Medical Errors: Responsibility and Informal Penalties

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Economic analyses of sources of legal compliance mainly address the threat of formal penalties. Formal penalties are state-imposed and involve material or physical deprivations in the form of fines and incarceration. The other disciplines, however, especially psychology and sociology, go beyond the issue of formal penalties by discussing the role of informal ones in refraining individuals from certain socially unwanted acts. We define such informal penalties as either socially imposed (shame) or self-imposed (guilt). Socially imposed penalties include embarrassment or loss of respect that individuals might experience from significant others when they violate social norms. Such penalties also arise if one feels that he/she might be potentially judged by significant others for behavior that is inappropriate or immoral. Self-imposed costs, on the other hand, are feelings of guilt that arise when individuals offend their own conscience by engaging in behavior they consider morally wrong. Examples include feelings of responsibility or remorse for some offense, crime, or wrong-doing or bad consciousness due to the violation of internal codes.

As follows from what has been presented, the distinction between formal and informal penalties depends upon the source of punishment. Whereas formal penalties are imposed by the state, informal ones are imposed by significant others or by oneself.

Economic decision-making models are applied to analyze the role of formal penalties in preventing tax evasion. Such models predict a higher frequency (and amount) of tax evasion than is actually observed. The high degree of honest tax-reporting being observed is by some believed to follow from the presence of non-pecuniary evasion costs such as guilt, social stigma, and reduction of self-image. One study provides evidence on individuals’ intention to violate law based on perceived threats including shame, guilt and legal sanctions.

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for three different illegal activities, tax evasion, drunk driving and petty theft. The perceived threat is found to be significant for legal sanctions and guilt. Guilt is the most important deterrent in the case of tax evasion, while for drunk driving, guilt and legal sanctions produce more or less the same threat.\(^3\)

An important issue is whether there is a relationship between formal and informal penalties. It is possible that formal penalties impact feelings of guilt, shame and embarrassment. Brennan and Buchanan find that punishments are not merely perceived as an alternative course of action but also symbolize that a wrong has been committed. They find therefore that the moral dimension in itself moderates illegal behavior.\(^4\) If this is true, the imposition of a fine has implications that go beyond material or physical deprivation.

**Informal Penalties and Medical Errors: Any Interdependencies?**

Literature on medical error reveals that the subject of medical errors is sensitive. Healthcare workers find it difficult to discuss mistakes and express significant fear of committing errors.\(^5\) This fear is often attributed to legal risks and the fear of malpractice suits; however, disciplinary actions and the risk of financial deprivations are not fully satisfactory explanations. Professionals involved in medical errors frequently express guilt as well as remorse and refer to a medical culture of “blaming, naming and shaming.”\(^6\) Furthermore, providers characterize themselves as the secondary victims, since they, like their patients, are hurt by the occurrence of medical errors. Committing a mistake triggers unpleasant feelings due to the fear of being discovered and ostracized.\(^7\) General practitioners who receive a patient complaint find the experience devastating. In fact, complaints appear to be punishments in themselves, regardless of the eventual decision following review of the complaint.\(^8,9\) The same pattern of negative emotions is identified among healthcare workers in association with such administrative reactions as reprimands and informal criticism.\(^10\) Respondents describe surprisingly strong personal negative experiences including feelings of shock, despair and such emotional conflicts as feelings of anger, depression and even contemplating suicide. Emotional reactions to such material deprivation as fines, loss of authorization and suspension are found to be somewhat stronger. Studies addressing physicians’ experiences with malpractice suits also confirm the strong negative reactions to the litigation process, as well as its outcome.\(^11-13\)

There are several reasons why informal penalties are especially relevant for the health care sector and iatrogenic injuries. First, the act of harming others is particularly stressful when the injured individuals are identifiable. This is the case not only for iatrogenic injuries but also for road traffic and workplace accidents. Second, the fact that the very intent of medical activity is to help people recover from illness, may reinforce the personal cost of worsening a patient’s health. Third, most often errors or patient injuries are not intentional, but in fact accidental unlike other activities like crimes, environmental pollution and tax evasion. And so, it is safe to say that physicians generally act in good faith.

The medical culture is believed to have certain characteristics that make physicians
especially susceptible to informal penalties. This vulnerability may be explained by physicians’ pursuit of perfection.\textsuperscript{14} The alleged vulnerability could also result from selective recruitment effects or because medical educational programs promote certain values. Admitting mistakes is not accepted and could trigger open condemnation from colleagues. More important is perhaps the lack of open support and feeling of isolation, since several authors cite a strong custom of avoiding criticism in medical cultures.\textsuperscript{15,16} Wu explains the grudging reassurance from colleagues as a way of avoiding personal exposure.\textsuperscript{17}

The presence of informal costs in health care could be explained by “provider altruism” – the dependence of the physician’s welfare upon the patient’s well being. Such a belief, however, is perhaps too simple for several reasons: 1) strong emotional reactions are elicited by injuries that are negligible, 2) emotion reactions often differ for similar injuries, 3) the degree to which such incidents are reported plays a role, 4) whether the physician is under review or not is significant and 5) the implementation of formal penalties and their magnitude impacts reactions.

The above literature review suggests at least three different types of informal penalties. First, involvement in medical errors, including those deemed unpreventable, can trigger negative responses such as irrational reproach, feelings of being suspected and ex-post regrets about ex-ante treatment strategies. When preventable errors remain private information, physicians may feel guilty because the act of lying low violates their ethical responsibility to inform patients and health authorities. Second, being under suspicion as by undergoing reviews or litigation processes is a stressful experience. Third, when the judicial system confirms wrong-doings by holding someone responsible, additional adverse feelings are triggered. These emotions tend to increase with the formal penalty level, in particular the size of awards in malpractice suits and fines in administrative systems, probably because the penalty level is interpreted as a signal of the degree of wrong-doing.

The impact of informal penalties varies from one individual to another and is influenced by several factors. Examples include the severity of patient injuries and the provider’s own perception of responsibility matter. Furthermore, whether others witness an incident is significant. There seems to be stigma attached to being under suspicion and for being held liable. Being publicly charged makes providers feel insulted, disgraced, and humiliated probably because their competence and performance abilities are openly questioned. A provider who chooses to inform a patient about errors risks being litigated, held responsible and confronted with patient anger. When providers are wrongfully held liable for medical negligence, they take an additional burden. The presence of informal penalties reflects prevailing values and norms in medical cultures. Since the values of professionalism and medical ethics are promoted to protect patients and deliver high-quality care, informal penalties, to some extent, become the other side of this coin.

**Policy Implications**

The above discussion confirms that informal penalties are significant in health care and therefore shape behavior. This
is the case even if expected penalties differ somewhat from those actually experienced. Consequently, informal penalties should be explicitly addressed when discussing patient safety, error reduction and deterrence. When focusing on iatrogenic injuries, “deterrence” means incentives that induce sufficient clinical attention and investment in precautionary care, so that preventable errors are minimized, as well as incentives that encourage providers to inform their patients about adverse events.

Whether the presence of informal penalties has policy implications or not is a complex issue. To address this issue, we will apply a standard economic welfare function approach that accounts for the well-being of both patients and providers. Standard social costs related to error episodes are patient injury, patient productivity losses and medical costs from prolonged hospital stays. Now, we include provider costs (informal) as well. It should be noted that such an approach is debatable, especially if errors are perceived as outcomes of negligent behavior. It is, for example, not self-evident that provider discomfort should be taken into account when adverse events are the result of recklessness and carelessness (law violations).

The conventional social costs that accrue in connection with error episodes are patient injury, productivity losses and medical costs following from prolonged hospital stays. The inclusion of provider discomfort implies that the social costs that accruing in the event of adverse events is higher. This again implies that more resources should be invested in error prevention activities. However, this policy advice does by not by itself provide us with a justification for such government intervention as the strengthening of deterrence incentives. The reason for this is that health care providers already internalize informal costs. Providers are aware of their vulnerability and take this vulnerability into account when making clinical decisions to protect themselves against the risk of making a mistake.

The situation differs, however, if the significance of informal penalties is contingent upon the law itself. The literature referred to above suggests that this is the case. The decision to formally indict someone and hold him/her responsible triggers strong emotional reactions. Consequently, incentive provision in the case of iatrogenic injuries, either motivated by deterrence or patient compensation, comes at a social cost. This gain implies, ceteris paribus, that less weight should be given to law. From the above discussion emerges a somewhat paradoxical result – it becomes more important to avoid errors, but less attractive to reach this goal using legal means as long as this method reinforces informal costs.

A relevant next question is whether there exist policy options that weaken the significance of informal penalties without compromising other social goals of deterrence, patient compensation, legitimacy and fairness. The general answer to this question is negative. As long as physicians’ fear of being involved in errors acts as an effective deterrent by improving clinical attention and investments in precautionary care, then less significant informal penalties imply less deterrence. There are, however, two possible reforms that may circumvent the trade-off between informal penalties and deterrence: enterprise liability and experience-rated contracts.

Enterprise liability places the negligence rule on organizations rather than
on individuals. Such a reform focuses less on individual blame, potentially reducing the significance of informal penalties. Furthermore, less deterrence needs not follow if errors are system failures rather than human failures. Assuming the system caused errors, this reform yields a win-win outcome. This conclusion does not hinge upon the presence of informal penalties, but instead on errors characterized as system failures, and should be implemented anyway.

Experience-rated liability insurances render the error history of providers decisive for future insurance premiums. Such contracts clearly represent financial incentives for investing in precautionary care and may substitute deterrent policies. However, it is not obvious that such a change lessens informal penalties since the contract terms can be interpreted to assign provider responsibility. On the other hand, it could also be that experience-rating is perceived by providers as a positive incentive or reward rather than a negative one or penalty. Literature in experimental economics confirms that rewards more effectively provide incentives than penalties. A problem with experience-rating is the need for information. Most adverse events are privately observed by providers and need not become common knowledge. If so, experience-rating becomes an imprecise and biased signal on providers’ past performance.

**Defensive Medicine and Underreporting**

In this section informal penalties will be discussed in relation to real world observations. Much of the error literature is concerned with US data and institutions, hence we focus on U.S. malpractice systems. The following three observations will be commented upon: 1) liability insurance is common and provide shield against financial risks and litigation expenses, and experience-rated contracts are rare, 2) the practicing of defensive medicine, 3) adverse events are significantly underreported.

Penalties that involve risks of material deprivation are less important in malpractice systems due to liability insurances. Providers appear to have deep coverage despite some variance in this matter. Some financial risks though are present due to co-insurance expenses, the time costs associated with litigation processes, and the risk of losing clients due to negative reputation effects. High and increasing premiums surely represent financial burdens, both for providers and patients, but do not provide deterrence incentives in the absence of experience-rating.

Defensive medicine is defined as precautionary treatments with minimal expected medical benefit out of the fear of legal liability. Defensive practices are the ordering of treatments, tests and procedures for the purpose of protecting the doctor from criticism rather than diagnosing or treating the patient. The practicing of both defensive medicine and defensive procedures is confirmed by several studies. Summerton found that 98% of general practitioners have made some practice changes as a result of the possibility of patient complaining. Symon reports that a majority of midwives and obstetricians believed that litigation caused a rise in defensiveness. Several econometric studies confirm that malpractice systems produce defensive medicine. Evidence supporting the practice of defensive medicine and
defensive practices is somewhat surprising considering the relative insignificance of financial risks. This paradox, coupled with the expressed significant fear of committing errors, can be explained by informal penalties.

A high degree of underreporting of adverse events is confirmed by several studies and estimates vary between 50-96 percent. These findings suggest that part of the doctor-patient relationship is characterized by dishonesty. In addition, underreporting is believed to represent costly information losses by making it difficult to undertake root-causes analysis. The obvious reason for choosing not to report is the fear of being exposed to a particular type of informal penalties, namely those associated with risk of being openly suspected and held responsible. However, there are informal penalties of guilt associated with lying low as well. Not telling the truth yields feelings of guilt as well as violations of the ethical responsibility to inform patients and health authorities about adverse events. Hence, the decision to lie low must imply less informal costs than the expected informal costs being associated with reporting. The distribution of informal penalties can be said to be a hindrance for achieving honesty, disclosure and openness in the doctor-patient relationship. Thus, the structure of informal penalties is dysfunctional because it encourages defensive medicine and under-reporting.

The policy implications that follow from the above conclusions are straightforward. Avoiding defensive medicine demands less deterrence pressure. To achieve this, the significance of informal penalties must be reduced. A whole range of reforms pull in this direction, from minor ones such as stricter negligence criteria to more structural ones, in particular, enterprise liability and no-fault systems. Less deterrence pressure will also make error reporting more likely. However, the prevalence of lying low suggests that prevailing values, norms and ethical obligations within medical cultures are insufficient to induce reporting behavior. To fully solve this problem, further policy measures may be necessary. Motivational campaigns are one possibility but are long-term measures with uncertain outcomes. A more effective policy may be to make providers accountable such as by penalizing those being detected for lying low. An additional argument in favor of non-reporting penalties is that lying low is not one an act of good faith. This reason lessens the justification for counting informal costs as social one. On the other hand, the same reform may not be a good idea for malpractice systems when characterized both by significant judicial imperfections including noisy negligence rules, substantial legal costs, random jury decision-making, as well as the number of claims far exceeding the actual number of negligent adverse events. The imposition of mandatory reporting backed up formal penalties may require more fundamental reforms to avoid reinforcing existing inefficiencies.

Conclusion

This paper applies the distinction between formal and informal penalties to discuss the role of incentives in reducing iatrogenic injuries. Informal penalties are uninsurable, internalized psychic or emotional costs, where the penalizing agent is oneself or significant others. As error
literature confirms, such penalties are important in medical cultures. Several factors may explain their importance among them the accidental nature of errors and the promotion of particular values in order to ensure quality care.

Observations suggest that policy determines the significance of informal penalties. Providers who act in good faith find reviewing processes and the assignment of individual responsibility very stressful. This points to a moral dimension—assigning individual responsibility by law signals that a wrong has been committed. Malpractice law becomes an effective deterrent, not because it induces the fear of material deprivations, but because induces the fear of moral deprivations. The recognition of the interdependency between the size of informal penalties and law is crucial for understanding the problem of defensive medicine and the current under-reporting of medical errors. Finally, governmental regulation in liability insurance markets motivated by the need to induce some financial risks such as mandating of co-insurance rates and experience-rated contracts is absent. This observation can be interpreted as an implicit recognition of the effective roles informal penalties have as deterrents of medical error.

References


17. Ibid.