

Trust in Physicians and Medical Institutions: What Is It, Can It Be Measured, and Does It Matter?

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THE CENTRAL ROLE OF TRUST IN MEDICAL relationships has long been recognized (Mechanic 1996; Pellegrino, Veatch, and Langan 1991; Parsons 1951; Peabody 1927), but trust has not been measured or systematically analyzed until recently. It has received increasing attention in recent years because of the strains placed on the doctor-patient relationship by managed care. Trust is seen as a global attribute of treatment relationships, one that encompasses subsidiary features such as satisfaction, communication, competency, and privacy—each of which has considerable importance in its own right.

Trust has significance on both *intrinsic* and *instrumental* grounds (Carter 1989; Lagenspetz and Akademi 1992; Rhodes and Strain 2000). Intrinsicly, it is the core, defining characteristic that gives the doctor-patient relationship meaning, importance, and substance—the way love or friendship defines the quality of an intimate relationship. Preserving, enhancing, and justifying trust are the fundamental goals of much of medical ethics (Carter 1989; Pellegrino and Thomasma 1993; Rogers 1994; Rhodes and Strain 2000) and are prominent objectives in health care law and public policy (Mechanic and Schlesinger 1996; Mechanic 1998).

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As an *instrumental* value, trust is widely believed to be essential to effective therapeutic encounters. It has been hypothesized or shown to affect a host of important behaviors and attitudes, including patients' willingness to seek care, reveal sensitive information, submit to treatment, participate in research, adhere to treatment regimens, remain with a physician, and recommend physicians to others (Parsons 1951; Rhodes and Strain 2000; Pennebaker 1990; Rothstein 1996; Safran, Taira, Rogers, et al. 1998; Fiscella, Franks, Clancy, et al. 1999; Corbie-Smith, Thomas, Williams, et al. 1999). In addition, it may mediate clinical outcomes. Commentators speculate that trust is a key factor in the mind-body interactions that underlie placebo effects, the effectiveness of alternative medicine, and unexplained variations in outcomes from conventional therapies (Branch 2000; Basmajian 1999; Fogarty, Curbow, Wingard, et al. 1999; Mason, Clark, Reeves, et al. 1969; Novack 1987; Thomas 1987; Plotkin 1985; Evans 1985; Shapiro and Shapiro 1983; Anderson and Guerwitsch 1982; Caterinicchio 1979).

Despite the profound importance of trust in medical settings, detailed conceptual analyses and empirical information are emerging only now about what difference trust actually makes, what factors affect trust, and how trust relates to other similar attitudes and behaviors (Pearson and Raeke 2000). This article reviews and synthesizes the emerging literature on trust in physicians and in medical institutions. The review is based on three sources, the details of which are given in other publications (Zheng, Hall, Dugan, et al. 2001; Hall, Zheng, Dugan, et al. 2002; Kidd, Dugan, Hall, et al. 1999): (1) an extensive literature search of published discussions of trust in medical settings and more generally; (2) our development of a conceptual model in connection with our own empirical research on trust; and (3) results from surveys of trust that we and others have conducted in recent years. Because we aim to provide a comprehensive overview of a large topic, we must cover a lot of ground in a short space, and so we address many key points very briefly.

What Is Trust?

We begin with a detailed conceptual model of trust, which includes critical definitions and distinctions concerning the nature of trust, its components and dimensions, and the way it differs from related concepts

and attitudes. A precise statement of the operative concepts is essential because trust is riddled with a variety of subtle paradoxes and points of confusion, some of which are seldom recognized (Hardin 2001). Our primary focus is on trust in physicians, but this discussion applies also to trust in nurses and other care providers (Wilson, Morse, and Penrod 1998) and, to some extent, to trust in medical institutions.

Definitions and Distinctions

Numerous definitions of trust have been proposed, in both the medical context (Carter 1989; Jackson 1996; Johns 1996) and more broadly (Baier 1986; Bigley and Pearce 1998; Govier 1993; Mayer, Davis, and Schoorman 1995; Rempel, Holmes, and Zanna 1985; Rotter 1980; Rousseau, Sitkin, Burt, et al. 1998; Cook 2001; Uslaner 2002). Although these definitions have important differences, they also share common themes. The majority stress the *optimistic* acceptance of a *vulnerable* situation in which the truster believes the trustee will *care* for the truster's interests. We will elaborate on each of these essential components.

First, trust is inseparable from *vulnerability*, in that there is no need for trust in the absence of vulnerability. The greater the risk, the greater the potential for either trust or distrust. Trust is sometimes said to *create* vulnerability, as in an intimate relationship, but vulnerability is primary and unavoidable in medicine, and so it is proper to think of trust arising from conditions of vulnerability. Considering the profound vulnerability created by illness and invasive treatment, trust in physicians can have remarkable strength or resilience (Pellegrino and Thomasma 1993; Zaner 1991). Skeptics of physicians' trustworthiness suggest that increased vulnerability should produce lower trust (Pellegrino, Veatch, and Langan 1991). Paradoxically, however, just the opposite is possible in theory, and appears likely in reality. Because trust arises from patients' need for physicians, the greater the sense of vulnerability, the higher the potential for trust. This explains why some patients seem to revere physicians as demigods, imbued with superhuman powers (Katz 1984; Parsons 1951). This is also why trust is said to be inevitable or unavoidable in treatment relationships (Pellegrino and Thomasma 1993). This assertion is not an arrogant claim for physicians' inherent trustworthiness (Pellegrino, Veatch, and Langan 1991); instead, it recognizes the psychological reality inherent in the vulnerability created by illness and the essential connection between trust and vulnerability.

Stressing the intrinsic nature of vulnerability raises the question of how *willing* the acceptance of vulnerability must be to constitute trust. One might question whether trust exists if it is not conferred freely but is forced by the exigencies of illness. Noting the distinction between trusting *behaviors* and trusting *attitudes* resolves this conundrum. Certain behaviors may indicate the possibility of trust, but they do not constitute trust itself, which is fundamentally an attitude. For example, one who seeks care could, by virtue of this behavior, be considered to have some level of trust, but this is not necessarily so. Trust has a subjective component that requires an *optimistic acceptance* of vulnerability with certain positive expectations noted below. However, some patients may not adopt this positive attitude, even when trust-related behavior is required by their circumstances, but instead may enter treatment relationships with a wariness or pessimism that characterizes distrust. In our conceptualization, having a positive attitude, and not merely engaging in trusting behavior, is necessary to constitute trust (Mayer, Davis, and Schoorman 1995; Uslander 2002). Even when behavior reflects trust, it is necessary both for conceptual clarity and for empirical precision to distinguish the objective manifestation from the subjective attitude (Hardin 2001).

It is also important to distinguish between the phenomenon of trust and the evaluation of *trustworthiness*. Trust often corresponds with trustworthiness, but sometimes it does not. Patients can misplace trust in physicians or institutions that are not deserving, or they can fail to trust those that are. Claims about whether trust is too great or too little are necessarily normative to some degree, not purely empirical, because they depend on judgments about what attributes merit trust—an evaluation that is likely to produce different views (Hardin 2001).

In medical and other interpersonal settings, trusting attitudes are directed as much to *motivations and intentions* as they are to results (Holmes and Rempel 1989). Of course, those who trust also hope for or expect a good result, but trust has a different character when they believe that another person has their best interests at heart. Interpersonal trust, in this conception, differs from confidence or reliance, each of which also entails the calculated prediction of positive results (Becker 1996; Govier 1997; Heimer 2001). When interpersonal trust assumes that the motivations of the trusted one are benevolent and caring, it takes on an emotional quality that extends beyond mere calculated expectations based on an objective assessment of risks. For this reason, it is perfectly possible to

trust an unskilled but very caring doctor or to distrust one who is highly competent but aloof.

This *emotional, nonrational* component of trust is especially prominent in medical contexts. The extraordinary strength of trust in physicians cannot always be justified by a calculated evaluation of objective evidence. Instead, it may arise as a coping mechanism in response to the intense psychic distress created by illness. Patients facing life-threatening risks need to believe, and therefore often do believe, that the power of physicians and medicine is greater than it sometimes is (Parsons 1951). These exaggerated expectations can have real benefits—by augmenting the effectiveness of treatment, activating self-healing mechanisms, or producing a placebo response, for example. However, overly optimistic expectations can also lead to a profound sense of *betrayal* when they are not met (Mechanic 1998). Thus, one of the hallmarks of trust is that its violation tends to produce an emotional reaction of moral outrage or indignation, rather than merely disappointment in the failure to achieve expected results (Baier 1986; Lagenspetz and Akademi 1992). This moral/emotional component exists because of assumptions made—and sometimes disproved—about motivations and intentions, not only about skills and performance.

One way to encapsulate these various aspects of trust is to distinguish it from *satisfaction*, a similar attitude that is widely used to measure performance. In contrast with trust, which is a forward-looking evaluation of an ongoing relationship, satisfaction is an assessment of one or more past events (Murray and Holmes 1997). Trust and satisfaction are closely related, in that trusting patients are likely to be more satisfied, and previous good encounters are likely to foster greater trust. However, trust is concerned with much more than assessing service delivery. Trust is an attitude directed to a physician's character and personality and to an ongoing relationship. Moreover, satisfaction does not require assumptions about motivations. Accordingly, satisfaction is more ephemeral and subject to rapid revision based on differing experiences (Murray and Holmes 1997). Also, one study has found that trust is better than satisfaction at predicting which patients remain with their physician and follow treatment recommendations (Thom, Ribisl, Steward, et al. 1999).

Because of trusting views about motivations and intentions, inferior performance can result in forgiveness rather than outrage. High-trusting patients are more likely to forgive a physician's mistake with the observation that the doctor at least meant well or gave a good effort

(Ben Sira 1980). (For an especially moving personal account, see Boyte 2001.) Thus, the willingness to forgive is another litmus test for the resilience of trust. Moreover, trust colors one's perception of the results. Through the resolution of cognitive dissonance, patients with high trust are more likely to perceive performance positively, even if it is objectively inferior (Murray, Holmes, and Griffin 1996a; Caterinicchio 1979; Mechanic and Schlesinger 1996). This might be viewed as an effective psychological coping strategy or a relationship buffer that makes trust more resilient, or it might be viewed as an undesirable form of wish fulfillment or denial of reality.

Whatever the interpretation, trust can behave in a number of different ways over the course of a relationship. It can have a *feedback loop* in which it can either build remarkable strength or rapidly deteriorate through spirals of expectations that influence perceptions of experiences (Murray, Holmes, and Griffin 1996b; Govier 1997). Thus, patients who enter a new relationship with high trust are more likely to experience results positively, which builds further trust and leads to greater expectations and satisfaction from future encounters, whereas patients who enter a relationship with distrust are more likely to view results negatively, which reinforces their initial view and colors their interpretation of subsequent treatment, even if it is flawless (Holmes and Rempel 1989). Trust also can have a *cliff effect*, in which trust builds for a time but then overextends itself beyond a physician's actual trustworthiness, leading to an inevitable steep decline or sense of betrayal (Thorne and Robinson 1988a). In addition, trust can reach a *plateau*, or steady state, in which there is an equilibrium between expectations and subjective experiences.

Finally, it is important to note the possible meanings of *distrust*. There are at least three. The first is simply a low level or absence of trust, which captures a sense of agnosticism or lack of familiarity but not active distrust. Alternatively, distrust can be viewed as the opposite of trust, that is, having anxious or pessimistic views of motivation and expected results (Govier 1992). Under either concept, trust and distrust can be measured on the same positive-to-zero or positive-to-negative scale, so it would be impossible to be both trusting and distrustful. There is, however, a more complex view of distrust, under which it is possible to be both trustful and distrustful (Bigley and Pearce 1998; Lewicki and McAllister 1998). This third perspective sees distrust as a substitute for or complement to trust, rather than as an attitude in opposition.

Distrust in the form of wariness that generates caution and verification (“trust but verify”) can substitute for trust, or can enhance trust if initial experiences are positive and inquiries are answered satisfactorily (Lewicki and McAllister 1998; Mishra 1996; Rousseau, Sitkin, Burt, et al. 1998; Govier 1998).

These different meanings of distrust help to explain why trust is not limited to a single patient type (the “trusting patient”) but is consistent with different patient personalities and communication styles. Some providers mistakenly believe that trust is fostered only with a paternalistic style of communication and a passive patient relationship (Sherlock 1986). This may be true for some patients, but the more complex view of distrust reveals that assertive patients may be trusting as well.

Objects of Trust

We turn now to distinctions about the objects and dimensions of trust, that is, whom or what one trusts, and what about them is trusted. As noted above, discussions of trust in physicians apply with equal force to trust in nurses and other care providers (Wilson, Morse, and Penrod 1998; Johns 1996; Lynn-McHale and Deatrlick 2000). Trust is also relevant to institutions and larger social systems in medicine. However, other objects of trust generate important contrasts. Consider table 1, showing potential objects of trust, consisting of personal versus institutional objects of trust, regarded at either individual or system levels (Luhmann 1973; Rousseau, Sitkin, Burt, et al. 1998; Buchanan 2000). These distinctions affect the dimensions of trust and how trust behaves. Trust in a known physician has a much different foundation, based primarily on personal experience and individual personality, than trust in a health plan or trust in doctors in general, which is based

TABLE 1
Potential Objects of Trust

	Individual	System
Personal	My doctor or care provider	Doctors or care providers in general
Institutional	My hospital, clinic, or health plan	Hospitals, clinics or health plans in general, or the medical system as a whole

more on professional institutions, legal/regulatory protections, and media portrayals (Mechanic 1996; Goold 1998). However, all of these influences potentially have some relevance for any object of trust, and some bases for trust are highly relevant to all objects of trust—for instance, shared social understandings and role expectations, or symbolic and archetypal elements (e.g., white coat or red cross) (Parsons 1951).

These contrasting objects of trust can interact in important ways. Due to possible halo effects, patients' trust in their personal physicians may influence their trust in a hospital or health plan affiliated with their physicians (Gray 1997), or the correlative may be true: institutional trust may influence individual trust, especially in newly formed relationships (Mechanic and Schlesinger 1996; Buchanan 2000). Similarly, *system trust* influences new relationships, since, knowing little else about a new doctor or health plan, one is likely to begin the relationship with general attitudes about doctors or health plans (Mechanic 1996). We refer to this newly formed individual trust, based on generic characteristics, as *blind trust*. As experience develops, the basis for trust likely shifts rapidly from system features to knowledge of individual characteristics gained from firsthand experience.

An additional point merits brief mention. We have chosen to focus on trust *in* physicians and medical institutions, in contrast with trust *by* physicians and institutions in their patients and members. The latter is also important, especially for patients with chronic disease, in that providers who convey an attitude of trust in their patients' own abilities may help patients to become more self-sufficient, which in turn may lead to greater trust in the provider (Thorne and Robinson 1988b). However, medical relationships are much less reciprocal in their exchange of trust than are other personal or business relationships (Govier 1997). Especially in acute care situations, the trust vector from patient to provider is much more prominent and important than in the reverse direction because the conditions of vulnerability that give rise to trust in medical settings are not shared equally on both sides of the relationship.

Dimensions of Trust

Trust, in addition to having different types and objects, has multiple *dimensions*. One can trust another with or about some things, but not others (Cooper 1985). Trust theorists, both within medicine (Anderson

and Dedrick 1990; Thom and Campbell 1997; Kao, Green, Davis, et al. 1998a; Mechanic and Meyer 2000; Mechanic 1996; Lynn-McHale and Deatrick 2000) and more broadly (Mishra 1996; Govier 1997; Barber 1983; Mayer, Davis, and Schoorman 1995), have posited multiple dimensions with many differences among them. Some focus on specific acts or obligations, while others stress personal attributes or character traits. Despite the differences among these conceptual schemes, there is a remarkable core of commonality among them. From this literature and our own conceptual model development, we have derived a five-part configuration: fidelity, competence, honesty, confidentiality, and global trust. (We do not include the dimension of control, advanced by Mechanic [1998], because it does not appear prominently in qualitative studies of trust, including those subsequently reported by Mechanic himself [Mechanic and Meyer 2000].)

Fidelity is pursuing a patient's best interests and not taking advantage of his or her vulnerability. This can be expressed through the related concepts of agency or loyalty, and it consists of caring, respect, advocacy, and avoiding conflicts of interest. Caring and respect are of central importance because they reflect directly on perceived motivation. Advocacy requires action, more than simply holding the right thought. Avoiding conflicts requires considering the patient's interests rather than other competing interests. There are a host of potential competing interests, but in this context, the most relevant are the physician's, the institution's, and other patients' or members'. The physicians' interests potentially include economic, professional, and personal interests.

Competence means avoiding mistakes and producing the best achievable results. Mistakes can be cognitive, which are errors in judgment, or technical, which are errors in execution. Most patients have difficulty assessing technical competence directly, so their views of competence are heavily influenced by a physician's interpersonal competence (communication skills and bedside manner). However, it is important for conceptual and empirical reasons to distinguish between *measures* of trust and *predictors* of trust, that is, between what trust *is* and what *influences* trust. This can be difficult to do when considering physicians' communication skills. Competent medical care entails gathering accurate medical histories and giving patients the information they need for the treatment to be effective. To this extent, trust in competence entails some trust in communication skills. However, many communication skills such as eye contact or being a compassionate listener do not affect the accuracy or

effectiveness of care directly, and it does not make sense to speak of trusting a physician to have good eye contact. Instead, these aspects of communication are relevant to trust because they influence how patients perceive their physicians' competence, caring, and other personal characteristics. To help preserve this distinction, we limit the competence dimension to communication skills that enhance the technical aspects of care.

The *honesty* dimension entails telling the truth and avoiding intentional falsehoods. Dishonesty can include outright lies, half-truths, or deception by silence. Dishonesty can be further classified according to who benefits from the dishonesty: (1) the physician, for example, by failing to admit mistakes; (2) the patient (or family), for example, by giving false hopes or triggering placebo effects; or (3) an institution, for example, by covering up the process, criteria, or constraints for making important decisions. Some kinds of dishonesty implicate several of these categories, for instance, misleading a patient about the risks of treatment (lack of informed consent) in order to encourage them to agree to beneficial treatment or to discourage them from expensive treatment. Honesty can also relate to the other dimensions of trust, for instance, admitting to a lack of knowledge or experience (competence), or disclosing a conflict of interest (fidelity). Paradoxically, therefore, increased honesty might lower trust in other dimensions, which makes the net effect on overall trust uncertain.

Confidentiality entails the protection and proper use of sensitive or private information. It does not require absolute secrecy but rather that information be revealed only as necessary for proper medical care. The potential sources for leaks of private medical information include the physician, other medical personnel, and those who keep medical records within medical and insurance institutions. The potential concerns include personal or economic harms that might result from disclosures to family or friends or to employers or insurers, inappropriate or disrespectful discussion among medical personnel, or a generalized sense of losing control over information about one's self as it enters the computerized arena.

Considering the increased attention given to medical confidentiality in recent years, we expected it to feature prominently in concerns about trust. However, several researchers have found that, in developing scales to measure trust, it is difficult to compose confidentiality questions that do not produce strongly positively skewed responses, and that variation in responses to confidentiality questions does not correlate well with variation in responses to other trust questions (Thom, Ribisl, Steward, et al. 1999; Mechanic and Meyer 2000; Hall, Zheng, Dugan, et al. 2002).

It appears that, although confidentiality is important, most patients appear to enter treatment relationships with an assumption of confidentiality that does not vary much or vary predictably with other aspects of trust. This conclusion may not hold, however, for specialized populations that have not yet been studied in large numbers. For instance, confidentiality may be a serious concern—and one that is reliably related to trust—for some minority groups, HIV or STD patients, or patients with mental illness or genetic conditions. Also, confidentiality has been found to be an integral aspect of trust in insurers (Zheng, Hall, Dugan, et al. 2001).

The final dimension is *global* trust, which serves two functions. First, this is a catchall for concerns that have strong connections with several of the other areas and do not fit exclusively in one. But global trust is more than this. It is likely that trust has a significant component that is irreducible or not subject to dissection—what one might call the “soul of trust.” The global dimension is intended to capture this more holistic aspect of trust.

This five-part conceptual model has not borne itself out fully in empirical testing. Several research teams have attempted unsuccessfully to develop measures of trust that track these dimensions separately (Hall, Zheng, Dugan, et al. 2001; Kao, Green, Davis, et al. 1998a; Thom, Ribisl, Steward, et al. 1999). Instead, trust in physicians behaves as a unidimensional construct, in contrast with trust in other settings (interpersonal and business) (Mishra and Spreitzer 1998; Johnson-George and Swap 1982; Larzelere and Huston 1980). Items measuring these separate dimensions are no more strongly correlated with each other than they are with items measuring other dimensions. However, these items correlate strongly with the overall trust scale and with global trust items.

Several conclusions can be drawn from this finding. It might mean these posited dimensions do not exist. This is unlikely, though, because these dimensions have strong face validity and are supported by evidence from focus groups and qualitative interviews (Thom and Campbell 1997; Mechanic and Meyer 2000; Semmes 1991). Alternatively, this unidimensional structure suggests that, while trust contains these several dimensions, people do not in fact distinguish among them, although each influences trust. To illustrate, imagine a rubber raft with several nozzles. Each nozzle is capable of taking air in or letting it out, but they inflate or deflate the entire raft, not individual sections. More to the point, a physician who displays fidelity or honesty is likely to enhance trust in competence or confidentiality as well, whereas a patient who

catches a doctor in a lie is likely to also question the other attributes. This interconnection of separate dimensions indicates that, in medical settings, trust has a pervasive quality that makes it distinctly holistic.

Measuring and Predicting Trust

It is no longer necessary to base discussions about trust solely on theory. There is a burgeoning body of empirical findings about causes, correlates, and consequences of trust. Space does not permit a thorough review here, but a brief summary illustrates how this conceptual model fits with emerging evidence and highlights where future research should focus.

Measures of Trust

Recent research has demonstrated that trust is a coherent psychological construct that can be reliably measured and differentiated from related concepts such as satisfaction. Several different research teams, including our own (see table 2), have developed multi-item scales to measure trust in physicians (Anderson and Dedrick 1990; Safran, Kosinski, Tarlov, et al. 1998; Kao, Green, Davis, et al. 1998b), in health insurers (Zheng, Hall, Dugan, et al. 2001), and in hospitals or the medical system (LaVeist, Nickerson, and Bowie 2000). Despite their differences, each scale is validated and has adequate psychometric properties. Also, each scale is broadly consistent with our conceptual scheme (Pearson and Raeke 2000; Hall, Zheng, Dugan, et al. 2002). There are important differences among these scales, however. As Hall and colleagues (2002) summarized, some scales do better than others in distinguishing trust itself from predictors and consequences of trust, and some scales do not include all the important domains of trust. Also, scale development and empirical testing are much more advanced for trust in a known physician than for trust in the medical profession, medical institutions, or the system of medicine.

The Level of Trust

Contrary to claims that trust is low or declining (Frankel 1998), these studies document that most patients have a remarkably high level of trust in their physician. On a five-point scale where 1 = strongly distrust and

TABLE 2
Content and Properties of Wake Forest Scales Measuring Trust

Dimensions	Trust in physician (Hall, Zheng, Dugan, et al. 2002)	Trust in insurer (Zheng, Hall, Dugan, et al. 2001)
Fidelity	<p>[Your doctor] will do whatever it takes to get you all the care you need</p> <p>Sometimes [your doctor] cares more about what is convenient for him/her than about your medical needs</p>	<p>[Your insurer] cares more about saving money than about getting you the treatment you need</p>
Competence	<p>[Your doctor's] medical skills are not as good as they should be</p> <p>[Your doctor] is extremely thorough and careful</p> <p>Sometimes, [your doctor] does not pay full attention to what you are trying to tell him/her</p>	<p>As far as you know, the people at [your insurer] are very good at what they do</p> <p>You feel like you have to double-check everything [your insurer] does</p>
Honesty	<p>[Your doctor] is totally honest in telling you about all of the different treatment options available for your condition</p>	<p>You think the people at [your insurer] are completely honest</p> <p>If someone at [your insurer] made a serious mistake, you think they would try to hide it</p> <p>If you have a question, you think [your insurer] will give you a straight answer</p>
Confidentiality		<p>You worry that private information [your insurer] has about you could be used against you</p>

continued

TABLE 2 *continued*

Dimensions	Trust in physician (Hall, Zheng, Dugan, et al. 2002)	Trust in insurer (Zheng, Hall, Dugan, et al. 2001)
Global	You completely trust [your doctor's] decisions about which treatments are best for you	You believe [your insurer] will pay for everything it is supposed to, even really expensive treatments
	[Your doctor] only thinks about what is best for you	You worry there are a lot of loopholes in what [your insurer] covers that you don't know about
	You have no worries about putting your life in [your doctor's] hands	If you got really sick, you're afraid [your insurer] might try to stop covering you altogether
	All in all, you have complete trust in [your doctor]	All in all, you have complete trust in [your insurer]
	alpha = 0.93; mean = 41 in a range of 10–50; SD = 6.2	alpha = 0.92; mean = 37 in a range of 11–55; SD = 7.8

5 = strongly trust, most of the major studies find that the *mean* level of trust in one's physician is near or well above 4 (Hall, Zheng, Dugan, et al. 2002; Thom, Ribisl, Steward, et al. 1999; Anderson and Detric 1990). In general, 90 percent or more of patients express some level of trust in their physician, and two-thirds express strong trust (Lake 2000; Gallagher, Robert, Margaret, et al. 2001). High trust scores may be attributable to selection or reporting biases in trust surveys. People may be reluctant to admit they dislike their doctors for fear that this will affect their care if their doctor were to find this out. However, the persistence of high trust scores across many different studies suggests the effect is real. Although one study showed trust declined modestly from 1996 to 1999 (Murphy, Chang, Montgomery, et al. 2000), the profound changes sweeping medicine appear not to have undermined the ability of patients to trust their doctors, so far (Hargraves 2000; Pescosolido, Tuch, and Martin 2001). This indicates that the foundations of trust

in physicians are more rooted in fundamental aspects of the treatment relationship than in shifting social and institutional frameworks.

In contrast to trust in physicians, trust in health insurers and in hospitals appears to be distinctly lower (Blendon, Benson, Morin, et al. 1997; Blendon, Brodie, Benson, et al. 1998; LaVeist, Nickerson, and Bowie 2000). Direct comparisons are difficult to make, however, since interpersonal trust is qualitatively different than institutional trust.

Predictors of Trust

Noting which factors have and have not been found to be related to trust confirms additional aspects of our conceptual model. Relevant factors can be classified as patient characteristics, physician characteristics, and relationship or situational factors. For the most part, patient characteristics are not strong predictors of trust. Excluding age, studies have found inconsistent, weak, or no relationships of trust to most demographic characteristics (Anderson and Dedrick 1990; Kao, Green, Davis, et al. 1998b; Thom, Ribisl, Steward, et al. 1999; Meit, Williams, Mencken, et al. 1997; LaVeist, Nickerson, and Bowie 2000; Pescosolido, Tuch, and Martin 2001). Age has a modest, positive correlation with trust, which may be a generational effect, or may arise from greater contact with physicians. Some studies have found other demographic factors such as race or education to have a statistically significant relationship with trust (Wholey and Sommers 2001), but these findings have not been consistent across studies or they are of a small magnitude. For instance, Doescher and colleagues (2000) reported that lack of continuity in care has much greater impact on trust than do race, gender, education, income, or health status, and Pescosolido, Tuch, and Martin (2001) reported that these factors do not consistently affect various measures of trust they reviewed from different studies in different decades.

Especially surprising is that personality factors have not, so far, emerged as strong predictors of trust. Speculation that people's basic outlook on life or worldview affects their ability to trust physicians is not borne out by existing studies, which have not found a strong or consistent relationship with general measures of social trust or cynicism (Kao, Green, Zaslavski, et al. 1998; Thom, Ribisl, Steward, et al. 1999). This suggests that most patients enter treatment encounters with a capacity to trust. Similarly, trust levels do not appear strongly related to patients'

preference for being involved in making medical decisions (Hall, Dugan, Zheng, et al. 2000; Thom, Ribisl, Steward, et al. 1999; Anderson and Dedrick 1990). This suggests that trust is consistent with patient roles that are both deferential to physicians and actively involved in decision making.

Considering physicians' characteristics, most demographic and professional characteristics are not strong predictors of the level of patients' trust, even when physicians' demographics are matched or contrasted with their patients' (Kao, Green, Davis, et al. 1998b; Meit, Williams, Mencken, et al. 1997; Hall, Dugan, Zheng, et al. 2000; Thom, Ribisl, Steward, et al. 1999). The strongest predictors of trust are physician personality and behavior. Patient trust is consistently found to be related to factors such as physicians' communication style and interpersonal skills (Safran, Kosinski, Tarlov, et al. 1998; Kao, Green, Davis, et al. 1998b; Thom, Ribisl, Steward, et al. 1999; Hall, Zheng, Dugan, et al. 2002; Cook 2001; Roberts and Aruguete 2000). However, the only published attempt to increase patients' trust by teaching physicians better humanistic skills did not succeed (Thom, Bloch, and Segal 1999).

Finally, some relationship or situational factors have been shown to be important to trust. Surprisingly, the length of a doctor-patient relationship or the total number of visits is only weakly associated with trust (Kao, Green, Zaslavski, et al. 1998; Kao, Green, Davis, et al. 1998b; Thom, Ribisl, Steward, et al. 1999; Safran, Kosinski, Tarlov, et al. 1998). This indicates that patients form their impressions relatively quickly and that trust does not depend greatly on how well patients know their doctors. Stronger predictors of trust include whether patients feel they had enough choice in selecting a physician, and on what basis patients chose their physician (personal recommendation versus convenience) (Kao, Green, Davis, et al. 1998b; Kao, Green, Zaslavski, et al. 1998; Thom, Ribisl, Steward, et al. 1999; Hall, Zheng, Dugan, et al. 2002; Safran, Kosinski, Tarlov, et al. 1998; Wholey and Sommers 2001). Related to these factors is how type of health insurance affects trust in physicians, with higher trust found among plan types that allow more choice of physician (Hall, Zheng, Dugan, et al. 2002; Kao, Green, Davis, et al. 1998b; Safran, Rogers, Tarlov, et al. 2000; Reschovsky, Kemper, and Tu 2000). Similar, but not as extensive findings exist for trust in insurers (Zheng, Hall, Dugan, et al. 2001; Blendon, Brodie, Benson, et al. 1998).

The overall impression is that distrustful relationships are not unavoidable or unmanageable. Accordingly, trust measures could be used fairly and effectively as evaluation instruments for physicians or institutions, either along with, or instead of, satisfaction measures (Barr, Vergun, and Barley 2000). This could occur either internally, as a management strategy to identify and address problem patients or providers, or externally, as an additional source of information for choosing among providers and plans.

Consequences of Trust

Potential consequences of trust can be divided between behavioral and attitudinal. This section focuses mainly on behavioral consequences because attitudinal measures are so likely to be both causes and effects of trust. Regardless, most measures of behavior used in studies to date are patient self-reports and so undoubtedly are heavily influenced by attitudes.

Based mainly on self-reports, trust in physicians correlates positively with adherence to treatment recommendations, not changing physicians, not seeking second opinions, willingness to recommend a physician to others, fewer disputes with the physician, perceived effectiveness of care, and improvement in self-reported health (Caterinicchio 1979; Safran, Taira, Rogers, et al. 1998; Thom, Ribisl, Steward, et al. 1999; Hall, Zheng, Dugan, et al. 2002). Trust in insurers correlates positively with lower desire to change insurers and fewer disputes with the insurer (Zheng, Hall, Dugan, et al. 2001). The relationship between trust and costs or utilization has not been extensively studied to date, nor has whether trust relates to patients' preferred style of medical decision making.

On balance, these many significant associations indicate that trust is a useful measure or monitor of physician and health plan performance—not only because of its intrinsic importance but because trust affects many important attitudes and behaviors. Trust appears to be good for business, good for effective care, and good for reducing disputes. Other measures, such as satisfaction, have the same functional attributes. This raises the intriguing question, which we turn to in our final area of inquiry, of whether trust or satisfaction is more fundamental—that is, whether one is the main driver of the other.

Endogenous or Ambiguous Factors

Many of the factors discussed above are potentially both causes and effects of trust. This possibility exists because of the cyclical patterns described above, in which experiences shape trusting or distrustful attitudes, which themselves color one's interpretation of subsequent experiences. For instance, while patients' disputes with physicians tend to lower trust, patients with high levels of trust are less likely to find fault or perceive a grievance in the first place. Similarly, people with a longer relationship have more experience on which to establish trust, but trust also makes them less likely to change physicians or seek care elsewhere. For these factors, the causal interconnection is relatively clear. Other factors, however, have a more ambiguous relationship to trust, making it more difficult to hypothesize or measure cause and effect with confidence.

For instance, the relationship of health status to trust is unclear. Healthy people might have more trust, either because their treatment has been more effective or because they have a better outlook on life generally. On the other hand, those in worse health may approach treatment with a greater sense of vulnerability or anxiety, which may differ according to whether the illness is chronic or acute or to numerous other factors. As noted above, vulnerability or anxiety may produce higher trust. Furthermore, trust may positively affect reported health status not only because it promotes better adherence or perceived success of treatment but also by activating nonspecific, placebo-type self-healing processes. All of these possibilities exist in theory. Empirically, it is very difficult to disentangle them.

Evidence to date shows, somewhat surprisingly, only a weak and inconsistent relationship between trust and health status (Kao, Green, Zaslavski, et al. 1998; Safran, Taira, Rogers, et al. 1998; Thom, Ribisl, Steward, et al. 1999; Wholey and Sommers 2001). The lack of a strong relationship suggests that several mixed effects may be occurring. The findings noted above suggest that trust has positive effects on health outcome. Patients with higher trust are more likely to report improved health and more effective treatment. Higher trust might produce improved health reports even if people are still sick, since having greater confidence in the care they are receiving makes them less anxious about their condition. Conversely, health status may be negatively associated with trust to the extent that serious illness creates conditions of

vulnerability that generate greater trust among patients who have relied on their physicians during very trying times. Or, poor health may cause depressive symptoms or other negative feelings that cloud evaluations of trust. These opposing health-related effects on trust may be offsetting. Similarly, chronically ill patients who have had more experience with their physician's trustworthiness may have more moderate trust but also a stronger basis for this level of trust, which might produce trust that is lower but more resilient to disappointment than among generally healthy people.

At present, there is only a limited empirical basis to move beyond these speculative possibilities and draw conclusions about actual cause/effect relationships. The limited evidence so far is consistent with these speculations, however. Using path analysis in a small cross-sectional study, one analyst found that trust predicts lower treatment anxiety, which further predicts greater tolerance for pain (Caterinicchio 1979). Also, this study found that past health gains predict higher trust and lower treatment anxiety at a current visit.

Similar puzzles exist with respect to satisfaction. Every trust study finds a strong correlation between trust and satisfaction, but does satisfaction with the care received drive trust, or vice versa? Insight comes from Thom's study, which concluded that trust is the primary driver, based on changes in trust and satisfaction over a six-month period (Thom, Ribisl, Steward, et al. 1999). Thom found that baseline trust predicts adherence, remaining with the same physician, and satisfaction six months later, even after controlling for baseline satisfaction, but that baseline satisfaction predicts only subsequent satisfaction after adjustment for baseline trust.

Finally, interrelated causal patterns potentially exist with respect to the connections between trust in physicians and trust in insurers. Studies measuring both have found them to be significantly correlated (Kao, Green, Davis, et al. 1998b; Zheng, Hall, Dugan, et al. 2001), but it is unclear whose halo is shining on whom.

Limitations

It is important to note several limitations in the existing studies of trust (Pearson and Raeke 2000). First, most have been done on fairly healthy primary care or general populations with low representation of minorities or low-income groups, so these findings may differ in other populations.

Second, most studies so far provide weak bases for inferring causal relationships since they report only cross-sectional correlations and rely on self-reported attitudes and behaviors. Only a few studies are longitudinal (Safran, Taira, Rogers, et al. 1998; Thom, Ribisl, Steward, et al. 1999), fewer still have an experimental design (Hall, Dugan, Balkrishnan, et al. 2001; Thom, Bloch, and Segal 1999), and none use primarily objective, independently observed outcome measures. These more-rigorous study designs are especially important for a phenomenon as subtle, complex, and potentially paradoxical as trust. Because of the cyclical patterns described above, in which experiences shape trusting or distrustful attitudes, which themselves color one's interpretation of subsequent experiences, important attitudes and behaviors related to trust will likely prove to be both causes and effects of trust. In addition to making trust an especially intriguing and difficult subject for study, this possibility means that trust is highly resilient, being both resistant to erosion and very difficult to restore once it has been betrayed.

Conclusion

There is a pressing need to increase the rigor of thought and the amount and quality of information bearing on trust. To advance this objective, this article draws from the rapidly developing body of work on trust in medical settings to propose a detailed conceptual framework and to summarize the limited empirical evidence to date. Doing so reveals several insights. First, an explicit conceptual framework is an important aid to studies or analyses of trust, especially considering its subtle and paradoxical nature. Therefore, it is essential that definitions and distinctions be clearly articulated. Second, it is critical to take a rigorously empirical approach, since many casual assumptions about trust and its causes and effects do not bear up under scrutiny. This often happens because we overlook the fact that trust originates from the fundamental psychological attributes of seeking care in a state of anxiety, rather than from variable physician characteristics or patient personalities. Finally, these empirical insights can be used to shape normative theory and public policy. Taking trust as the object of law and ethics, knowing more about what conditions produce trust and distrust and why this matters helps to craft the structure and financing of health care delivery in a manner that supports and enhances trust. Examples include increasing the choice of providers,

encouraging better communication and more time with patients, and using trust measures to monitor delivery-system performance.

Viewed from another perspective, the study of trust helps define what constitutes trustworthiness. Observing where, how, and at what level patients repose their trust reinforces an ethic of caring and loyalty, underscores the need for vigilance against medical error, and reminds us that all levels of the medical system must work hard to deserve the trust they receive.

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