-profit), (b) the magnitude of ownership-related differences in trustworthiness may be a function of the extent of community influences on both nonprofit and for-profit plans, and (c) the magnitude of ownership-related differences may also be affected by the mix of ownership among health plans located in the local market. Consequently, we must measure each aspect of these potentially ownership-related behaviors.

Measures of Plan Ownership. Respondents on the SMS were asked to name their primary health plan. These names were then matched to data from Interstudy’s directory of managed care plans. Slightly more than 83 percent

of the plans named by respondents were successfully matched using this procedure (involving over 85 percent of respondents). For each of these plans, we were able to identify the legal form of ownership under which the plan operated.

Interactions of Ownership and Local Control. Nonprofit health care providers have been hypothesized to be more trustworthy because they operate under reduced pecuniary incentives and are more constrained by the local community than are for-profit firms. To help distinguish between these two effects, we used Interstudy data to identify whether the respondent's primary health plan was affiliated with a multistate system, which ought to be less constrained by community influences. We will refer to plans without such an affiliation as "local" plans, those with an affiliation as "national" plans, although some of these systems may be regional in scope.

As is evident from Table 3, slightly more than 71 percent of the plans identified by the respondents had national affiliations. National affiliations were higher among for-profit plans (85 percent) than among nonprofit plans (49 percent). The plans identified by our respondents were more likely to be affiliated with national systems than is true for all health plans, because local plans typically have fewer enrollees and correspondingly smaller networks of clinicians.

Ownership Mix in Local Markets. The market areas for health plans are difficult to define with great accuracy, since enrollees' county of residence is unreliably reported. Consequently, we used a relatively crude proxy for defining the market areas within which the ownership mix might mediate plan performance. For respondents who practice in MSAs, the MSA was treated as the market area. For those who practiced outside of MSAs, the ownership mix of plans for the entire state was treated as the relevant constraint.³

Neither theory nor past empirical research provides much guidance on the precise ways in which market-level and plan-level effects of ownership can be expected to interact. More specifically, it is unclear whether for-profit performance would be affected by the presence of a single nonprofit plan (an extreme form of mimetic or coercive isomorphism), might be linearly related to the market share of nonprofit plans (as one might expect with consumer sorting), or would be affected only if the nonprofit presence in the local market passes some threshold (a more plausible formulation for normative isomorphism). To test for these various possible interactions, we categorize

each of our for-profit plans as operating in: (1) markets in which there is no nonprofit presence, (2) at least one nonprofit plan in the local market, (3) a minimal nonprofit role (market share up to 10 percent), (4) a moderate nonprofit role (market share from 10 to 20 percent), (5) a substantial nonprofit role (market share from 20 to 30 percent), and (6) a large nonprofit share (market share above 30 percent).⁴

Controlling for Other Influences on the Perceived Quality of Health Plans

To appropriately identify the effects of ownership and control for any spurious correlations, we incorporated into our regression models a number of other explanatory variables. These include (a) characteristics of our respondents that might have influenced their assessment of the plan, (b) characteristics of the plan itself, other than its ownership form, (c) characteristics of the local market for managed care, other than ownership mix, and (d) (for the models involving exploitive practices) physicians' experiences with utilization review that may have subtly colored their perception of those practices at their primary plan. We list the relevant variables below: a full justification for their inclusion is provided in the Statistical Appendix to this paper (please see <http://www.blackwellpublishing.com/products/journals/suppmat/HESR/HESR00377/HESR00377sm.htm>).

Characteristics of Physicians. Research has identified several physician characteristics that are associated with more problematic experiences with health plans, and others that are related to the attitudes with which they assess managed care. To control for these various other factors that might affect physicians' assessments of their primary health plan, we therefore incorporated into the explanatory models measures of: (1) the physicians' year of birth, (2) the physician's gender, (3) whether the physician was trained in a medical school in the United States, (4) whether the physician was a primary care physician, psychiatrist, or other specialist, (5) the number of patients the physician has enrolled in their primary managed care plan, (6) the number of years that the clinician has been affiliated with that plan, and (7) the total number of managed care contracts that are currently held by the physician's practice. The characteristics of the sample, compared with all practicing physicians in the U.S., are presented in Table 1. There were no statistically significant differences in any of these characteristics.

Characteristics of Health Plans Other Than Ownership. Research has identified several characteristics of health plans that can affect consumers' awareness of

Table 1: Characteristics of Physician Respondents

<i>Characteristics of Physician Respondents</i>	<i>Full Physician Sample (n = 3,826)</i>	<i>Physicians Who Identified a Primary Plan (n = 1,621)</i>
Birth year (%)		
Before 1939	16.31	15.75
1940–1949	28.12	27.88
1950–1959	39.92	39.55
1960 or later	15.65	16.82
Sex (%)		
Male	83.53	84.27
Female	16.47	15.73
Primary care physician (%)		
No	48.00	46.07
Yes	52.00	53.93
Mental health provider (%)		
No	93.47	94.71
Yes	6.53	5.29
Trained in the U.S. medical school (%)		
No	21.24	20.19
Yes	78.76	79.81
Mean percentage of patients affiliated with primary plan	N/A	21.12
Mean years affiliated with primary plan	N/A	6.28
Mean number of managed care contracts	N/A	12.44
Mean minutes spent by physician on utilization review appeals	N/A	44.91

Percents may not sum to 100 because of rounding.

N/A, not applicable.

plan benefits: enrollment of beneficiaries from public insurance programs, size of the plan, and model type. Because each of these characteristics tends to be correlated with ownership (for-profit plans serving more Medicaid, but fewer Medicare patients; group/staff model plans more often incorporated under nonprofit ownership, and larger plans are often for-profit) it is important to control for the impact of these other characteristics on the perceived trustworthiness of plan practices.

As is evident from Table 3, the sample of plans identified by our respondents were larger than the average plan (because of the definition of “primary health plan”) but somewhat less likely than the average health plan in the U.S. to enroll either Medicaid or Medicare beneficiaries. This again reflects the fact that a physician’s “primary health plan” tends to be larger than the average plan, since smaller plans tend to seek public beneficiaries to achieve economies of scale. Respondents on the survey were affiliated with

plans that had almost the identical distribution of model types as found for the country as a whole.

Characteristics of the Local Market. Apart from ownership mix, several other characteristics of the local market may affect consumers' understanding of their health plan or physician's perceptions of their primary plan's performance in terms of hidden dimensions of quality. These factors include residents' familiarity with managed care generally, the average level of education in the community, and the number of plans available in that locale.

To control for these market-level effects, we thus measure three characteristics of the community. Educational attainment is measured in terms of the average level of education of residents over the age of 25 years in the county. Because one would expect that those with limited education are most at risk for exploitation, educational attainment is incorporated into the models as the percentage of residents with less than 9 years of education. Familiarity with managed care is measured by the history of HMOs operating in the county. More specifically, we identify "experienced" counties as those in which there was at least one HMO operating in 1985. The availability of alternative plans is measured by the number of HMOs in operation in that county in 1997.⁵ As is evident from the statistics reported in Table 3, the communities in which our respondents practice tend to have above average education, more managed care plans and a more established history in dealing with HMOs, compared with the country as a whole.

Other Aspects of the Interactions between Plans and Physicians. Physicians' assessments of external review may be colored by a variety of characteristics of the review process in addition to the impact that review has on quality of care. Most prominent among these looms the so-called "hassle factor," requirements that clinicians or their staff carefully document and, in some cases, extensively negotiate with external reviewers (Goold et al. 1994; Schlesinger 1998b). Managed care firms that are trying to be most careful about effectively reviewing treatment may impose the most extensive requirements for documentation, but create negative assessments from clinicians. Because requirements for documentation vary with plan ownership (Wolff and Schlesinger 1998; Ahern and Molinari 2001) controlling for these "hassles" may be important for accurately identifying the true impact of plan practices on quality of care.

But reported levels of "hassle" may be "endogenous"—that is, may be a product of the same features of managed care that threaten quality of care.

Introducing these variables could therefore bias the measured relationship between ownership and hidden dimensions of quality. This creates something of a dilemma—if measures of the hassle factor are omitted, they may bias the coefficient on the ownership variable, but their inclusion in the model may produce other biases. Because no one specification is clearly more appropriate, we have estimated the regression models both ways. The measure was based on a report from the respondent about the total time that they spent in negotiating a typical appeal under utilization review with their primary plan. The average respondent reported that a typical appeal required just under 45 minutes of the clinician's time.

Statistical Methods

To determine the relationship between ownership and trustworthiness, we estimated five regression models, one for each measure of trustworthiness. Organizational-level measures of ownership were introduced that combine legal form (nonprofit versus for-profit) with system affiliation (national versus local), with locally controlled nonprofit plans as the comparison group. The other measures of physician characteristics, plan characteristics, and market characteristics identified above were included as explanatory variables. In these first models, we do not control for the market-level measure of ownership mix (proportion of plans that are nonprofit). We will refer to these models as the “baseline” models relating ownership to trustworthy performance.

Because the dependent variables were categorical (either a three- or five-point scale), these regressions were estimated as ordered logistic models. To ease interpretation, we present the results as odds ratios (ORs). (The complete regression results, with coefficients and standard errors, are included in the Appendix Tables 1–3 [see <http://www.blackwellpublishing.com/products/journals/suppmat/HESR/HESR00377/HESR00377sm.html>]). The models presented in the text include the measure of the “hassle factor” associated with external review. Omitting this variable did not significantly alter any of the ownership-related findings that are reported below.

To test for the mediating effects of market-level ownership, we estimated a second set of models, which we term the “interaction models.” Dichotomous variables for each form of plan ownership were interacted with a dummy variable measuring whether the plan operated in a for-profit dominant market, or one in which there was a mix of ownership. As we noted earlier, neither the theory of isomorphism nor consumer sorting makes clear predictions about the threshold at which mixed ownership could be expected

Table 2: Physician Responses on Measures of Trustworthiness

<i>Responses on Dependent Variables</i>	<i>Physicians Who Identified a Primary Plan (n = 1,621)</i>
<i>Measure of deception</i>	
Plan ads create inaccurate impression of benefits (%)	
Never	17.96
Rarely	25.34
Sometimes	30.66
Often	18.86
Always	7.18
<i>Measure of disclosure</i>	
Patients are often confused about benefits (%)	
Never	2.78
Rarely	13.19
Sometimes	36.14
Often	35.98
Always	11.91
<i>Measures of exploitation: hidden quality</i>	
Plan's overall review criteria (%)	
Excellent	5.39
Very good	16.89
Good	33.29
Fair	35.17
Poor	9.26
<i>Measures of exploitation: hidden quality</i>	
Plan forces physician to compromise standard of care (%)	
Never	30.44
Rarely	38.35
Sometimes	23.58
Often	6.34
Always	1.30
<i>Measures of exploitation: vulnerable group</i>	
Plan suitable for chronically ill patients (%)	
More suitable	29.16
Same as other plans	53.43
Less suitable	17.42

Percents may not sum to 100 because of rounding.

to alter the trustworthiness of for-profit firms. Thus, to provide a sensitivity test for these threshold effects, we estimated each of the interaction models with four different specifications.

In the first specification, mixed ownership is defined as a market having any nonprofit plan (90 percent of all respondents). In the second, the threshold is defined as nonprofit plans having at least a 10 percent market share (81 percent of all respondents). In the third specification, the threshold is set at

Table 3: Characteristics of Managed Care Plans and Markets

	<i>All Managed Care Plans</i>	<i>Physician-Identified Sample</i>
<i>Plan characteristics</i>		
Ownership and affiliation (%)		
For-profit national plans	50.55	60.37
For-profit local plans	23.40	17.97
Nonprofit national plans	8.58	10.73
Nonprofit local plans	17.47	10.92
Treat Medicare managed care patients (%)		
No	58.13	73.34
Yes	41.87	26.66
Treat Medicaid managed care patients (%)		
No	61.20	75.96
Yes	38.80	24.04
Managed care model type (%)		
Staff or group model	4.64	5.32
IPA or network	62.90	61.95
Mixed model	32.46	32.73
Mean total enrollment	120,852	445,365
<i>Market characteristics</i>		
Mean number of HMOs in 1997	0.21	3.09
Percent of counties with HMO in 1985	6.94	56.60
Mean percent of plans that are nonprofit in local market	25.66	24.98
Mean percent in counties of residents with under 9 years of education	15.51	9.35

Percents may not sum to 100 because of rounding or omitted categories.

a 20 percent nonprofit market share (52 percent of all respondents), in the fourth at a 30 percent nonprofit market share (35 percent of all respondents). By comparing findings across these different specifications, one can both identify whether the nonprofit market share is associated with differences in for-profit performance, and the level of nonprofit presence at which these differences emerge.

RESULTS

We first consider the organization-level implications of ownership from the baseline models, then examine the interaction models to explore the impact of ownership mix in local markets. To simplify our review of the baseline models, we report in Table 4 only the results for the ownership variables and, to provide a standard of comparison, the findings for other plan characteristics.

(Complete models are included in the Statistical Appendix [see <http://www.blackwellpublishing.com/products/journals/suppmat/HESR/HESR00377/HESR00377sm.htm>]). For heuristic purposes, we present in Table 5 the comparisons of ownership with nonprofit system-affiliated plans as the omitted comparison group. In presenting the findings from the interaction models, we focus on the two forms of ownership shown in the baseline models to be most distinctly different in trustworthiness: nonprofit plans that are locally controlled and for-profit plans with national affiliations. We also comment on other characteristics of health plans or markets that appear to be consistently associated with trustworthy performance.

Relationship of Organizational Ownership and Trustworthiness of Health Plans

Deceptive Practices. Compared with locally controlled nonprofit health plans (the omitted comparison group in Table 4), both for-profit and nonprofit plans affiliated with multistate systems are more often reported by their affiliated physicians to have misled their enrollees through deceptive advertising, although the finding for nonprofit national plans is only marginally significant ($p < .10$). A physician affiliated with a national for-profit plan is about 70 percent more likely than one affiliated with a nonprofit local plan to report that deceptive advertising is a frequent problem (OR = 1.69).

Inadequate Disclosure. System-affiliated for-profit plans are seen by their clinicians as having significantly more beneficiaries confused about benefits than is true in locally controlled nonprofit plans. The magnitude of the ownership-related differences is about the same as for deceptive practices. In this case, the for-profit national plans are also less trustworthy than are the nonprofit national plans, although here again the difference is only marginally significant in a statistical sense (Table 5).

Exploitive Practices. We observe statistically significant differences related to ownership for all three of the measures of enrollee exploitation. According to their affiliated physicians, for-profit national plans are significantly more likely than either nonprofit local (Table 4) or nonprofit national (Table 5) health plans to cut back on hidden dimensions of quality or to engage in practices that could exploit their more vulnerable enrollees. The magnitude of these differences was most pronounced for problematic utilization review (UR) practices (OR = 2.25) comparing for-profit national and nonprofit local plans. For utilization review, system-affiliated nonprofit plans are reported to have more frequent problems than locally controlled nonprofit plans

Table 5: Baseline Regression Models: Nonprofit System-Affiliated Plans as the Omitted Comparison Group (Odds Ratios)

	Exploitive Practices			
	Deceptive Practices Plan Ads Create Inaccurate Impression of Benefits	Disclosure Practices Patients Often Confused about Benefits	Hidden Quality #1 Plan's Overall Review Criteria Is Poor	Hidden Quality #2 Plan Forces Physician to Compromise Standard of Care
				Vulnerable Enrollees Plan Is Not Suitable for Chronically Ill Patients
Plan characteristics				
Profit and affiliation [†]				
For-profit national	1.11	1.38 [§]	1.47*	1.60*
For-profit local	0.81	1.11	0.58 [§]	1.14
Nonprofit local	0.66 [§]	0.81	0.65 [§]	0.88

Note: Results from ordered logistic regression models, controlling for characteristics of physicians, local managed care markets, interactions with primary health plan, and other characteristics of the health plan.

[§] $p < .10$;

* $p < .05$;

** $p < .01$.

[†] Compared with nonprofit nationally affiliated plan.

(OR = 1.53), although here again the results are only marginally significant in a statistical sense. Physicians' experiences with utilization review also reveal one pattern related to ownership that is not found for any of our other measures of trustworthiness. Locally controlled *for-profit* plans appear to have marginally fewer problems than do system-affiliated nonprofit plans, reported to be about equally reliable in this regard as are local nonprofit plans (Table 5).

Other Features of Health Plans and Markets That Appear Related to Trustworthiness

It is helpful to put these reported differences in trustworthiness in context by comparing them to other plan characteristics (Table 4). The ownership-related differences in trustworthiness appear to be consistently larger than are the elevated problems with deception and external review that are reported for Medicare-participating health plans. On the other hand, the implications of ownership appear to be less pronounced than are the effects of model type, with staff/group model health plans appearing more trustworthy in terms of deceptive practices, disclosure, and at least one form of exploitation.

Other characteristics of physicians or managed care markets that are related to deception, disclosure, or exploitation are identified in the full models presented in the Appendix (please see <http://www.blackwellpublishing.com/products/journals/suppmat/HESR/HESR00377/HESR00377sm.htm>). Only one characteristic of local markets is associated with consistent differences in trustworthy practices: longer familiarity with managed care plans appears to be associated with reduced problems related to consumer communication. Localities in which there was an HMO operating as early as 1985 have less frequent problems with deceptive advertising. Conversely, localities in which there was an HMO operating as early as 1985 do not appear less likely to experience exploitive practices.

Psychiatrists report more frequent problems with their managed care plans than do other physicians. Having a larger number of managed care contracts was associated with more frequent problems related to patient communication, whereas deeper commitments between the physician and the plan (more patients enrolled in the plan, longer affiliation) were associated with less frequent reports of shirking in hidden dimensions of quality. Physicians who spent more time dealing with external review were more likely to report problems with hidden aspects of quality.

Relationship of Ownership Mix in Local Markets and Trustworthiness of Health Plans

Our strategy to test for the market-level effects of ownership involves the specification of four different models for each of our dependent variables, with

each specification using a different definition of a market with mixed ownership. Because our baseline models found consistent ownership-related differences only between local nonprofit and national for-profit health plans, we present here the interaction effects only for this comparison. (The models from which these results are derived included interaction terms for all three categories of ownership and corporate control.) Because the other explanatory variables in the models were the same as in the baseline models, and their coefficients did not differ significantly from those presented for the baseline models, we present below only the coefficients related to ownership and corporate control.

Deceptive Practices. In Figure 1, we present all four specifications for each of our measures of consumer communication. Each vertical bar represents the OR of problems of trustworthiness in for-profit national plans, compared with nonprofit local plans. Bars that are substantially above 1.00 indicate elevated problems in for-profit national plans; those at 1.00 indicate that for-profit national and nonprofit local plans are equally trustworthy. For each specification, the lighter bar represents the comparative performance of for-profit plans located in for-profit-dominated markets, the darker bar their relative performance in local markets where they face greater nonprofit competition.

Because this format is unfamiliar, it may be helpful to walk through one example in some detail. The pair of bars on the far left of each diagram defines mixed markets (the darker bar) as those having any nonprofit health plan, and thus for-profit-dominated markets (the lighted bar) as those with no nonprofit plans. For our measure of misleading advertising, this definition of nonprofit presence is associated with *worse* for-profit performance (that is, a higher bar) in markets with mixed ownership (OR = 1.37 versus 1.84), although this difference is not statistically significant. This finding suggests that neither isomorphic pressures nor consumer sorting are affecting for-profit performance in markets with at least one nonprofit plan. And the same pattern holds when one defines mixed markets as having more than 10 percent nonprofit market share (the second set of bars from the left).

But the pattern changes dramatically when mixed markets are defined as having a 20 percent or higher market share for nonprofit plans. In this case, for-profit performance is decidedly *improved* in mixed markets, compared with those that are dominated by for-profits (OR = 2.06 versus 1.26). And the effect becomes even more pronounced when one defines mixed markets as those with a nonprofit share of 30 percent or higher (OR = 2.00 versus 0.95).⁶

Figure 1: Interaction Model Results: Relative Frequency of Impaired Consumer Communication in For-Profit National Plans

Indeed, this final specification suggests that for-profit national plans are no more likely to engage in deceptive practices than are their nonprofit counterparts, when they operate in markets that have a nonprofit market share of at least 30 percent. This pattern is consistent with both isomorphism and consumer sorting theories, although with a relatively high threshold before the practices of for-profit plans are altered.

Since our measures of trustworthiness involve the performance of for-profit national plans *relative* to their nonprofit local plans, one might wonder if the performance of *nonprofit* plans was also related to the mix of ownership in local markets. Supplementary analyses demonstrated that the trustworthiness of nonprofit plans was unrelated to ownership mix.

Disclosure Practices. Our measure of enrollee confusion displays a slightly different pattern.⁷ In this case, as the proportion of nonprofit plans in mixed markets increases, there appears to be a roughly linear decline in the problems found in for-profit plans, compared with their nonprofit counterparts. The relative performance of the for-profit plans in mixed markets is only slightly better when mixed markets are defined as having at least one nonprofit plan (OR = 1.88 and 1.68, respectively), but improves markedly in mixed markets having at least a 30 percent nonprofit market share (OR = 1.32). But this apparent trend in improved performance is not statistically significant.

Exploitive Practices. Our analysis of the market-level effects of ownership for these aspects of trustworthiness is presented in Figure 2, using the same format as Figure 1. For all three measures, it appears that the relative performance of for-profit plans is improved when at least 20 percent of the plans in the local market operate under nonprofit auspices. These findings appear to confirm that a substantial nonprofit presence in local markets can produce significant convergence in the behavior of nonprofit and for-profit health plans. For one of our measures of exploitation (substandard care for chronically ill enrollees), these market-level effects appear to completely offset any plan-level effects of ownership. For one of our hidden dimensions of quality (compromised standards of practice), plan-level effects remain, but are no longer statistically significant. For the other hidden aspects of quality (problematic utilization review criteria), ownership-related differences at the plan level persist and remain statistically significant.

DISCUSSION AND CONCLUSIONS

This paper used physician assessments of managed care plans to examine how the trustworthiness of health plans is related to ownership, system affiliation, and the market share of nonprofit health plans. Physicians in system-affiliated for-profit plans report more frequent deception, enrollee confusion, and quality shirking compared with physicians affiliated with local nonprofit plans. Ownership-related differences *among* system-affiliated plans are most pronounced for quality shirking, with nonprofit plans reported to have consistently fewer problems than for-profit plans. A sufficient nonprofit presence in local markets (at least 20 percent share) appears to limit and in some cases eliminate these ownership-related differences.

Figure 2: Interaction Model Results: Relative Frequency of Exploitive Practices in For-Profit National Plans

Nonprofit Market Share Used to Define Nonprofit Presence in Local Market

■ For-Profit Plans in Markets **without** Nonprofit Presence ■ For-Profit Plans in Markets **with** Nonprofit Presence

These results should be interpreted in light of certain methodological limitations. Although physician-based reports offer an important new window for assessing health plan performance, they have limitations. Physicians may

only imperfectly judge their patients' understanding of plan benefits and plan advertising. Although this could inject "noise" into measures of deception and disclosure, it should not systematically bias findings related to plan ownership or system control.

Assessments by physicians are subjective. Although we statistically control for factors that might color their assessments, not every confounding influence can be accounted for. For example, plans that pay physicians more generously may evoke more favorable assessments of their other practices (Wholey et al. 2003). If payment generosity were related to ownership, this could distort our findings. Physicians may omit certain factors from their assessments of plan performance. For example, they may not have considered premiums when identifying whether their primary plan was most suitable for enrollees with chronic illness. But this omission biases comparisons in favor of for-profit plans, since they have higher average premiums than do their non-profit competitors (Schlesinger et al. 1986). It is also possible that physician reports might be biased *because* of ownership, if physicians *assume* that non-profit plans are more trustworthy. To avoid activating preconceptions, respondents on this survey were never told that the study was related to ownership nor were they asked about the ownership of their own primary health plan.

Since this study is the first to compare trustworthiness among health plans, its conclusions should be viewed as preliminary and serve as the basis for additional research. The study of trustworthiness and health plan ownership could be generalized in several different ways. First, one could incorporate other measures of trustworthiness to complement the five used here. Second, the stability of our findings about trustworthiness should be tested by repeating the study with more recent data. Third, we have relatively few respondents from rural areas and rather crude measures of managed care penetration from those areas, making it difficult to generalize about the comparative trustworthiness of nonprofit and for-profit plans outside of urban settings. Fourth, although this sample is representative of physicians, it is not representative of all health plans. By asking physicians about their primary plan, we probably skewed responses in a positive manner, since physicians can be expected to focus most of their practice on the plans with which they feel most comfortable. Here again, we do not expect this bias to be related to ownership.

Finally, one could envision a more elaborate research design that could better determine the sources of untrustworthy practices among health plans. Future studies could compare the experiences of physicians and consumers to

gain a broader perspective on which types of plans are more trustworthy and trusted. The experiences of purchasers also could be studied, since they too face concerns about the trustworthiness when they contract with plans (Gray 1997b).

Implications for the Study of Ownership

Our findings hold at least three noteworthy implications for how we understand and study ownership in American medicine. First, we found ownership, in itself, was only a weak predictor of trustworthy practices, but that in *combination* with system control, became a consistent predictor. Although researchers have previously studied the impact of large corporations on the costs and quality of medical care, this is the first study to suggest that this interaction holds important consequences for trustworthiness. Community-level constraints may mitigate potentially perverse incentives associated with for-profit ownership, but these may be weakened by system affiliation. Since we lack the measures to directly test local constraints, this potential link must be viewed as speculative, albeit worthy of additional study.

Second, we found that the magnitude of ownership-related differences in trustworthiness depends crucially on the local market share of nonprofit health plans. Although other studies have examined the impact of nonprofits' market share on quality, this is the first study to examine aspects of quality and other practices connected with exploitation, deception, and disclosure. Given the prevalence of concerns about these sorts of problems, they merit greater attention from researchers.

Third, as we noted earlier, the presence of local nonprofits could affect the behavior of their for-profit competitors through either client sorting or isomorphic pressures. Although the local market effects in Figure 1 were consistent with the sorting hypothesis, this theory is an unlikely explanation for the results observed for hidden dimensions of quality (Figure 2). Since these dimensions of quality are presumed to be hidden, consumers could not choose a plan based on these aspects of performance. Future research should explicitly examine which of the various forms of isomorphism identified earlier might account for the convergence reported above.

It is possible that the hidden dimensions of quality are not as hidden from consumers as we had assumed. Plans operating UR programs do sometimes contact patients directly (Schlesinger, Gray, and Perreira 1997), and some physicians occasionally complain to their patients about their frustrations with external review (Wynia et al. 2002). However, findings from the

Community Tracking Study suggest that most patients are unfamiliar with even the most basic features of the utilization review procedures in their managed care plan (Cunningham, Denk, and Sinclair 2001). This lack of information would make it very difficult for consumers to select a plan based on performance related directly to external review practices.

Nonetheless, it is possible that consumers who sort on observable markers of plan trustworthiness may have inadvertently selected plans that also do better on hidden dimensions of quality. The correlations between our measures of untrustworthy performance range from 0.24 to 0.48. This suggests that if consumers were avoiding plans with a reputation for, say, deceptive advertising, they would also be more likely to enroll in plans that have less problematic UR practices.

Perhaps the most intriguing question for future research relates to the apparent threshold effects of nonprofit market share. Although thresholds are more apparent for some aspects of trustworthiness than for others (contrast, for example, the results for deception and disclosure from Figure 1), our findings suggest thresholds effects may be substantial. A limited nonprofit presence in a market (say, one nonprofit plan) has very little impact on the performance of for-profit plans in that locale, whereas when 20 to 30 percent of the plans in the local market are nonprofit, ownership-related differences in trustworthiness are substantially smaller.

Neither models of consumer sorting nor theories of isomorphism predicted that thresholds necessarily would be evident. But threshold effects could be consistent with either paradigm. If the pool of consumers who are potentially fooled by false advertising, for instance, is sufficiently small, 20 to 30 percent of local plans operating under nonprofit ownership may provide all the vulnerable consumers with a "safe haven" against exploitation. Were this the case, deceptive advertising simply would not be worth the bother for their for-profit competitors.

Threshold effects would also be consistent with normative isomorphism, if trustworthy practices reflect locally defined standards that emerge from social interactions in the community. Sociological research suggests that when norms are reinforced by interactions with others, the impact of a norm on behavior increases in a nonlinear manner as proponents become more common (Watts 1999; Oliver and Marwell 2001). These "tipping points" have been evident in a variety of behaviors, ranging from discriminatory practices to criminal activity (Green, Strolovitch, and Wong 1998; South and Crowder 1998). If nonprofit plans embody distinctive approaches to trustworthiness, their impact on other plans may therefore emerge only when there are a

sufficient number of nonprofits in a local market that their combined presence mutually reinforces norms of practice, which then “crystallize” to effectively constrain the behavior of for-profit plans in that locale.

Given our data, we cannot distinguish between these competing theoretical explanations. Further research is warranted to determine how and why these threshold effects emerge to shape organizational behavior.

Implications for Public Policy

The managed care industry changed dramatically between the mid-1980s and mid-1990s (Gabel 1997; Gray 1999). The ownership of health plans by large, for-profit corporations expanded markedly. At the same time, the market share of group-staff model plans declined sharply, as other models (IPAs, networks, PPOs) grew more quickly because of their reduced requirements for capital and construction.

Our findings suggest that the managed care backlash that appeared in the mid-1990s may have been a result of this transformation of the industry, since we found that the fastest growing forms of ownership, for-profit national plans, are the least trustworthy type of plan. And the fastest growing models of managed care—IPAs and network plans—are strikingly less trustworthy than their group/staff model counterparts.

It is essential to recognize that these segments of the managed care industry are growing rapidly because public policies have encouraged that growth. IRS practices over the past two decades have made it difficult for managed care plans to incorporate as nonprofit entities (Schlesinger, Gray, and Bradley 1996). State practices have allowed widespread conversion of nonprofit plans to for-profit ownership (Gray and Schlesinger 2002). And the elimination of capital subsidies from the federal government added to the disadvantage that group/staff model plans faced responding to rapidly growing demands or changing market conditions.

Precisely because these ongoing changes in the managed care industry were produced by policy shifts, they can be partially addressed by changing public policy. Our findings on the relationship between ownership and trustworthiness join a growing body of evidence that ownership matters for plan performance. Combined together, these findings may provide a sufficient rationale for further subsidizing the role of nonprofit ownership, particularly tax-exempt locally governed plans. Our findings suggest that one may achieve many of the benefits of increased trustworthiness without keeping the industry *entirely* nonprofit in character, but by ensuring that there is a sufficient number

of nonprofit plans in local markets to set a standard for the performance of other plans.

Of course, there are other ways to improve the performance of health plans. Many states have enacted a plethora of regulations applied to managed care practices (Noble and Brennan 1999; Sloan and Hall 2002). As yet, little is known about the efficacy of these interventions, although state resources for enforcement are quite limited (Sloan and Hall 2002). Under these circumstances, public policies that encourage a larger role for more trustworthy forms of managed care may prove a more feasible form of intervention, even if not entirely reliable in their own right. The trade-off between indirect regulation through subsidies to nonprofit plans, and direct regulation of managed care practices, raises a complex set of issues that require additional attention from policy makers and additional study from health services researchers.

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NOTES

1. The most substantial ownership-related differences in community influence have been documented for hospitals. Among health plans, the differences in external influence appear to be much smaller (Schlesinger, Mitchell, and Gray 2003).
2. One study did claim to find indirect evidence of greater consumer distrust in for-profit health plans. Sleeper et al. (1998) established that for-profit plans were less likely than their nonprofit counterparts to make use of capitation payments to physicians. Because these sorts of financial incentives arouse fears among consumers (Miller and Horowitz 2000), the researchers concluded that for-profit plans could not afford to use them, because of "consumer distrust of for-profit HMOs" (p. 189). Even if one accepts this rather tortured logic, greater trust does not necessarily imply greater trustworthiness. Several other studies have established that nonprofit health plans have fewer dissatisfied enrollees (Landon et al. 2001; Tu and Reschovsky 2002) and perform better on HEDIS measures of preventive care (Himmelstein et al. 1999), although this last finding depended on whether one controlled

for the profitability of the plan (Born and Simon 2001). In any case, precisely because these aspects of performance are visible to consumers on report cards, they are not markers for ownership-related differences in trustworthiness.

3. This formulation provides a reasonably accurate portrait of ownership mix in MSAs, but could be challenged in its treatment of physician practices in more rural areas. More specifically, by counting all plans operating in the state outside of urban areas, this measure may inaccurately portray the ownership mix of plans in any particular rural area. Nonetheless, we believe that this approach can be justified. Plans that already operate in a rural area can be reasonably seen as potential entrants into any other rural market in the state, since they have developed the capacity to operate outside areas of high-population density. In economists' language, they can "contest" the local market. Consequently, they can be argued to become part of the relevant comparison set against which any given plan judges its own performance.
4. Note that these are not mutually exclusive categories—markets with a single non-profit plan could have a relatively large nonprofit share if there are few health plans operating in that community.
5. The number of managed care contracts reported by the respondent also captures some of this availability.
6. At the 30% level, this difference was statistically significant (Δ likelihood ratio = 9.67 with $df = 1$).
7. There is actually a second interesting difference, in addition to the one reported in the text. Note that for misleading advertising, the reported behavior of for-profit national plans is actually worse when the for-profit markets include a small presence of nonprofit plans, compared with markets in which there are only for-profit plans (contrast the height of the dark bars in the first and fourth model specifications). This suggests that the performance of for-profit plans may actually deteriorate with token competition from nonprofit plans. This pattern also appears for some hidden dimensions of quality, although we do not have any compelling explanation for why this might be the case.

REFERENCES

- Ahern, M., and C. Molinari. 2001. "Impact of HMO Ownership on Management Processes and Utilization Outcomes." *American Journal of Managed Care* 7 (5): 489–97.
- Alemayehu, E., D. W. Molloy, G. H. Guyatt, J. Singer, G. Penington, J. Basile, M. Eisemann, P. Finucane, M. E. McMurdo, and C. Powell. 1991. "Variability in Physicians' Decisions on Caring for Chronically Ill Elderly Patients: An International Study." *Canadian Medical Association Journal* 144 (9): 1133–8.
- Alexander, J. A., M. A. Morrissey, and S. M. Shortell. 1986. "Effects of Competition, Regulation, and Corporatization on Hospital–Physician Relationships." *Journal of Health and Social Behavior* 27 (3): 220–35.

- Alexander, J. A., and B. J. Weiner. 1998. "The Adoption of the Corporate Governance Model by Nonprofit Organizations." *Nonprofit Management and Leadership* 8 (3): 223–42.
- Alexander, J. A., B. J. Weiner, and M. Succi. 2000. "Community Accountability among Hospitals Affiliated with Health Care Systems." *The Milbank Quarterly* 78 (2): 157–84.
- Allen, P. 2001. "An Exploration of Complaints Forwarded to the Connecticut Long Term Care Ombudsman Program: What Are the Correlates of Nursing Home Complaints Reported?" Doctoral thesis, Fordham University.
- Arrow, K. 1963. "Uncertainty and the Welfare Economics of Medical Care." *American Economic Review* 53 (5): 941–69.
- Bell, R. A., R. L. Kravitz, A. D. Siefkin, and G. E. Foulke. 1997. "Physicians' Attitudes toward Managed Care: Assessment and Potential Effects on Practice Behaviors." *American Journal of Managed Care* 3 (9): 1297–304.
- Blendon, R. J., M. Brodie, J. M. Benson, D. E. Altman, L. Levitt, T. Hoff, and L. Hugick. 1998. "Understanding the Managed Care Backlash." *Health Affairs* 17 (4): 80–94.
- Bloche, M. G. 1998. "Should Government Intervene to Protect Nonprofits?" *Health Affairs* 17 (5): 7–25.
- . 2002. "Trust and Betrayal in the Medical Marketplace." *Stanford Law Review* 55: 919–54.
- Born, P. H., and C. J. Simon. 2001. "Patients and Profits: The Relationship between HMO Financial Performance and Quality of Care." *Health Affairs* 20 (2): 167–74.
- Braun, B. L., E. A. Kind, J. B. Fowles, and W. G. Suarez. 2002. "Consumer Response to a Report Card Comparing Healthcare Systems." *American Journal of Managed Care* 8 (6): 522–8.
- Brown, M. 1995. "Commentary: Competition, Managed Care and Trusteeship—Can Voluntary Hospital Governance Survive? Will Not-for-Profit Hospitals Survive?" *Health Care Management Review* 20 (1): 84–9.
- Chillemi, O., and B. Gui. 1991. "Uninformed Customers and Nonprofit Organizations: Modeling 'Contract Failure' Theory." *Economic Letters* 35 (1): 5–8.
- Chou, S. Y. 2002. "Asymmetric Information, Ownership and Quality of Care: An Empirical Analysis of Nursing Homes." *Journal of Health Economics* 21 (2): 293–311.
- Christianson, J. B., D. R. Wholey, L. Warrick, and P. Henning. 2003. "How Are Health Plans Supporting Physician Practice? The Physician Perspective." *Health Affairs* 22 (1): 181–9.
- Cunningham, P. J., C. Denk, and M. Sinclair. 2001. "Do Consumers Know How Their Health Plan Works?" *Health Affairs* 20 (2): 159–66.
- Davidson, G. 1993. "Does Inappropriate Use Explain Small-Area Variations in the Use of Health Care Services? A Critique." *Health Services Research* 28 (4): 389–400.
- De Beyer, J. 1999. "Monitoring Disenrollment from HMOs." In *Medicare HMOs: Making Them Work for the Chronically Ill*, edited by R. Kronick and J. de Beyer, pp. 183–204. Chicago: Health Administration Press.
- DiMaggio, P. J., and H. K. Anheier. 1990. "The Sociology of Nonprofit Organizations and Sectors." *Annual Review of Sociology* 16: 137–59.

- Easley, D., and M. O'Hara. 1988. "Contracts and Asymmetric Information in the Theory of the Firm." *Journal of Economic Behavior and Organization* 9 (3): 229-46.
- Evans, R. 1990. "The Dog in the Night-Time: Medical Practice Variations and Health Policy." In *The Challenges of Medical Practice Variations*, edited by T. Anderson and G. Mooney, pp. 117-52. London: Macmillan Press.
- Farley-Short, P., L. McCormack, J. Hibbard, J. A. Shaul, L. Harris-Kojetin, M. H. Fox, P. Damiano, J. D. Uhrig, and P. D. Cleary. 2002. "Similarities and Differences in Choosing Health Plans." *Medical Care* 40 (4): 289-302.
- Feldman, D. S., D. H. Novack, and E. Gracely. 1998. "Effects of Managed Care on Physician-Patient Relationships, Quality of Care and the Ethical Practice of Medicine: A Physician Survey." *Archives of Internal Medicine* 158 (15): 1626-32.
- Foulke, G. E., R. A. Bell, A. D. Siefkin, and R. L. Kravitz. 1998. "Attitudes and Behavioral Intentions Regarding Managed Care: A Comparison of Academic and Community Physicians." *American Journal of Managed Care* 4 (4): 555-63.
- Freidson, E. 2001. *Professionalism: The Third Logic*. Chicago: University of Chicago Press.
- Gabel, J. 1997. "Ten Ways HMOs Have Changed during the 1990s." *Health Affairs* 16 (3): 134-45.
- Garg, P. P., K. D. Frick, M. Diener-West, and N. R. Powe. 1999. "Effect of Ownership of Dialysis Facilities on Patients' Survival and Referral for Transplantation." *New England Journal of Medicine* 341 (22): 1653-60.
- Glaeser, E., and A. Schliefer. 2001. "Not-for-Profit Entrepreneurs." *Journal of Public Economics* 81 (1): 99-115.
- Goold, S. D., T. Hofer, M. Zimmerman, and R. A. Hayward. 1994. "Measuring Physician Attitudes towards Cost, Uncertainty, Malpractice, and Utilization Review." *Journal of General Internal Medicine* 9 (10): 544-9.
- Goold, S. D., and G. Klipp. 2002. "Managed Care Members Talk about Trust." *Social Science and Medicine* 54 (6): 879-88.
- Grabowski, D. C., and R. A. Hirth. 2003. "Competitive Spillovers across Non-Profit and For-Profit Nursing Homes." *Journal of Health Economics* 22 (1): 1-22.
- Gray, B. H. 1991. *The Profit Motive and Patient Care: The Changing Accountability of Doctors and Hospitals*. Cambridge, MA: Harvard University Press.
- . 1997a. "Conversion of HMOs and Hospitals: What's at Stake?" *Health Affairs* 16 (2): 29-47.
- . 1997b. "Trust and Trustworthy Care in the Managed Care Era." *Health Affairs* 16 (1): 34-49.
- . 1999. "The Changing Face of Health Care." In *Philanthropy and the Nonprofit Sector in a Changing America*, edited by C. T. Clotfelter and T. Erlich, pp. 364-84. Bloomington, IN: Indiana University Press.
- Gray, B., and M. Schlesinger. 2002. "Health." In *The State of the Nonprofit Sector*, edited by L. Salamon, pp. 65-106. Washington, DC: Brookings Institution Press.
- Green, D., D. Strolovitch, and J. Wong. 1998. "Defended Neighborhoods, Integration and Racially Motivated Crime." *American Journal of Sociology* 104 (2): 372-403.

- Grumbach, K., D. Osmond, K. Vranizan, D. Jaffe, and A. B. Bindman. 1998. "Primary Care Physicians' Experience of Financial Incentives in Managed-Care Systems." *New England Journal of Medicine* 339 (21): 1516–21.
- Hall, M. A. 2002. "Law, Medicine and Trust." *Stanford Law Review* 55: 463–527.
- Hall, M. A., E. Dugan, B. Zheng, and A. K. Mishra. 2001. "Trust in Physicians and Medical Institutions: What Is It, Can It Be Measured, and Does It Matter?" *The Milbank Quarterly* 79 (4): 613–39.
- Hansmann, H. B. 1980. "The Role of Nonprofit Enterprise." *Yale Law Journal* 89 (5): 835–901.
- Hargraves, J. L., and S. Trude. 2002. "Obstacles to Employers' Pursuit of Health Care Quality." *Health Affairs* 21 (5): 194–200.
- Himmelstein, D. U., S. Woolhandler, I. Hellander, and S. M. Wolfe. 1999. "Quality of Care in Investor-Owned vs. Not-for-Profit HMOs." *Journal of the American Medical Association* 282 (2): 159–63.
- Hirth, R. A. 1993. "Consumer Information and Ownership in the Nursing Home Industry." Doctoral thesis, University of Pennsylvania.
- . 1997. "Competition between For-Profit and Nonprofit Health Care Providers: Can It Help Achieve Social Goals?" *Medical Care Research and Review* 54 (4): 414–38.
- . 1999. "Consumer Information and Competition between Nonprofit and For-Profit Nursing Homes." *Journal of Health Economics* 18 (2): 219–40.
- Hirth, R.A., M. E. Chernew, and S. M. Orzol. 2000. "Ownership, Competition, and the Adoption of New Technologies and Cost-Saving Practices in a Fixed-Price Environment." *Inquiry* 37 (3): 282–94.
- Holmstrom, B., and P. Milgrom. 1994. "The Firm as an Incentive System." *American Economic Review* 84 (4): 972–91.
- Holtmann, A., and S. G. Ullmann. 1993. "Transaction Costs, Uncertainty and Not-for-Profit Organizations: The Case of Nursing Homes." In *The Nonprofit Sector in the Mixed Economy*, edited by A. Ben-Ner and B. Gui, pp. 149–59. Ann Arbor, MI: University of Michigan Press.
- Kaiser Family Foundation. 1999. *Survey of Physicians and Nurses*. Menlo Park, CA: Kaiser Family Foundation.
- Kanter, R., and D. Summers. 1987. "Doing Well While Doing Good: Dilemmas of Performance Measurement in Nonprofit Organizations and the Need for a Multiple Constituency Approach." In *The Nonprofit Sector: A Research Handbook*, edited by W. W. Powell, pp. 154–66. New Haven: Yale University Press.
- Kramer, R. M. 2000. "A Third Sector in the Third Millennium?" *Voluntas* 11: 1–23.
- Krashinsky, M. 1997. "Stakeholder Theories of the Nonprofit Sector: One Cut at the Economic Literature." *Voluntas* 8: 149–62.
- Krause, E. A. 1996. *Death of the Guilds: Professions, States and the Advance of Capitalism: 1930 to the Present*. New Haven: Yale University Press.
- Kuttner, R. 1996a. "Columbia/HCA and the Resurgence of the For-Profit Hospital Business, Part 1 of 2." *New England Journal of Medicine* 335 (5): 362–7.
- . 1996b. "Columbia/HCA and the Resurgence of the For-Profit Hospital Business, Part 2 of 2." *New England Journal of Medicine* 335 (6): 446–51.

- . 1998. "Must Good HMOs Go Bad? The Commercialization of Prepaid Group Health Care." *New England Journal of Medicine* 338 (21): 1558–63.
- Landon, B. E., A. M. Zaslavsky, N. D. Beaulieu, J. A. Shaul, and P. D. Cleary. 2001. "Health Plan Characteristics and Consumers' Assessments of Quality." *Health Affairs* 20 (2): 274–86.
- Lawrence, D. M., P. H. Mattingly, and J. M. Ludden. 1997. "Trusting in the Future: The Distinct Advantage of Nonprofit HMOs." *Milbank Quarterly* 75 (1): 5–10.
- McCormack, L., S. Garfinkle, J. Hibbard, S. Keller, K. Kilpatrick, and B. Kosiak. 2002. "Health Insurance Knowledge among Medicare Beneficiaries." *Health Services Research* 37 (1): 43–63.
- Malani, A., T. Philpson, and G. David. 2003. "Theories of Firm Behavior in the Non-Profit Sector: Synthesis and Empirical Evaluation." In *The Governance of Not-For-Profit Organizations*, edited by E. Glaeser, pp. 181–215. Chicago: University of Chicago Press.
- Mark, T. L. 1996. "Psychiatric Hospital Ownership and Performance: Do Nonprofit Organizations Offer Advantages in Markets Characterized by Asymmetric Information?" *Journal of Human Resources* 31 (3): 631–49.
- Marmor, T., M. Schlesinger, and R. Smithey. 1987. "Nonprofit Organizations and Health Care." In *The Nonprofit Sector: A Research Handbook*, W.W. Powell, ed, pp. 221–39. New Haven: Yale University Press.
- Mechanic, D. 1998. "The Functions and Limitations of Trust in the Provision of Medical Care." *Journal of Health Politics, Policy and Law* 23 (4): 660–86.
- . 2001. "The Managed Care Backlash: Perceptions and Rhetoric in Health Care Policy and the Potential for Health Care Reform." *Milbank Quarterly* 79 (1): 35–54.
- Mechanic, D., and M. Rosenthal. 1999. "Responses of HMO Medical Directors to Trust Building in Managed Care." *The Milbank Quarterly* 77 (3): 283–303.
- Miller, T. E. 1998. "Center Stage on the Patient Protection Agenda: Grievance and Appeal Rights." *Journal of Law, Medicine and Ethics* 26 (2): 89–99.
- Miller, T. E., and C. R. Horowitz. 2000. "Disclosing Doctors' Incentives: Will Consumers Understand and Value the Information?" *Health Affairs* 19 (4): 149–55.
- Mukamel, D.B., J. Zwanziger, and K. J. Tomaszewski. 2001. "HMO Penetration, Competition and Risk-Adjusted Hospital Mortality." *Health Services Research* 36 (6, part I): 1019–35.
- Musacchio, R., S. Zuckerman, L. E. Jensen, and L. Freshnook. 1986. "Hospital Ownership and the Practice of Medicine from the Physician's Perspective." In *For-Profit Enterprise in Health Care*, B. Gray, ed., pp. 385–401. Washington, DC: National Academy Press.
- Needleman, J. 2001. "The Role of Nonprofits in Health Care." *Journal of Health Politics, Policy and Law* 26 (5): 1113–30.
- Noble, A. A., and T. A. Brennan. 1999. "The Stages of Managed Care Regulation: Developing Better Rules." *Journal of Health Politics, Policy and Law* 24 (6): 1275–305.
- Oliver, P., and G. Marwell. 2001. "Whatever Happened to Critical Mass Theory? A Retrospective and Assessment." *Sociological Theory* 19 (3): 292–311.

- Ortmann, A., and M. Schlesinger. 1997. "Trust, Repute and the Role of Nonprofit Enterprise." *Voluntas* 8: 97-119.
- Proenca, E. J., M. D. Rosko, and J. S. Zinn. 2000. "Community Orientation in Hospitals: An Institutional and Resource Dependence Perspective." *Health Services Research* 35 (5, part 1): 1011-35.
- Quaye, R. 2001. "Professional Integrity in the Age of Managed Care: Views of Physicians." *International Journal of Health Care Quality Assurance* 14 (2-3): 82-6.
- Reed, M., and S. Trude. 2002. "Who Do You Trust? Americans' Perspectives on Health Care, 1997-2001." Tracking Report. Washington, DC: Center for the Study of Health System Change.
- Reschovsky, J., M. Reed, D. Blumenthal, and B. Landon. 2001. "Physicians' Assessments of Their Ability to Provide High-Quality Care in a Changing Health Care System." *Medical Care* 39 (3): 254-69.
- Riportella-Mueller, R., and D. P. Slesinger. 1982. "The Relationship of Ownership and Size to Quality of Care in Wisconsin Nursing Homes." *The Gerontologist* 22 (4): 429-34.
- Rodwin, M. A. 1993. *Medicine, Money, and Morals: Physicians' Conflicts of Interest*. New York: Oxford University Press.
- Rosenthal, M., and M. Schlesinger. 2002. "Not Afraid to Blame: The Neglected Role of Blame Attribution in Medical Consumerism and Some Implications for Health Policy." *Milbank Quarterly* 80 (1): 41-95.
- Schlesinger, M. 1998a. "Mismeasuring the Consequences of Ownership: External Influences and the Comparative Performance of Public, For-Profit and Nonprofit Organizations." In *Private Action and Public Good*, edited by W. W. Powell and E. Clemens, pp. 85-113. New Haven: Yale University Press.
- . 1998b. "Utilization Review and the Treatment of Mental Illness: Emerging Norms and Variabilities." In *Managed Behavioral Health Care: Current Realities and Future Potential*, edited by D. Mechanic, pp. 31-40. San Francisco: Josey-Bass.
- . 2002. "On Values and Democratic Policymaking: The Fragile Consensus around Market-Oriented Medical Care." *Journal of Health Politics, Policy and Law* 27 (6): 889-92.
- Schlesinger, M., J. Bentkover, D. Blumenthal, R. Musacchio, and J. Willer. 1987. "The Privatization of Health Care and Physicians' Perceptions of Access to Hospital Services." *The Milbank Quarterly* 65 (1): 25-58.
- Schlesinger, M., D. Blumenthal, and E. Schlesinger. 1986. "Profits under Pressure: The Economic Performance of Investor-Owned and Nonprofit Health Maintenance Organizations." *Medical Care* 24 (7): 615-27.
- Schlesinger, M., P. Cleary, and D. Blumenthal. 1989. "The Ownership of Health Facilities and Clinical Decision-Making: The Case of the ESRD Industry." *Medical Care* 27 (3): 244-58.
- Schlesinger, M., B. Druss, and T. Thomas. 1999. "No Exit? The Effect of Health Status on Dissatisfaction and Disenrollment from Health Plans." *Health Services Research* 34 (2): 547-76.
- Schlesinger, M., and B. Gray. 2004. "Nonprofit Organizations and Health Care: The Paradox of Persistent Attention." In *The Nonprofit Sector: A Research Handbook*.

- 2d Edition, edited by W. W. Powell and R. Steinberg. New Haven: Yale University Press.
- Schlesinger, M., B. Gray, and E. Bradley. 1996. "Charity and Community: The Role of Nonprofit Ownership in a Managed Health Care System." *Journal of Health Politics Policy and Law* 21 (4): 697-752.
- Schlesinger, M., B. Gray, and K. Perreira. 1997. "Medical Professionalism under Managed Care: The Pros and Cons of Utilization Review." *Health Affairs* 16 (1): 106-24.
- Schlesinger, M., S. Mitchell, and B. Gray. 2003. "Measuring Community Benefits Provided by Nonprofit and For-Profit HMOs." *Inquiry* 40 (2): 114-32.
- Schlesinger, M., M. Wynia, and D. Cummins. 2000. "Some Distinctive Features of the Impact of Managed Care on Psychiatry." *Harvard Review of Psychiatry* 8 (5): 216-30.
- Sleeper, S., D. R. Wholey, R. Hamer, S. Schwartz, and V. Inoferio. 1998. "Trust Me: Technical and Institutional Determinants of Health Maintenance Organizations Shifting Risk to Physicians." *Journal of Health and Social Behavior* 39 (3): 189-200.
- Sloan, F. A. 1998. "Commercialism in Nonprofit Hospitals." In *To Profit or Not to Profit: The Commercial Transformation of the Nonprofit Sector*, edited by B. Weisbrod, pp. 151-68. New York: Cambridge University Press.
- Sloan, F., and M. Hall. 2002. "Market Failures and the Evolution of State Regulation of Managed Care." *Law and Contemporary Problems* 65 (4): 169-206.
- Spector, W. D., T. M. Selden, and J. W. Cohen. 1998. "The Impact of Ownership Type on Nursing Home Outcomes." *Health Economics* 7 (7): 639-53.
- Smith, M. A., A. B. Bindman, M. K. Davis, and M. D. Finch. 2001. "To Help or Hinder: Which Is More Important in Explaining a Physician's Willingness to Recommend a Health Plan?" *Medical Care* 39 (5): 469-77.
- South, S., and K. Crowder. 1998. "Leaving the 'Hood: Residential Mobility between Black, White and Integrated Neighborhoods." *American Sociological Review* 63 (1): 17-26.
- Stevens, R. 2001. "Public Roles for the Medical Profession in the United States: Beyond Theories of Decline and Fall." *Milbank Quarterly* 79 (3): 327-53.
- Tu, H. T., and J. D. Reschovsky. 2002. "Assessments of Medical Care by Enrollees in For-Profit and Nonprofit Health Maintenance Organizations." *The New England Journal of Medicine* 346 (17): 1288-93.
- Watts, D. 1999. "Networks, Dynamics, and the Small-World Phenomenon." *American Journal of Sociology* 105 (2): 493-527.
- Weisbrod, B. A. 1988. *The Nonprofit Economy*. Cambridge, MA: Harvard University Press.
- Weisbrod, B. A., and M. Schlesinger. 1986. "Ownership Form and Behavior in Regulated Markets with Asymmetric Information." In *The Nonprofit Sector: Economic Theory and Public Policy*, edited by S. Rose-Ackerman, pp. 133-51. New York: Oxford University Press.
- Wennberg, J. M. 1996. "Cooper and the Dartmouth Atlas of Health Care Working Group." *The Dartmouth Atlas of Health Care in the United States*. Chicago: American Hospital Publishing Inc.

- Whiteis, D. G. 1997. "Unhealthy Cities: Corporate Medicine, Community Economic Underdevelopment, and Public Health." *International Journal of Health Services* 27 (2): 227-42.
- Wholey, D., J. Christianson, K. Jones, M. Finch, and the Physicians Evaluating Health Plans Research Team. 2003. "What Do Physician Recommendations of Health Plans Mean?" *American Journal of Managed Care* 9 (Spec No. 2): 88-99.
- Wickizer, T. M., and D. Lessler. 2002. "Utilization Management: Issues, Effects, and Future Prospects." *Annual Review of Public Health* 23: 233-54.
- Williams, T. V., A. M. Zaslavsky, and P. D. Cleary. 1999. "Physician Experiences with, and Ratings of, Managed Care Organizations in Massachusetts." *Medical Care* 37 (6): 589-600.
- Wolff, N., and M. Schlesinger. 1998. "Risk, Motives and Styles of Utilization Review: A Cross-Condition Comparison." *Social Science and Medicine* 47 (7): 911-26.
- Woolhandler, S., D. Himmelstein, M. Angell, Q. Young and the Physicians' Working Group for Single-Payer National Health Insurance. 2003. "Proposal of the Physicians' Working Group for Single-Payer National Health Insurance." *Journal of the American Medical Association* 290 (6): 798-805.
- Wynia, M. K., J. B. VanGeest, D. S. Cummins, and I. B. Wilson. 2003. "Do Physicians Not Offer Useful Services Because of Coverage Restrictions?" *Health Affairs* 22 (4): 190-7.
- Wynia, M. K., D. Zucker, S. Supran, and H. P. Selker. 2002. "Patient Protection and Risk Selection. Do Primary Care Physicians Encourage Their Patients to Join or Avoid Capitated Health Plans According to the Patients' Health Status?" *Journal of General Internal Medicine* 17 (1): 40-7.
- Young, G. J. 1996/97. "Insider Representation on the Governing Board of Nonprofit Hospitals: Trends and Implications for Charitable Care." *Inquiry* 33 (4): 352-62.
- Young, G. J., K. R. Desai, and F. J. Hellinger. 2000. "Community Control and Pricing Patterns of Nonprofit Hospitals: An Antitrust Analysis." *Journal of Health Care Politics, Policy and Law* 25 (6): 1051-81.
- Zheng, B., M. A. Hall, E. Dugan, K. E. Kidd, and D. Levine. 2002. "Development of a Scale to Measure Patients' Trust in Health Insurers." *Health Services Research* 37 (1): 187-202.