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## **Abstract**

This research investigates how the payment source of medical indemnity payments affects their perceived value. Specifically, I compare payments through a medical liability insurance (MLI) scheme with those paid directly out of the physician's pocket. In two survey experiments employing a vignette of an actual malpractice case, I test whether out-of-pocket indemnity payments are perceived to have a higher value than those paid via an MLI scheme. In Study 1, participants took a first-person perspective, and assessed a settlement on its fairness, compensation, deterrence, and reputation. The results of Study 1 show that the subjective valuation of indemnity payments is higher when paid out-of-pocket by the physician compared to an MLI scheme. In Study 2, respondents received the same scenario in third-person perspective and in addition, some received an incentivized coordination task to explore shared beliefs. Here, I replicate the findings of Study 1 and document that the divergent perceptions are shared beliefs among participants. This indicates that the divergence in valuation is present not only as first-order beliefs but also as second-order beliefs among participants. These findings highlight the role of personal accountability in sustaining trust in the healthcare system, with implications for both the healthcare sector, policymakers and insurance providers.

## **Abstract**

In dieser Studie wird untersucht, wie sich die Zahlungsquelle von Entschädigungszahlungen für ärztliche Behandlungsfehler auf deren wahrgenommenen Wert auswirkt. Konkret vergleiche ich Zahlungen durch eine Ärzthaftpflichtversicherung (MLI) mit solchen, die direkt aus eigener Tasche des Arztes bezahlt werden. In zwei Umfrageexperimenten mit einer Vignette eines tatsächlichen Kunstfehlerfalls prüfe ich, ob Entschädigungszahlungen aus der eigenen Tasche als wertvoller wahrgenommen werden als solche, die über ein MLI-System gezahlt werden. In Studie 1 nahmen die Teilnehmer eine Ich-Perspektive ein und bewerteten Vergleiche hinsichtlich ihrer Fairness, Entschädigung, Abschreckung und Reputation. Die Ergebnisse von Studie 1 zeigen, dass die subjektive Bewertung von Entschädigungszahlungen höher ist, wenn sie vom Arzt aus eigener Tasche gezahlt werden, als bei einem MLI-System. In Studie 2 wurde den Befragten dasselbe Szenario in der Perspektive der dritten Person vorgespielt, und zusätzlich erhielten einige von ihnen eine Koordinationsaufgabe mit Anreizen, um die gemeinsamen Überzeugungen zu untersuchen. Hier wiederhole ich die Ergebnisse von Studie 1 und dokumentiere, dass die abweichenden Wahrnehmungen gemeinsame Überzeugungen der Teilnehmer sind. Dies deutet darauf hin, dass die Divergenz in der Bewertung nicht nur als Überzeugung erster Ordnung, sondern auch als Überzeugung zweiter Ordnung unter den Teilnehmern vorhanden ist. Diese Ergebnisse unterstreichen die Rolle der persönlichen Verantwortlichkeit bei der Aufrechterhaltung des Vertrauens in das Gesundheitssystem, was sowohl für den Gesundheitssektor als auch für politische Entscheidungsträger und Versicherungsanbieter von Bedeutung ist.

# 1 Introduction

In most states of the United States, physicians are legally not required to carry medical liability insurance (MLI), and therefore, it is up to the physician whether she<sup>1</sup> purchases a malpractice insurance policy.<sup>2</sup> Since employers (e.g., hospitals and clinics) provide their professionals with group coverage (Zeiler, 2010), practitioners' choices of individually purchased coverage only pertain to practicing in outpatient settings or whether they wish to complement their institutional coverage. Still, doctors usually carry a liability insurance policy (van Velthoven, Ben CJ and van Wijck, Peter W., 2012). The American Medical Association (Guardado, 2023) estimates that, in any given year, approximately 2% of physicians are sued and that physicians face around 30% likelihood of being sued at least once in their professional lifetimes. Between 1985 and 2008, an average of \$282,843 were paid as indemnity payments to wronged patients (Carroll et al., 2012). Given the astronomical expected costs of medial indemnity payments (for some more examples, see White (1994)), it may be surprising if a physician chooses not to be insured or, as is called, "goes bare" and, in the event of being required to pay indemnity to a wronged patient, is willing to pay indemnity payments out-of-pocket.<sup>3</sup> Based on data from the Texas Department of Insurance, between 1990 and 2003, Zeiler (2007) finds that only 62 of the 9,525 (0.65%) indemnities were paid directly by the physician's personal funds. The mean of the corresponding indemnity payments was \$190,000 and the median was \$54,000. Kane (2019) finds in a 2019 survey answered by more than 4300 physicians in over 29 specialties that around 6% of doctors practice without a medical liability insurance.

One strand of academic research on MLI has focused on physicians' decision processes about whether to purchase insurance (e.g., Naguib et al., 2019), and the other strand on how much the institution of MLI rectifies losses of the wronged patient, trust in society, and how it impacts the future prospects of the involved practitioners (e.g., Mello et al., 2020). In this research, I introduce a new aspect of how indemnity payments are perceived and valued. Namely, I propose and test in two studies that, for recipients and observers, the value of an indemnity payment systematically depends on the source of the payment: whether it was paid through an MLI scheme (i.e., indirect loss) or the wrongdoer's pocket (i.e., direct loss). In Study 1, respondents recruited from Prolific services<sup>4</sup> stand in the shoes of a wronged patient and take a first-person perspective. Here, I test whether the perceived value of medical indemnity payments differs between those paid via an MLI scheme or directly from the wrongdoer physician's pocket. I predict and find that indemnity

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<sup>1</sup>Throughout the thesis, I use she as a gender pronoun.

<sup>2</sup><https://www.insureon.com/small-business-insurance/medical-malpractice>

<sup>3</sup><https://www.gallaghermalpractice.com/blog/post/going-bare-are-doctors-required-to-have-malpractice-insurance/>

<sup>4</sup><https://www.prolific.com/>. For a description of this online platform to recruit participants for various studies in behavior sciences, see Palan and Schitter (2018).

paid directly from the wrongdoer’s pocket has a higher value than when the same indemnity amount is paid indirectly, via an MLI scheme. In Study 2, respondents stand in the shoes of an observer and take a third-person perspective. Here, I test whether the results documented in Study 1 replicate and, also, by using a coordination task when prompting respondents to value the indemnity payments, whether this divergence emerges as shared beliefs among respondents, which latter suggests that the divergence serves as a descriptive social norm (e.g., [Nosenzo and Grges, 2020](#)).

Respondents of the survey-experiments (Studies 1 & 2) received a hypothetical scenario (i.e., vignette) describing an actual medical malpractice case that was settled out of court without a trial. In Study 1, the scenario described the malpractice case in first person (i.e., You), as if it happened to them. Depending on the treatment-assignment, the vignette varied whether the settlement was through an MLI scheme or out of the physician’s pocket. Participants responded to four questions that decomposed the perceived value of the settlement along the functions documented by [Mello et al. \(2020\)](#), and the order of presentation of the four questions was randomized for each participant to control for anchoring. These four questions measured the settlement’s (1) perceived fairness, (2) compensatory value, (3) deterrence values, and (4) whether the settlement impacts the practitioner’s reputation enough. The responses to the four questions were anchored on a four-level Likert scale.

Study 2 uses the same vignette as Study 1 and its goals are twofold. Firstly, it tests whether the results regarding the divergent valuations of the two payment sources replicate when respondents are prompted to stand in the shoes of an observer, which removes the self-involvement from the decision. Secondly, it addresses whether respondents are able to coordinate their divergent perceptions, which would suggest that this divergence is a shared belief and thus, emerges as a descriptive social norm ([Krupka et al., 2022](#); [Krupka and Weber, 2013](#); [Nosenzo and Grges, 2020](#)). However, since this study employs a third-order perspective, I no longer include the item on the compensatory value of the settlement and thus, participants only responded to the fairness, deterrence and reputation items from Study 1, resulting in three items.

In both studies, respondents responded to a wide range of demographic questions, also including their zip code, which allowed controlling for whether their home-state mandates MLI for physicians. Additionally, I administered a large battery of heterogeneity items which inquired about respondents’ experiences with the health-care system, whether they have been involved as a plaintiff of a defendant in a medical malpractice situation, whether they are health workers, and about their self-reported level of health anxiety.

Overall, in Study 1, I find that medical indemnity payments are valued *higher* if they are paid

out-of-pocket by the wrongdoer physician than if they are paid through MLI. Results of Study 2 lend support for the notion that this divergence in subjective valuation is also present when self-involvement is removed and respondents are only observers. Critically, I also find that the documented divergence in the valuations also emerges in second-order beliefs. This finding suggests that the documented disparity between valuing medical indemnity payments via an insurance scheme versus pocket emerges as shared beliefs and thus, people are able to coordinate on them. The documented divergent valuations are robust after controlling for respondents' demographics (including the local of their residency) and the heterogeneity measures.

The thesis is as follows. In Section 2, I present the relevant literature to motivate the research questions. Section 3 presents Study 1. Here, I present the methods (Subsection 3.1) and the procedure (Subsection 3.2), the empirical strategy and hypotheses (Subsection 3.3), the results (Subsection 3.4) of Study 1 and close the section with discussing the results (Subsection 3.5). In Section 4, I present the methods (Subsection 4.1), the procedure (Subsection 4.2), the empirical strategy and hypotheses (Subsection 4.3) and the key results (Subsection 4.4) of Study 2. In Subsection 4.5, I present an overall discussion of both studies.

## 2 Literature Review

Physicians are usually insured, either under the coverage of their employers or an individual insurance policy (van Velthoven, Ben CJ and van Wijck, Peter W., 2012). It is up to the doctor whether she wants to complement her employer’s coverage by obtaining an additional MLI policy. Zeiler (2010) reports that typical insurance limits consist of \$1 million per incident and \$3 million total coverage per year. This coverage seems to be mostly sufficient, since only approximately 1.5% of claim payouts exceed the insurance limit (Zeiler, 2010). According to the estimates of The American Medical Association (Guardado, 2023), around 2% of doctors are sued in any given year. Across their entire professional lifetime, physicians face a 30% probability of being sued. In the event of a lost medical malpractice case, an MLI typically covers the legal fees and indemnity payments (i.e., punitive and compensatory claims for medical damages).

In contrast, an uninsured physician usually pays the legal fees plus the indemnity payments out of pocket. According to Vidmar et al. (2006), approximately 3% of medical malpractice payouts involved a jury verdict in 2005, indicating that the case was taken to court. Although most lawsuits are settled out-of-court (Hyman and Silver, 2012), the few which end up in trial can be costly to doctors. Beyond the financial burden, medical malpractice lawsuits involve a range of significant non-pecuniary losses, such as opportunity costs of missed practice, time spent dealing with the case, and emotional and reputational damage (Panthöfer, 2022). Furthermore, doctors might face increased insurance premiums after a medical malpractice lawsuit, and in extreme cases, insurance companies may even deny coverage from the physician (Danzon, 2000). Carroll et al. (2012) reports that the average indemnity payment to wronged patients between 1985 and 2003 amounted to \$282,843. Given that the costs of a malpractice case, even if settled out-of-court, could be terribly high, what motivates physicians to “go bare” and bear these high expected costs has been in the interest of academic research on physicians’ MLI insurance choices.

One strand of academic research on MLI focuses on unpacking what drives physicians’ choices on whether to purchase an MLI policy. The overconfidence of physicians in their expertise and competencies is seen as a key factor (Berner and Graber, 2008; Dawson et al., 1993; Naguib et al., 2019), which is not different from the overconfidence of experts documented in other fields (Sanchez and Dunning, 2023). Among other factors for “going bare”, they find that the perceived likelihood of being sued in the event of actual or disputable malpractice and the expected value of the indemnity payment are predominantly listed (Jena et al., 2011).<sup>5</sup> Unpacking doctors’

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<sup>5</sup>Some popular media coverage also mentions the amount of the insurance premium, the geographic location of the practicing physician, the practice setting, and the medical specialty. See, for example, <https://www.aha.org/sites/default/files/trendwatch-medical-liability-insurance-looming-crisis.pdf>



motivation to purchase MLI has two goals. On the one hand, it contributes to the understanding of the underlying decision-making process, specifically applied to medical decision-making. On the other hand, health-care providers and their industry can map the current trends. Research presented in this thesis does not touch on these topics.

Another strand of research, consisting of health and some legal scholars, examines whether the institution of MLI serves its originally intended three functions, as summarized in [Mello et al. \(2020\)](#). First, it should provide monetary compensation to the plaintiff (i.e., the wronged patients or their families) for their loss. These payouts are intended to monetize the overall losses. Second, the institution of MLI should promote a mechanism of corrective justice that rectifies wrongful losses and thus, establishes fairness. This could also be seen as promoting and fostering society's trust in institutions, which may also create some positive societal externality. Third, it should deter wrongdoing and thus mitigate future negligence. The sanctions, on the one hand, should be sufficient to impose a direct or indirect financial penalty on the defendant (that is, the wrongdoer healthcare practitioner), which would deter her from future malpractice. In the framework of MLI, the instrument of deterrence is the increased MLI premium. However, the psychological and time strains of the litigation process or the cost of rectifying one's reputation are also seen to have deterrent functions ([Panthöfer, 2022](#)). On the other hand, when the malpractice becomes public knowledge, it should also create a negative reputation of the wrongdoer. This informs society about the risks of choosing the provider, which information is seen as a positive social externality.

These dimensions give the basis of the items along which, in my thesis, I compare the value of medical indemnity paid via an MLI scheme versus out of the physician's pocket while the amount of the settlement is the same under both conditions. Additionally, to create a conceptual framework for my research questions and empirical setup, I rely on the following literature.

## 2.1 Reactions to having been wronged or observing wrongful behaviors

Abundant empirical social science research documents that people tend to retaliate for being wronged. Legal and criminology research maps the determinants of public attitudes toward law-breakers to uncover perceptions of different punishment regimes ([Gerber and Jackson, 2013](#)). Psychology and economic studies document that, after being wronged, the wronged seek compensation to even the score with their wrongdoer (e.g., [Ambrose et al., 2002](#); [Dezső et al., 2022](#); [Greenberg, 1990, 1993](#); [Houser et al., 2012](#); [Pillutla and Murnighan, 1996](#)). Psychological literature focuses on identifying the emotional and cognitive factors driving compensation-seeking and retaliatory processes after being wronged ([Stillwell et al., 2008](#)). Behaviorally informed economic research assumes that compensation-seeking is a form of negative reciprocity that is either direct to even

the score with the wrongdoer or indirect, wherein the wronged redresses her losses and any occasion followed by being wronged (Fehr and Gächter, 1998; Schmid et al., 2021). Individuals may reciprocate the actions of others directly (e.g., returning help or taking revenge on the same person) or indirectly (i.e., behaving in kind to someone independent) (Nowak and Sigmund, 1998). In my research, I apply this framework where the wronged party (i.e., the patient) is compensated either directly by the wrongdoer (i.e., the practitioner) or by a third party (i.e., the insurance company). From the monetary perspective, only the size of the payoff should matter for the wronged, while its source should be irrelevant. However, I conjecture that indemnity paid out-of-pocket is valued higher than by MLI, since out-of-pocket payments represent a form of direct reciprocity which fosters personal accountability and trust by incurring personal cost on the wrongdoer. In contrast, indemnity payment from a third party, such as an insurance provider, resembles indirect reciprocity, since the compensation is decoupled from the wrongdoer’s agency. The absence of direct interaction between the patient and the physician reduces accountability, and waters the perceived value of the indemnity payment, since the insurance company bears the cost through the collective burden of other policy-payers (Gintis et al., 2003). Findings from these different fields about compensation-seeking converge and can also be linked to the functions of MLI. These are, providing compensation, rectifying fairness, deterring the wrongdoer from further wrongdoing, and creating a negative reputation for the wrongdoer to inform society.

It is also documented that even those people who are only observing the wrongdoing but are not directly involved demand some retribution.

On the one hand, the motivation for retribution can stem from a desire to see the wrongdoer suffer, which may be influenced by a form of psychological algebra. It is assumed that the wronged or the observers desire a “comparative suffering” of the wrongdoer, and solace comes if the wrongdoer suffers approximately equivalently to the pain she caused (Gollwitzer et al., 2011). The need for retribution comes close to the deterrence function of the MLI institution when it assumes that the loss of reputation and the distress surrounding the settlement process impose significant suffering on the wrongdoer practitioner.

On the other hand, “retribution as just desserts” is a desire to restore justice by compensating for the monetary losses. This desire is driven by distributive justice, and the emerged wealth asymmetries from being wronged are eliminated or mitigated between the wronged and the wrongdoer. Applying this to indemnity payments, a mutually agreed size of indemnity payment should restore a fair wealth allocation between the wronged and the wrongdoer and thus satisfy the preference for direct negative reciprocity (Charness and Rabin, 2002; Fehr and Gächter, 2000) or the distaste of being disadvantaged by inequality (Leibbrandt et al., 2023; Raihani and McAuliffe, 2012). Both

of these explanations hold an outcome-oriented perspective and take it for granted that the loss is redressed at the direct expense of the wrongdoer.

From these purely outcome-oriented perspectives, as long as the size of the indemnity payment is mutually agreed by the involved parties, the source of the payment (MLI or out-of-pocket) should not make a difference.<sup>6</sup> In this research, I propose and test that it is not only the money per se that matters, but, in the perceived value of an indemnity payment, it also matters who bears the cost. In other words, the same amount of indemnity paid through an insurance scheme would not have the same value as an equal size out-of-pocket payment. This is because the insurance scheme does not impose a direct loss on the wrongdoer, while an out-of-pocket payment does.

There is also a recently rediscovered aspect of retaliation, which is now incorporated into the utility framework based on beliefs (Molnar and Loewenstein, 2022). Philosophers and psychologists have long recognized that punishment has an educational function (Miller, 2001), but until now, this function was conflated with its deterrence function. In a series of experiments, Molnar et al. (2023) demonstrate that the educational function of retribution exists without the deterrence function. Specifically, an important driver of retribution is making transgressors understand why they are being punished. This function of retribution seems to be independent of the monetary restoration (i.e., driven by distributive preferences), the deterrence, and the comparative suffering (i.e., driven by retributive preference) functions of retribution. Instead, this approach advances the idea that punishers care about the offenders' beliefs, and shaping these beliefs (by teaching them why they are being punished) is alone a source of consumption utility for the avenger. This is because punishers form the belief that transgressors' beliefs are changed as a result of the education exchange. This research also suggests that the out-of-pocket indemnity payments would be perceived to carry more effect in educating the wrongdoer as it imposes a direct loss on her which may indirectly prompt more reflection.

## 2.2 Different mental accounts

Second, to provide an overall framework for my research question, I turn to the concept of mental accounting (Thaler, 1985). This approach advances the notion that the marginal willingness to consume differs between mental accounts from where money is paid. Consequently, this approach questions the fungibility of the Dollar amount paid from different sources. While the mental accounting literature focuses on the subjective valuations and behaviors of the spenders (i.e., those making the payment), I turn the table and examine whether similar differences exist among

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<sup>6</sup>I do acknowledge that one cannot put a price-tag on health or life. However, health economics construes the values of different health states and premature mortality, which values and formulas serve as the basis for determining the amounts of indemnity payments.

receivers (i.e., those receiving the indemnity payment in particular). I propose that for the receiver of the indemnity payment, the perceived value of the received indemnity payment, *ceteris paribus*, depends on the source of the payment. This main effect interacts with the level of responsibility assigned to the physician for wrongful behavior.

This payment–source dependence emerges because, in the context of malpractice, the perceived value of the received indemnity payment depends on who incurred the direct loss by paying the indemnity. Specifically, I predict that the perceived value of an indemnity payment paid via an MLI scheme is *lower* than when the same amount is paid out of the wrongdoer’s pocket. This is because the MLI payment does not impose a direct loss on the wrongdoer, and thus, the indemnity amount carries a lower perceived value for the wronged.

Simply put, I propose and empirically test that the perceived value of an indemnity payment is psychologically biased, and therefore, it is valued less when it does not entail a direct monetary loss on the wrongdoer.

## 2.3 Valuations are shared perceptions

Third, this research tests whether the predicted divergence between the two payment sources are jointly recognized shared perceptions on which people can coordinate and therefore, emerge as descriptive social norms. In game theory, focal points have been introduced by [Schelling \(1960\)](#), who defines them as coordinated choices when communication between participants is restricted. Such focal points can emerge from various sources, such as the context, the status quo, and social norms, and they are mainly driven by logic and imagination. [Janssen \(1997\)](#) reviews the literature on focal points and advances that they are not only relevant in pure coordination games, but also in everyday situations, such as bargaining and social life in general. In experimental economics, the extent to which the perceived social appropriateness of actions is evaluated is often seen as a measure of social norms (for example, see, [Bicchieri, 2005, 2016](#); [d’Adda et al., 2020](#); [Erkut et al., 2015](#); [Fehr and Schurtenberger, 2018](#); [Krupka et al., 2022](#); [Krupka and Weber, 2013](#); [Nosenzo and Gorges, 2020](#); [Ostrom, 2000](#); [Schram and Charness, 2015](#)). The intuition is that social norms embody shared expectations or perceptions about the acceptability or appropriateness of actions or outcomes, and these internalized perspectives shape preferences. In other words, preferences are conditional on empirical expectations, and people also coordinate their behaviors on these implicit norms. A large body of experimental research demonstrates that the appropriateness of different distributive outcomes measured in dictator games are seen consistently between third parties, dictators, and receivers and thus are social norms rather than personal norms (see, e.g., [Erkut et al., 2015](#); [Krupka and Weber, 2013](#)). In other words, people hold similar evaluations of how, for

example, dictators should share in distributive situations even when the contexts vary (Krupka and Weber, 2013). Additionally, as Krupka et al. (2022) and Lane et al. (2023) demonstrate, people hold correct second-order beliefs about how people evaluate the appropriateness of certain and unique behaviors that are neither regulated by the law nor are widespread. Krupka et al. (2022) analyze collective perceptions about actions, such as tipping and punctuality, of US and not US experimental subjects using coordination games. They compare subjects' elicited responses with actual social norms and find that participants' shared beliefs align more closely with actual social norms than their individual opinions and that subjects are able to take into account that certain descriptive norms are culture- and context-specific when forming their second-order beliefs.

Moreover, in situations lacking any distributive outcomes, people can successfully identify the outcome that would be selected by the majority of respondents and coordinate their responses on these choices. Fallucchi and Nosenzo (2022) test the robustness of the Krupka-Weber method (Krupka and Weber, 2013) in scenarios where respondents can coordinate on more than one focal point. In a study, featuring multiple potential focal points (i.e., smileys or frowny faces) and employing the Krupka-Weber elicitation method, subjects are asked to coordinate their choices by selecting the most salient answer. They find, that the Krupka-Weber approach is robust to these alternative contexts and subjects are able to coordinate their choices.

Building on this research, in this thesis, I propose and test that subjects can coordinate their responses when evaluating the different aspects of indemnity payments such that their second-order beliefs will show a divergent perceived value of indemnity paid via an insurance scheme versus out-of-pocket.

All in all, my research asks whether the subjective value of an indemnity payment depends on whether it is paid by an MLI scheme or out-of-pocket by the wrongdoer doctor. I anticipate that the same Dollar amount of indemnity payment would be valued lower when it is paid through an MLI than when it is paid directly by the wrongdoer and this divergence would be observed when respondents are involved (Study 1), observers (Study 2) and as second-order beliefs (Study 2).

### 3 Study 1

The goal of Study 1 is to test that when respondents stand in the shoes of a wronged patient, the perceived value of a medical indemnity payment is higher when it is paid from the implicated physician’s pocket or through an MLI scheme.

#### 3.1 Methods

To empirically address my intuitions, I design a survey–experiment. Participants are presented with a vignette that describes a gender–neutral (i.e., a health issue that is not gender–specific) and a real (i.e., actually happened<sup>7</sup> malpractice case that was settled out–of–court. The malpractice case presented is downloaded from a public case inventory and satisfies the definition of error of the Institute of Medicine, which is defined as follows. “A failure of a planned action to be completed as intended (i.e., error of execution) or the use of a wrong plan to achieve an aim (i.e., error of planning)” (Kohn, 2000).

The between–subject survey–experiment employs a 2–level (Payment source: Insurance vs. Pocket) factorial design, yielding two cells of the Payment source manipulation. The *Payment source* manipulation exogenously varies whether the indemnity payment was paid indirectly by an MLI insurance scheme as in the *Insurance* treatment or directly, out of the wrongdoer physician’s pocket as in the *Pocket* treatment. This exogenous variation should induce the differential effect of direct versus indirect compensation on the perceived value of the settlement.

Respondents evaluate the indemnity along four dimensions that correspond to each function of the MLI, as summarized by Mello et al. (2020). I measure whether the settlement presented in the vignette is perceived as *appropriate compensation*, is *fair*, has *adequate deterrence*, and has *satisfactory reputational consequences* for the physician. The exact formulation of each item is presented in Appendix A.

Before I finalized the content of the design and the questions to measure valuations along the four dimensions, on a separate sample recruited from Prolific services, I piloted the study (i.e., the vignette, the instructions, and the wording of the questions involving the measured dimensions).

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<sup>7</sup><https://www.tampabay.com/archive/1995/03/10/willie-king-said-doctor-that-s-the-wrong-leg/>

### 3.2 Procedure

Study 1 was programmed in oTree (Chen et al., 2016) and launched at Prolific services, enrolling US residents.

First, participants received an online consent form, and only those who started the study and consented to participate were given a form. After providing informed consent, all participants were given general instructions for the study. These read as follows.

*In the next couple of pages, you will read the summary of a real medical malpractice case which was settled out of court. The scenario describes the key elements and aspects of the case, and also discloses the amount that was paid to the patient as an out-of-court settlement. You will be asked to imagine that the described malpractice happened to you. Therefore, the case is described from a second-person view, as if it actually happened to you. Please pay close attention to the text and read it carefully, because you will be asked four questions about how you evaluate different aspects of the settlement.*

The participants are then presented with a medical malpractice scenario based on the *Payment Source* treatment arm to which they were assigned. Below the described scenario, participants are asked five questions in random order. These five questions consist of the four items corresponding to the functions of the MLI institution and the first attention check. The four items on the function of MLI are described as follows.

1. The perceived **fairness** of the settlement.

“The settlement is fair.”

2. The perceived **compensatory** value of the settlement.

“The settlement appropriately compensates me for my monetary losses.”

3. The perceived **deterrence** potential of the settlement.

“The settlement appropriately deters the practitioner from future malpractice.”

4. The perceived **reputation** consequences of the settlement.

“The practitioner’s reputation will appropriately suffer after the malpractice and settlement become public knowledge.”

Responses are anchored on a 4-level Likert scale: 1–Strongly disagree, 2–Disagree, 3–Agree and 4–Strongly agree.

The first attention question is described below.

- “From the list, select the one you believe is the most common child’s disease. Instead of the correct answer, please click on the third option.”

Respondents are presented 4 choices in the following order: Common cold, Chickenpox, Croup, Earache.

Next, participants answered some demographic questions. These items inquired about their gender, age, race/ethnicity, education-level, income-level, political preferences, zip code of their living place and the US State in which they live.

Next, participants received the block of heterogeneity questions that included the following items. First, they were asked to indicate if they believed that the US state where they live requires physicians to maintain a medical malpractice insurance. They were asked not to look up the correct answer online for this question. Second, they were asked to indicate if they work in any of the listed health professions. Third, I asked whether they have ever been a plaintiff in a medical malpractice case or filed a complaint against a health professional for malpractice. Fourth, they were asked if they had ever received a medical indemnity payment. Fifth, they were asked if they had ever been sued for anything. Sixth, whether they had ever been a defendant in a malpractice case. Seventh, whether they tended to worry about their health. Eighth, whether they tended to worry about the health of the people they loved.

Finally, participants received the second attention check question that tested whether they could recall how (from which source) the settlement was paid in the scenarios they received.

All participants, regardless of their performances on the attention checks, received a completion fee corresponding to a \$12 hourly rate paid on Prolific (approximately \$0.90 for this three-minute long survey).

According to power calculations, for a 0.8 power, calculating with a low-medium effect size with the main effect of the payment source manipulation and predictors, I need a minimum sample size of 100 per cell ( $N = 200$  in total).

### 3.3 Empirical strategy and Hypotheses

I expect that the responses on the four items will correlate. Therefore, I will conduct an exploratory factor analysis to identify the maximum number of underlying factors of the four items, and will regress these factors on the payment source (henceforth, Source) term to address the main prediction. Namely, the perceived value of the indemnity payment is *higher* when it is paid from the wrongdoer's pocket than from an MLI scheme.

I will use the following OLS specification with robust standard errors (HC1 method) to address my prediction.



$$Perceived\_value = \beta_0 + \beta_1 Pocket + (\beta_2 H)(\beta_3 D) + \epsilon \quad (1)$$

*Perceived\_value* is the mean value of each emerged component.

*Pocket* is a dummy variable of the *Source* factor, coded as 1 for *Pocket* and 0 for *Insurance*.

*H* is a vector of characteristics measured with the heterogeneity measures.

*D* is a vector of observables measured with demographic measures.

HYPOTHESIS 1. The mean *Perceived\_value* is higher in the Pocket than in the Insurance treatment,  $\beta_1 > 0$ .

## 3.4 Results

### 3.4.1 Sample characteristics

Four hundred and ninety-five respondents started the survey, and 16 did not finish the survey. The final sample consists of 479 respondents, 241 participants in the Pocket and 238 in the Insurance cells. Of the 479 respondents, a total of 48 participants failed in at least one attention check. Specifically, 29 failed in the Pocket and 19 in the Insurance cells, but the failure distribution does not differ across the Source factor,  $\chi^2(1) = 2.0029$ ,  $p = 0.1567$ . Restricting the sample to those who passed the attention checks, I have 209 participants in the Pocket and 222 in the Insurance cells. I do not exclude participants who failed either of the two attention checks, but instead, I run a regression analysis with and without these participants.

When conducting the statistical tests in the remainder of this section, I will use the following procedures. When comparing the means and variances of numeric variables, I will apply *F-Test*. When comparing the distributions of nominal categorical variables, I will apply *Chi-squared test*. When comparing the distributions of ordinal categorical variables, I will apply *Wilcoxon-Mann-Whitney test*.

**Table 1.** Participants' demographics in the Pocket and Insurance treatments in Study 1

|                                    | Insurance         | Pocket            | Test of statistical differences  |
|------------------------------------|-------------------|-------------------|----------------------------------|
| <b>Gender N (%)</b>                |                   |                   |                                  |
| Female                             | 110 (45.6%)       | 128 (53.8%)       | $\chi^2(3) = 3.5564, p = 0.3135$ |
| Male                               | 125 (51.9%)       | 103 (43.3%)       |                                  |
| Other                              | 5 (2.1%)          | 6 (2.5%)          |                                  |
| Prefer not to answer               | 1 (0.4%)          | 1 (0.4%)          |                                  |
| <b>Total</b>                       | <b>241 (100%)</b> | <b>238 (100%)</b> |                                  |
| <b>Mean (SD) Age in years</b>      | 40.5 (13.9)       | 41.7 (13.6)       | $F(1, 477) = 0.9784, p = 0.3231$ |
| <b>Race N (%)</b>                  |                   |                   |                                  |
| Black/African American             | 28 (11.6%)        | 37 (15.5%)        | $\chi^2(6) = 5.5951, p = 0.4700$ |
| Asian                              | 22 (9.1%)         | 23 (9.7%)         |                                  |
| White                              | 163 (67.6%)       | 145 (60.9%)       |                                  |
| Hispanic                           | 16 (6.6%)         | 14 (5.9%)         |                                  |
| Mixed                              | 9 (3.7%)          | 16 (6.7%)         |                                  |
| Other                              | 3 (1.2%)          | 2 (0.8%)          |                                  |
| Prefer not to say                  | 0 (0%)            | 1 (0.4%)          |                                  |
| <b>Total</b>                       | <b>241 (100%)</b> | <b>238 (100%)</b> |                                  |
| <b>Education N (%)</b>             |                   |                   |                                  |
| Less than high school              | 2 (0.8%)          | 1 (0.4%)          | $Z = 0.6292, p = 0.5081$         |
| High school or equivalent          | 29 (12%)          | 31 (13%)          |                                  |
| Some college                       | 59 (24.5%)        | 58 (24.4%)        |                                  |
| College                            | 110 (45.6%)       | 93 (39.1%)        |                                  |
| Master's degree                    | 34 (14.1%)        | 45 (18.9%)        |                                  |
| Doctoral degree                    | 2 (0.8%)          | 7 (2.9%)          |                                  |
| Professional degree (e.g., MD, JD) | 5 (2.1%)          | 3 (1.3%)          |                                  |
| <b>Total</b>                       | <b>241 (100%)</b> | <b>238 (100%)</b> |                                  |
| <b>Income N (%)</b>                |                   |                   |                                  |
| Lowest 25%                         | 43 (17.8%)        | 39 (16.4%)        | $Z = 1.1778, p = 0.7377$         |
| Between 25% and 50%                | 91 (37.8%)        | 105 (44.1%)       |                                  |
| Between 50% and 75%                | 82 (34%)          | 78 (32.8%)        |                                  |
| Top 25%                            | 12 (5%)           | 10 (4.2%)         |                                  |
| Prefer not to say                  | 13 (5.4%)         | 6 (2.5%)          |                                  |
| <b>Total</b>                       | <b>241 (100%)</b> | <b>238 (100%)</b> |                                  |
| <b>Political preferences N (%)</b> |                   |                   |                                  |
| Very liberal                       | 48 (19.9%)        | 52 (21.8%)        | $\chi^2(5) = 2.9623, p = 0.7058$ |
| Somewhat liberal                   | 65 (27%)          | 68 (28.6%)        |                                  |
| Neither liberal nor conservative   | 53 (22%)          | 51 (21.4%)        |                                  |
| Somewhat conservative              | 43 (17.8%)        | 45 (18.9%)        |                                  |
| Very conservative                  | 30 (12.4%)        | 19 (8%)           |                                  |
| Prefer not to say                  | 2 (0.8%)          | 3 (1.3%)          |                                  |
| <b>Total</b>                       | <b>241 (100%)</b> | <b>238 (100%)</b> |                                  |

Table 1 presents the distribution of key demographic variables in the Insurance and Pocket cells. Gender distribution does not differ between cells, and it is balanced between females and males. Mean age is also the same in the Insurance and Pocket cells, and the marginal mean is 41.0731 (13.7295). Race distribution does not differ between cells, either. The majority of respondents identifies themselves as White, followed by Black / African American and Asian, and this distribution is the same across the two cells. Education distribution is also the same between cells, with most respondents having a college degree. Most respondents consider themselves to be either between 25% and 50% or between 50% and 75% of the median income distribution in the US, and this is consistent between the Insurance and Pocket cells. The distributions of political preferences are balanced across the two cells. In conclusion, respondents in the two cells do not differ in their demographic characteristics.

Table 2 presents the distribution of key heterogeneity variables in the Insurance and Pocket cells. From the first row, we learn that the majority of respondents answered with either “Yes” or “I do not know” to whether they believe that there was a mandatory MLI in place in their state, and this distribution is consistent between the two cells. Row two documents that the distribution of health professionals does not differ between the Insurance and Pocket cells, and that only a few respondents work in the health-sector. From the third row, we learn that most respondents have never been a plaintiff in a malpractice case and the distributions do not differ between cells. Furthermore, based on row four, most of the respondents have not received an indemnity payment, again, no difference across cells. Only a few respondents have ever been sued in their lives (row five), and this is consistent in the Insurance and the Pocket cells. Malpractice defendant distributions do not differ between the two cells, either, and responses mainly consist of “No” answers. The last two items measure, whether respondents tend to worry about their own health (Worry about own health) and about the health of others, such as their children, relatives and close friends (Worry about health of others). One can see, that most participants worry at least somewhat about their own health, while they tend to worry even more about the health of others. Both of these distributions are the same between the two cells.

**Table 2.** Participants' heterogeneity in the Pocket and Insurance treatments in Study 1

|                                                     | Insurance         | Pocket            | Test of statistical differences         |
|-----------------------------------------------------|-------------------|-------------------|-----------------------------------------|
| <b>Believed mandatory MLI policy in state N (%)</b> |                   |                   |                                         |
| Yes                                                 | 101 (42%)         | 104 (43.7%)       | $\chi^2(2) = 0.21624$ ,<br>$p = 0.8975$ |
| No                                                  | 17 (7.1%)         | 15 (6.3%)         |                                         |
| I do not know                                       | 123 (51%)         | 119 (50%)         |                                         |
| <b>Total</b>                                        | <b>241 (100%)</b> | <b>238 (100%)</b> |                                         |
| <b>Health professional N (%)</b>                    |                   |                   |                                         |
| Nurse                                               | 5 (2.1%)          | 4 (1.7%)          | $\chi^2(9) = 6.4129$ ,<br>$p = 0.6980$  |
| Therapist                                           | 3 (1.2%)          | 4 (1.7%)          |                                         |
| Medical doctor                                      | 3 (1.2%)          | 4 (1.7%)          |                                         |
| Paramedic                                           | 1 (0.4%)          | 0 (0%)            |                                         |
| Midwife                                             | 0 (0%)            | 1 (0.4%)          |                                         |
| Dentist                                             | 1 (0.4%)          | 0 (0%)            |                                         |
| Dietitian                                           | 0 (0%)            | 0 (0%)            |                                         |
| Pharmacist                                          | 1 (0.4%)          | 1 (0.4%)          |                                         |
| Clinical psychologist                               | 3 (1.2%)          | 0 (0%)            |                                         |
| Other                                               | 16 (6.6%)         | 15 (6.3%)         |                                         |
| I am not a health professional                      | 208 (86.3%)       | 209 (87.8%)       |                                         |
| <b>Total</b>                                        | <b>241 (100%)</b> | <b>238 (100%)</b> |                                         |
| <b>Malpractice plaintiff N (%)</b>                  |                   |                   |                                         |
| Yes                                                 | 3 (1.2%)          | 6 (2.5%)          | $\chi^2(3) = 2.0008$ ,<br>$p = 0.5722$  |
| No                                                  | 232 (96.3%)       | 229 (96.2%)       |                                         |
| Other                                               | 2 (0.8%)          | 1 (0.4%)          |                                         |
| Prefer not to answer                                | 4 (1.7%)          | 2 (0.8%)          |                                         |
| <b>Total</b>                                        | <b>241 (100%)</b> | <b>238 (100%)</b> |                                         |
| <b>Received indemnity N (%)</b>                     |                   |                   |                                         |
| Yes                                                 | 2 (0.8%)          | 4 (1.7%)          | $\chi^2(3) = 1.6823$ ,<br>$p = 0.6409$  |
| No                                                  | 235 (97.5%)       | 231 (97.1%)       |                                         |
| Other                                               | 1 (0.4%)          | 0 (0%)            |                                         |
| Prefer not to answer                                | 3 (1.2%)          | 3 (1.2%)          |                                         |
| <b>Total</b>                                        | <b>241 (100%)</b> | <b>238 (100%)</b> |                                         |
| <b>Sued N (%)</b>                                   |                   |                   |                                         |
| Yes                                                 | 12 (5%)           | 14 (5.9%)         | $\chi^2(3) = 0.6886$ ,<br>$p = 0.8759$  |
| No                                                  | 224 (92.9%)       | 221 (92.9%)       |                                         |
| Other                                               | 2 (0.8%)          | 1 (0.4%)          |                                         |
| Prefer not to answer                                | 3 (1.2%)          | 2 (0.8%)          |                                         |
| <b>Total</b>                                        | <b>241 (100%)</b> | <b>238 (100%)</b> |                                         |
| <b>Malpractice defendant N (%)</b>                  |                   |                   |                                         |
| Yes                                                 | 1 (0.4%)          | 4 (1.7%)          | $\chi^2(3) = 3.8576$ ,<br>$p = 0.2773$  |
| No                                                  | 239 (99.2%)       | 233 (98%)         |                                         |
| Other                                               | 1 (0.4%)          | 0 (0%)            |                                         |
| Prefer not to answer                                | 0 (0%)            | 1 (0.4%)          |                                         |
| <b>Total</b>                                        | <b>241 (100%)</b> | <b>238 (100%)</b> |                                         |
| <b>Worry about own health N (%)</b>                 |                   |                   |                                         |
| Not at all                                          | 24 (10%)          | 26 (10.9%)        | $\chi^2(3) = 1.7913$ ,<br>$p = 0.6168$  |
| Somewhat                                            | 140 (58.1%)       | 124 (52.1%)       |                                         |
| Very much                                           | 56 (23.2%)        | 65 (27.3%)        |                                         |
| Extremely                                           | 21 (8.7%)         | 23 (9.7%)         |                                         |
| <b>Total</b>                                        | <b>241 (100%)</b> | <b>238 (100%)</b> |                                         |
| <b>Worry about health of others N (%)</b>           |                   |                   |                                         |
| Not at all                                          | 8 (3.3%)          | 8 (3.4%)          | $\chi^2(3) = 2.4396$ ,<br>$p = 0.4863$  |
| Somewhat                                            | 86 (35.7%)        | 73 (30.7%)        |                                         |
| Very much                                           | 109 (45.2%)       | 108 (45.4%)       |                                         |
| Extremely                                           | 38 (15.8%)        | 49 (20.6%)        |                                         |
| <b>Total</b>                                        | <b>241 (100%)</b> | <b>238 (100%)</b> |                                         |

### 3.4.2 Descriptive results

Descriptive results of key variables are presented in the upper panel of Table 3. The top panel presents results by including everyone, whereas the lower panel includes only those who passed both attention checks. As one can see from this table, the point estimates of the means for all four variables are higher in the Pocket than in the Insurance cells. Note, when comparing means, I report one-sided  $p$ -values since my predictions involve direction (means would be lower in the Insurance than in the Pocket cells). The fifth column presents Bonferroni-adjusted, and the sixth the Benjamini-Hochberg-adjusted (Benjamini and Hochberg, 1995)  $p$ -values, and we learn that the documented treatment differences are robust even after adjusting for the multiple hypothesis testing.

**Table 3.** Means (SDs) of key variables in the Insurance and Pocket treatments of Study 1

| Variable     | Insurance          | Pocket             | Test of statistical differences         | Bonferroni adjustment | Benjamini-Hochberg adjustment |
|--------------|--------------------|--------------------|-----------------------------------------|-----------------------|-------------------------------|
| Fairness     | 1.6888<br>(0.7790) | 1.9832<br>(0.8616) | $F(1, 477) = 15.3935$ ,<br>$p = 0.0001$ | $p = 0.0002$          | $p = 0.0001$                  |
| Compensation | 1.7095<br>(0.8700) | 1.8193<br>(0.8936) | $F(1, 477) = 1.8561$ ,<br>$p = 0.0869$  | $p = 0.3474$          | $p = 0.0869$                  |
| Deterrence   | 2.1120<br>(0.8990) | 2.4202<br>(0.8568) | $F(1, 477) = 14.7387$ ,<br>$p = 0.0001$ | $p = 0.0003$          | $p = 0.0001$                  |
| Reputation   | 2.9212<br>(0.8792) | 3.0798<br>(0.8152) | $F(1, 477) = 4.1927$ ,<br>$p = 0.0206$  | $p = 0.0823$          | $p = 0.0274$                  |
| <b>N</b>     | <b>241</b>         | <b>238</b>         |                                         |                       |                               |
| Fairness     | 1.6667<br>(0.7470) | 1.9522<br>(0.8479) | $F(1, 429) = 13.7949$ ,<br>$p = 0.0001$ | $p = 0.0005$          | $p = 0.0002$                  |
| Compensation | 1.6937<br>(0.8593) | 1.7656<br>(0.8535) | $F(1, 429) = 0.07578$ ,<br>$p = 0.1923$ | $p = 0.5000$          | $p = 0.1923$                  |
| Deterrence   | 2.0721<br>(0.8844) | 2.3828<br>(0.8418) | $F(1, 429) = 13.9224$ ,<br>$p = 0.0001$ | $p = 0.0004$          | $p = 0.0002$                  |
| Reputation   | 2.9054<br>(0.8797) | 3.0431<br>(0.8338) | $F(1, 429) = 2.7727$ ,<br>$p = 0.0483$  | $p = 0.1932$          | $p = 0.0644$                  |
| <b>N</b>     | <b>222</b>         | <b>209</b>         |                                         |                       |                               |

*Notes:* The top panel includes all respondents who completed Study 1 in the Insurance ( $N = 241$ ) and Pocket ( $N = 238$ ) treatment arms. The bottom panel includes only those participants who passed both attention checks in the Insurance ( $N = 222$ ) and Pocket ( $N = 209$ ) treatment arms. Responses on the variables are anchored on a 4-level Likert scale: 1-Strongly disagree, 2-Disagree, 3-Agree and 4-Strongly agree.

### 3.4.3 Addressing the hypothesis

Next, I address the main hypothesis; namely, the means on all four items is higher in the Pocket than in the Insurance treatment. However, since the items may be measuring underlying preferences that may not all be distinct, first, I test whether responses on the four items correlate. Therefore, I present the Pearson correlation coefficients in Table 4 and visualize the results in Figure 1. As one can see from this table and figure, there is a significant positive correlation between

all four items. Among these, the highest correlation appears to be between Fairness and Compensation and between Fairness and Deterrence as well as Compensation and Deterrence. To explore if the four items can be reduced to a set of factors, I conduct a Principal Component Analysis (PCA) and given the theoretical considerations presented above, I expect three components to emerge from the PCA.

**Table 4.** Correlation Matrix of Study 1 for Fairness, Compensation, Deterrence, and Reputation

| Variables    | Fairness | Compensation | Deterrence | Reputation |
|--------------|----------|--------------|------------|------------|
| Fairness     |          | 0.6638***    | 0.4930***  | 0.1623***  |
| Compensation |          |              | 0.4310***  | 0.1226***  |
| Deterrence   |          |              |            | 0.2677***  |
| Reputation   |          |              |            |            |

Note: The table displays the Pearson correlation coefficients between the items Fairness, Compensation, Deterrence, and Reputation. Only the upper triangle is shown. The  $p$ -values have been corrected using the Benjamini & Hochberg adjustment. \*\*\*  $p \leq 0.001$ , \*\*  $p \leq 0.01$ , \*  $p \leq 0.05$ , +  $p \leq 0.1$

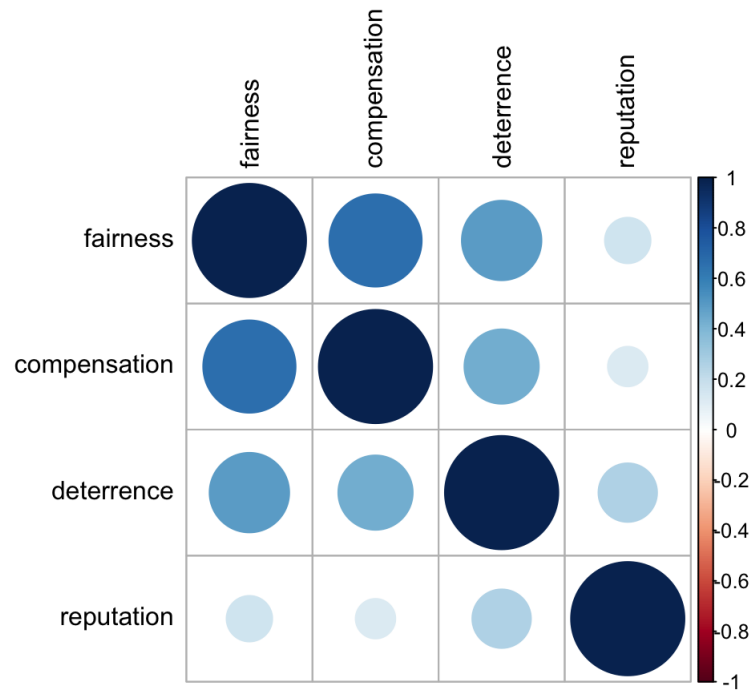


Figure 1: Correlations between the four response items in Study 1

Notes: The size and the color of the circles represent the strength of the correlations. Coefficients are Pearson's  $\rho$  and for all  $p \leq 0.05$ .

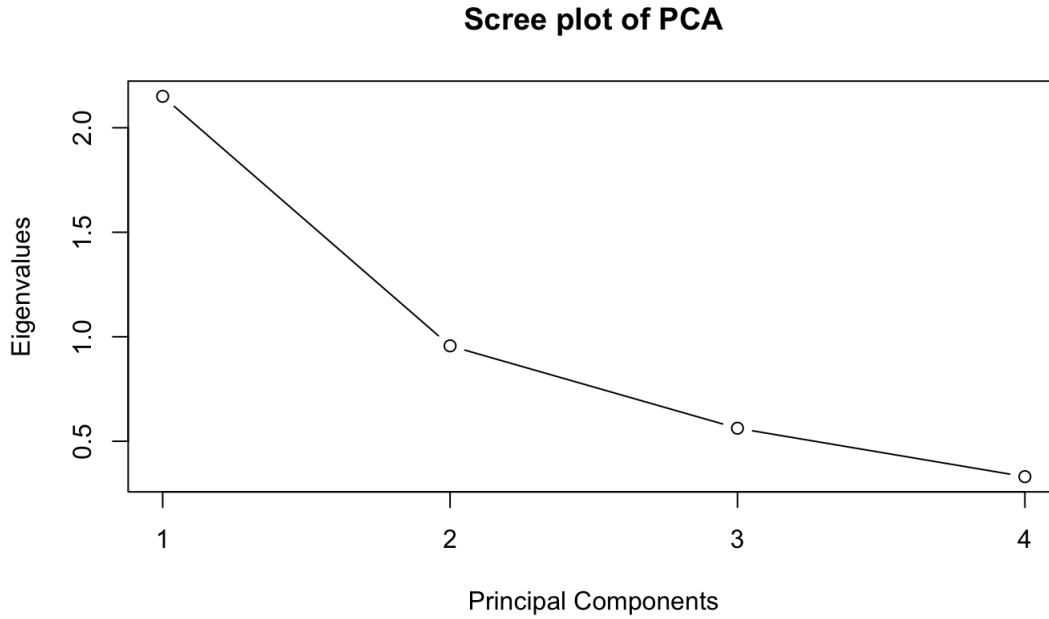


Figure 2: PCA for the four response items in Study 1

*Notes:* The scree plot indicates the Eigenvalues for the four potential PCA factors.

I visualize the Eigenvalues of the PCA exercise using a scree plot (see Figure 2), and find that, in fact, three components emerge from this analysis. This can be seen based on the so-called “elbow”, where Eigenvalues start to decrease significantly.

Next, I observe the loadings of the three emerged components (see Table 5). I find that RC1 consists of 85.2% Fairness and 96.2% Compensation. Therefore, I call the first component “Restorative justice”, indicating the effect of how fair and compensatory the settlement is perceived. RC2 consists of 100% Reputation, so I call this component “Reputation”. RC3 consists of 99.9% Deterrence. Consequently, I call the third component “Deterrence”. These variables appropriately capture the four dimensions along which the indemnity payment was evaluated.

**Table 5.** Summary of exploratory PCA component loadings in Study 1

|              | <b>RC1</b><br>“Restorative justice” | <b>RC2</b><br>“Reputation” | <b>RC3</b><br>“Deterrence” |
|--------------|-------------------------------------|----------------------------|----------------------------|
| Fairness     | 0.852                               |                            |                            |
| Compensation | 0.962                               |                            |                            |
| Deterrence   |                                     |                            | 0.999                      |
| Reputation   |                                     | 1.000                      |                            |

*Notes:* Table shows loadings for each component (RC1, RC2, RC3) across the factors of Fairness, Compensation, Deterrence, and Reputation using the promax rotation.

To address the predictions, I regress each emerged principal component on the *Source* term and summarize the results in Table 6 under different specifications. Specifications (1) of all three regressions include the whole sample. Here, I find that mean agreement responses in the Pocket are higher than in the Insurance treatment for all three variables. These results are robust after controlling for passing both attention checks, see specifications (2) and are maintained when restricting the sample to those who passed both attention check items, see specifications (3). These results lend support to Hypothesis 1; namely, that the perceived value of an indemnity is higher when directly paid by the wrongdoer than indirectly, through an insurance scheme.

**Table 6.** Regressing the emerged components on the Source term (Study 1)

|                          | Restorative justice  |                      |                      | Deterrence            |                       |                        | Reputation          |                      |                     |
|--------------------------|----------------------|----------------------|----------------------|-----------------------|-----------------------|------------------------|---------------------|----------------------|---------------------|
|                          | (1)                  | (2)                  | (3)                  | (1)                   | (2)                   | (3)                    | (1)                 | (2)                  | (3)                 |
| Constant                 | -0.1257*<br>(0.0619) | 0.2326<br>(0.1741)   | -0.1497*<br>(0.0630) | -0.1805**<br>(0.0648) | 0.2142<br>(0.1605)    | -0.2257***<br>(0.0664) | -0.0938<br>(0.0665) | 0.1879<br>(0.1383)   | -0.1124<br>(0.0693) |
| Source = Pocket          | 0.2531**<br>(0.0908) | 0.2363**<br>(0.0906) | 0.2225*<br>(0.0934)  | 0.3632***<br>(0.0899) | 0.3448***<br>(0.0894) | 0.3685***<br>(0.0932)  | 0.1888*<br>(0.0910) | 0.1756+<br>(0.0914)  | 0.1643+<br>(0.0970) |
| Attention check = Passed |                      | -0.3890*<br>(0.1717) |                      |                       | -0.4285**<br>(0.1580) |                        |                     | -0.3057*<br>(0.1323) |                     |
| Observations             | 479                  | 479                  | 431                  | 479                   | 479                   | 431                    | 479                 | 479                  | 431                 |
| Adjusted R <sup>2</sup>  | 0.0140               | 0.0256               | 0.0108               | 0.0310                | 0.0456                | 0.0328                 | 0.0068              | 0.0132               | 0.0043              |
| DF                       | 1                    | 2                    | 1                    | 1                     | 2                     | 1                      | 1                   | 2                    | 1                   |
| DF2                      | 477                  | 476                  | 429                  | 477                   | 476                   | 429                    | 477                 | 476                  | 429                 |
| F-Statistic              | 7.7771**             | 7.2708***            | 5.6900*              | 16.3040***            | 12.4083***            | 15.5830***             | 4.2960*             | 4.1970*              | 2.8606+             |

*Notes:* OLS with robust standard error estimates (i.e., HC1 method). Standard errors are in parentheses;  $p$ -values are two-sided. Specifications (1) and (2) include the whole sample. Specifications (3) include only those who passed both attention check questions. Terms are dummy coded with reference levels: Source = Insurance and Attention check = Not passed. Responses on the variables are anchored on a 4-level Likert scale: 1-Strongly disagree, 2-Disagree, 3-Agree and 4-Strongly agree.

\*\*\*  $p \leq 0.001$ , \*\*  $p \leq 0.01$ , \*  $p \leq 0.05$ , +  $p \leq 0.1$

### 3.4.4 Robustness analysis

To see if the main results are controlling for respondents' demographic characteristics, I regress the variables Restorative justice, Deterrence and Reputation on the demographics and present the results in Table 7. I run the robustness analysis on specifications (3) from Table 6 which only includes those respondents who passed both attention checks items. In addition to the demographic characteristics presented in Table 1, I also introduce two new variables. First, the “*Consistent location*” is a dummy, which is 1 if the respondent's answer for the zip code question matches her actual zip code based on her state and 0 otherwise. Second, the “*Mandatory insurance in state*” is a dummy, which is 1 if physicians are required to have MLI in the respondent's state and 0 otherwise.



**Table 7.** Regressing the three Components on the Source term with demographics (Study 1)

|                                    | Restorative justice | Deterrence          | Reputation          |
|------------------------------------|---------------------|---------------------|---------------------|
| Constant                           | −0.0173 (0.2762)    | −0.2486 (0.3009)    | 0.1454 (0.2627)     |
| Source = Pocket                    | 0.2557 (0.0938)**   | 0.4115*** (0.0957)  | 0.1444 (0.0977)     |
| Age                                | −0.0072* (0.0035)   | −0.0067+ (0.0038)   | −0.0044 (0.0039)    |
| Gender                             |                     |                     |                     |
| Female                             | −0.0506 (0.1758)    | −0.5479** (0.1734)  | −0.3893* (0.1905)   |
| Male                               | −0.0176 (0.1025)    | 0.1316 (0.1256)     | 0.1068 (0.1200)     |
| Other                              | 0.0417 (0.1104)     | 0.2940* (0.1270)    | 0.2727* (0.1140)    |
| Race                               |                     |                     |                     |
| Black/ African American            | −1.0251 (0.7473)    | −1.6500*** (0.4678) | 1.1454*** (0.2717)  |
| Asian                              | 0.3197+ (0.1743)    | 0.3930* (0.1573)    | 0.1241 (0.1414)     |
| White                              | 0.1368 (0.1916)     | 0.1157 (0.1876)     | −0.3812* (0.1519)   |
| Hispanic                           | −0.0069 (0.1564)    | 0.2172 (0.1404)     | −0.4165*** (0.1243) |
| Mixed                              | −0.0007 (0.2117)    | 0.1210 (0.2153)     | −0.1738 (0.2167)    |
| Other                              | −0.1131 (0.2104)    | 0.0925 (0.2016)     | −0.1105 (0.1787)    |
| Education                          |                     |                     |                     |
| High school or equivalent          | −0.4769+ (0.2670)   | 0.1743 (0.5453)     | 0.1266 (0.3669)     |
| Some college                       | 0.0107 (0.1640)     | −0.1028 (0.1790)    | 0.0591 (0.1542)     |
| College                            | 0.0522 (0.1237)     | 0.0248 (0.1395)     | −0.0432 (0.1284)    |
| Master's degree                    | −0.0108 (0.1029)    | −0.0143 (0.1301)    | −0.1659 (0.1085)    |
| Doctoral degree                    | 0.0134 (0.1221)     | 0.0713 (0.1447)     | −0.1618 (0.1429)    |
| Professional degree (e.g., MD, JD) | 0.4333 (0.3300)     | 0.2987 (0.2910)     | 0.4403 (0.3415)     |
| Income                             |                     |                     |                     |
| Lowest 25%                         | 0.5187* (0.2259)    | 0.3689+ (0.2210)    | 0.0470 (0.1736)     |
| Between 25% and 50%                | 0.1026 (0.1189)     | −0.0107 (0.1268)    | −0.1207 (0.1212)    |
| Between 50% and 75%                | −0.0463 (0.0951)    | −0.0466 (0.0975)    | 0.1865+ (0.0954)    |
| Top 25%                            | −0.0992 (0.0907)    | −0.1762+ (0.1001)   | 0.0119 (0.1014)     |
| Political preferences              |                     |                     |                     |
| Very liberal                       | 0.5095 (0.6930)     | 0.9492* (0.3910)    | −0.1779 (0.1612)    |
| Somewhat liberal                   | −0.2442 (0.1653)    | −0.2185+ (0.1210)   | −0.1088 (0.0915)    |
| Neither liberal nor conservative   | −0.1105 (0.1635)    | −0.1813 (0.1148)    | 0.1046 (0.0954)     |
| Somewhat conservative              | −0.2064 (0.1644)    | −0.3150* (0.1234)   | −0.0409 (0.1076)    |
| Very conservative                  | −0.0244 (0.1709)    | −0.2184+ (0.1244)   | 0.0967 (0.1095)     |
| Consistent location                | −0.1054 (0.2322)    | −0.1546 (0.2253)    | −0.1180 (0.1923)    |
| Mandatory insurance in state       | 0.2841 (0.2391)     | −0.0876 (0.2086)    | 0.0667 (0.1858)     |
| Observations                       | 431                 | 431                 | 431                 |
| Adjusted R <sup>2</sup>            | 0.0439              | 0.0388              | 0.0266              |
| Df1                                | 28                  | 28                  | 28                  |
| Df2                                | 402                 | 402                 | 402                 |
| F-Statistic                        | 1.705*              | 1.6198*             | 1.4198+             |

*Notes:* OLS with robust standard error estimates (i.e., HC1 method). Standard errors are in parentheses;  $p$ -values are two-sided. Scalar variables are demeaned. Reference levels for categorical variables: Source = Insurance, Gender = Prefer not to answer, Race = Prefer not to say, Education = Less than high school, Income = Prefer not to say, Political preferences = Prefer not to say. Responses on the variables are anchored on a 4-level Likert scale: 1–Strongly disagree, 2–Disagree, 3–Agree and 4–Strongly agree. \*\*\* $p \leq 0.001$ , \*\* $p \leq 0.01$ , \* $p \leq 0.05$ , + $p \leq 0.1$

Table 7 shows that the effect of the Source term is robust after controlling for demographics for the variables Restorative justice and Deterrence, but not for the variable Reputation. That is, demographic variations eliminate the treatment effect on the Reputation term. A higher age seems to decrease the perceived value over the dimensions Restorative justice and Deterrence. It seems that females indicate lower perceived values on the Deterrence and Reputation items, and those with other gender are associated with higher values on the Deterrence and Reputation items compared to individuals who did not prefer to answer. There are also some differences across different races. Black / African American participants are associated with a lower perceived value on the Deterrence item, but they indicate a higher value on the Reputation item compared to those respondents who did not prefer to answer. Asian respondents indicate higher perceived values on the Restorative justice and Deterrence items, while both White and Hispanic individuals are associated with lower values on the Reputation item compared to the reference level. In the case of education, the only marginally significant level is whether participants have at least high school or equivalent education, higher levels do not change the results. These respondents indicate lower perceived values on the Restorative justice item compared to participants with less than high school education. Compared to those who preferred not to disclose their income, respondents in the lowest 25% income group indicate higher perceived values on the Restorative justice and Deterrence items. The mean response for participants with income between 50% and 75% of the median income distribution in the US is higher on the Reputation item, whereas those in the top 25% are associated with a lower perceived value on the Deterrence item compared to the reference group. Respondents who consider themselves to be very liberal indicate a higher perceived value on the Deterrence item, whereas those who consider themselves only somewhat liberal are associated with a lower mean on the Deterrence item compared to participants who did not wish to answer. Respondents who consider themselves to be either somewhat or very conservative indicate a lower perceived value on the Deterrence item compared to the reference group.

Next, I regress the variables Restorative justice, Deterrence and Reputation on the heterogeneity measures, and present the results in Table 8. Again, I run this robustness analysis on specifications (3) from Table 6 which only includes those respondents who passed both attention checks items. The results indicate that the effect of the Source term is robust after controlling for heterogeneity measures for the variables Restorative justice and Deterrence, but not for the variable Reputation. Respondents who believe that the state which they live in does not mandate MLI indicate lower perceived values on all three items compared to those who answered that they do not know. Midwives indicate higher perceived values on the Restorative justice and Deterrence items, while dentists do so on all three items compared to those who are not health professionals. Moreover,

clinical psychologists indicate lower perceived values on the Restorative justice and Deterrence items, but a higher value on the Reputation item compared to the reference group. Respondents who have already been plaintiffs in a medical malpractice case indicate lower perceived values on all three items, whereas those who have not been malpractice plaintiffs are associated with a higher value on the Reputation item compared to those participants who did not prefer to answer. Respondents who have never received indemnity payment are associated with a lower perceived value on the Restorative justice item compared to those who did not prefer to answer. Furthermore, individuals who have not been involved in a malpractice case as defendants indicate lower perceived values on the Deterrence and Reputation items compared to those who did not prefer to answer. Respondents who tend to worry very much about their own health indicate lower responses on the Restorative justice and Deterrence items compared to those who do not worry about their health at all. Lastly, respondents who tend to worry very much about the health of others are associated with lower perceived values on the Reputation item compared to those who do not worry about the health of others at all.

**Table 8.** Regressing the three Components on the Source term with heterogeneity measures (Study 1)

|                                        | Restorative justice | Deterrence          | Reputation        |
|----------------------------------------|---------------------|---------------------|-------------------|
| Constant                               | 0.6155 (0.5312)     | 1.0248** (0.3685)   | 0.6195* (0.2993)  |
| Source = Pocket                        | 0.2055* (0.0937)    | 0.3414*** (0.0952)  | 0.1519 (0.1006)   |
| Believed mandatory MLI policy in state |                     |                     |                   |
| Yes                                    | -0.0167 (0.0824)    | 0.0382 (0.0866)     | -0.0262 (0.0826)  |
| No                                     | -0.1779* (0.0837)   | -0.1746+ (0.0893)   | -0.1912* (0.0859) |
| Health professional                    |                     |                     |                   |
| Nurse                                  | 0.4320 (0.5407)     | 0.4129 (0.4012)     | 0.5225 (0.3830)   |
| Therapist                              | -0.3418 (0.4404)    | 0.2569 (0.2416)     | -0.1268 (0.3737)  |
| Medical doctor                         | 0.3369 (0.3145)     | 0.4841 (0.4458)     | 0.2345 (0.3627)   |
| Midwife                                | 2.0731*** (0.1777)  | 0.5165** (0.1710)   | 0.0962 (0.1757)   |
| Dentist                                | 0.5801*** (0.0986)  | 1.2552*** (0.1076)  | 0.3983** (0.1295) |
| Pharmacist                             | 0.6840 (1.0171)     | 0.4077 (1.0629)     | -0.4951 (0.3866)  |
| Clinical psychologist                  | -0.8588*** (0.1996) | -0.9136*** (0.1778) | 0.7665** (0.2796) |
| Other                                  | 0.0452 (0.1888)     | 0.1026 (0.1750)     | -0.0499 (0.1754)  |
| Malpractice plaintiff                  |                     |                     |                   |
| Yes                                    | -0.7260* (0.3462)   | -0.7668* (0.3552)   | -0.7083* (0.2807) |
| No                                     | -0.1323 (0.3572)    | 0.3439 (0.3954)     | 0.4446+ (0.2592)  |
| Other                                  | -0.1561 (0.2139)    | 0.0743 (0.1782)     | -0.0030 (0.1315)  |
| Received indemnity                     |                     |                     |                   |
| Yes                                    | 0.1290 (0.5562)     | 0.4310 (0.6828)     | -0.3502 (0.4312)  |
| No                                     | -0.9066+ (0.4614)   | -0.4039 (0.5172)    | 0.0687 (0.2752)   |
| Sued                                   |                     |                     |                   |
| Yes                                    | 0.0511 (0.2838)     | 0.1612 (0.2358)     | -0.0535 (0.1742)  |
| No                                     | -0.2198 (0.1983)    | 0.1145 (0.2043)     | -0.0497 (0.1877)  |
| Other                                  | 0.0503 (0.1242)     | 0.1972 (0.1250)     | -0.0144 (0.0935)  |
| Malpractice defendant                  |                     |                     |                   |
| Yes                                    | 1.1699 (0.7902)     | -0.7864 (0.6176)    | -0.7510 (0.4737)  |
| No                                     | 0.3639 (0.6008)     | -1.0759* (0.4835)   | -0.6676* (0.2899) |
| Worry about own health                 |                     |                     |                   |
| Somewhat                               | -0.1305 (0.1297)    | 0.1538 (0.1332)     | -0.0202 (0.1322)  |
| Very much                              | -0.1688* (0.0812)   | -0.1564+ (0.0862)   | -0.0201 (0.0859)  |
| Extremely                              | 0.0586 (0.0985)     | -0.1175 (0.0998)    | -0.0183 (0.1001)  |
| Worry about health of others           |                     |                     |                   |
| Somewhat                               | 0.1273 (0.1702)     | -0.1991 (0.2071)    | 0.0207 (0.2383)   |
| Very much                              | 0.0536 (0.0879)     | 0.0706 (0.1023)     | -0.1907+ (0.1125) |
| Extremely                              | 0.0660 (0.0845)     | 0.1301 (0.0955)     | 0.0344 (0.1038)   |
| Observations                           | 431                 | 431                 | 431               |
| Adjusted R <sup>2</sup>                | 0.0484              | 0.0452              | -0.0045           |
| Df1                                    | 27                  | 27                  | 27                |
| Df2                                    | 403                 | 403                 | 403               |
| F-Statistic                            | 1.8093**            | 1.7546*             | 0.9289            |

*Notes:* OLS with robust standard error estimates (i.e., HC1 method). Standard errors are in parentheses;  $p$ -values are two-sided. Levels with zero observations have been removed from the model. Scalar variables are demeaned. Reference levels for categorical variables: Source = Insurance, Believed mandatory MLI policy in state = I do not know, Health professional = I am not a health professional, Malpractice plaintiff = Prefer not to answer, Received indemnity = Prefer not to answer, Sued = Prefer not to answer, Malpractice defendant = Prefer not to answer, Worry about own health = Not at all, Worry about health of others = Not at all. Responses on the variables are anchored on a 4-level Likert scale: 1-Strongly disagree, 2-Disagree, 3-Agree and 4-Strongly agree. \*\*\*  $p \leq 0.001$ , \*\*  $p \leq 0.01$ , \*  $p \leq 0.05$ , +  $p \leq 0.1$

### 3.5 Discussion

Study 1 provides robust evidence that the subjective valuation of medical indemnity payments depends on the payment source. In particular, whether the settlement was paid directly by the wrongdoer (i.e., out-of-pocket) or indirectly (via an insurance scheme). In fact, I find that the same

Dollar amount is valued *higher* if it is paid out-of-pocket by the wrongdoer (i.e., the physician) than if it is paid through an MLI scheme. These findings are present for all three dimensions across which the settlement was evaluated. The results are significant for the variable Restorative justice, highlighting the importance of personal accountability and showing that individuals perceive the outcome as more fair and compensatory if the wrongdoer directly bears the financial burden of a settlement. The effect on the variable Deterrence is also significant, showing that a direct financial loss is believed to more effectively discourage future misconduct than an indirect one. The results for Reputation are marginally significant, indicating that individuals perceive smaller Pocket vs. Insurance divergence along this dimension compared to Restorative justice and Deterrence.

From the perspective of the wronged, this divergence suggests that there is something more than just the monetary value of a medical indemnity payment. It means that when the settlement is paid out-of-pocket less is enough than when paid via an insurance scheme. This divergent valuation gives support for the comparative suffering approach in the sense that the wrongdoer may suffer more in the event of an out-of-pocket payment than when she is not bearing the direct costs. This raises attention to the importance of psychological mechanisms in the valuation of indemnity payment but perhaps, compensations in general too.

From a social planner's point of view, consider a world where there exists no institution of MLI. This may foster doctors' personal accountability and perhaps remove moral hazard from the decisions when practicing, and given the zero involvement of the insurance industry, health-care costs may go down as the expensive policies would not need to be financed from running costs. However, there are two main pitfalls to consider. First, the total absence of MLI may result in defensive medical practices, which can reduce access to riskier treatment and drive up healthcare costs since physicians might order additional tests and procedures to protect themselves. Second, mandating MLI reduces the personal accountability of physicians by shifting the responsibility to the insurance company. Therefore, patients might perceive doctors to be less invested in the quality of care they provide, which potentially disrupts trust in the healthcare system. Therefore, partial insurance models might represent an ideal policy solution. Using a shared liability model, insurance providers could cover a portion of the settlement amount, using deductibles, caps and limits which are already in place on other types of insurance products. This would provide physicians with some level of financial protection and maintain patients' perception of responsibility and accountability at the same time. Further research could focus on the legal and regulatory side of mandating MLI, considering the effect on overall social welfare.

## 4 Study 2

To address whether the documented results of Study 1 hold when the respondent does not have to stay in the shoes of the wronged patient, but instead, she is an observer and that the Insurance-vs-Pocket divergence holds when subjects are prompted to provide their second-order beliefs, I designed and conducted Study 2.

### 4.1 Methods

Study 2 is a survey-experiment. Participants are presented with the same vignette as in Study 1. Study 2 is a between-subject survey-experiment, deployed as a 2 X 2 (Payment source: Pocket vs Insurance by Coordination: Yes vs. No) factorial design, yielding four cells. In the *Payment source* treatment arm, I vary whether the indemnity payment was paid indirectly by an MLI insurance scheme (i.e., Insurance) or directly out of the wrongdoer physician’s pocket (i.e., Pocket). The wording of the scenario will be adjusted to reflect this treatment variation. This exogenous variation measures the differential effect of direct versus indirect compensation on the perceived value of the settlement. In the *Coordination* treatment arm, I vary whether the instructions prompt the respondents to indicate their own valuations as observers (Coordination: No) or if they are instructed to indicate their second-order beliefs implemented in a Krupka-Weber task.

Each question that respondents answered corresponded to one of the functions of the MLI institution, as summarized by [Mello et al. \(2020\)](#). However, as there is no self-involvement, I did not include the compensation item. Instead, I include the *fairness*, *adequate deterrent potential*, and *satisfactory reputational consequences* items in Study 2. The material of the survey-experiment is presented in Appendix A.

Before I finalized the content of the design and the questions to measure valuations along the three dimensions, on a separate sample recruited from Prolific services, I piloted the study (i.e., the vignette, the instructions, and the wording of the questions involving the measured dimensions).

### 4.2 Procedure

Study 2 was programmed in oTree ([Chen et al., 2016](#)) and launched at Prolific services, enrolling US residents.

First, participants received an online consent form, and only those who started the study and consented to participate were given a form. After providing informed consent, all participants were given general instructions for the study. These read as follows.

*In the next couple of pages, you will read the summary of a real medical malpractice case which was settled out of court. The scenario describes the key elements and aspects of the case and also discloses the amount that was paid to the patient as an out-of-court settlement. You will be asked to imagine that the described malpractice happened to a patient. Therefore, the case is described from a third-person view. Please pay close attention to the text and read it carefully, because you will be asked three questions about how you evaluate different aspects of the settlement.*

The participants are then presented with a medical malpractice scenario based on the *Payment Source* treatment arm to which they were assigned. Below the described scenario, participants are asked four questions in random order. These four questions consist of the three items corresponding to the functions of the MLI institution and the first attention check. The three items on the function of MLI are described as follows.

1. The perceived **fairness** of the settlement.

“The settlement is fair.”

2. The perceived **deterrence** potential of the settlement.

“The settlement appropriately deters the practitioner from future malpractice.”

3. The perceived **reputation** consequences of the settlement.

“The practitioner’s reputation will appropriately suffer after the malpractice and settlement become public knowledge.”

Responses are anchored on a 4-level Likert scale: 1–Strongly disagree, 2–Disagree, 3–Agree and 4–Strongly agree.

The first attention question is described below.

- “From the list, select the one you believe is the most common child’s disease. Instead of the correct answer, please click on the third option.”

Respondents are presented 4 choices in the following order: Common cold, Chickenpox, Croup, Earache.

In addition, participants in the Coordination: Yes cells received following instructions.

*After all participants have submitted their responses, one of the three scenario-related questions will be selected. Then, the computer program will check whether your response to this question matches the most frequent response given by the sample of respondents who are US residents and recruited from Prolific just as you were. If yours and the most frequent response match, you will receive an approximately \$0.50 bonus. Therefore, we recommend that you carefully choose your response to this question.*

Next, participants answered some demographic questions. These items inquired about their gender, age, race/ethnicity, education-level, income-level, political preferences, zip code of their living place, the US State in which they live.

Next, participants received the block of heterogeneity questions that included the following items. First, they were asked to indicate if they believed that the US state where they live requires physicians to maintain a medical malpractice insurance. They were asked not to look up the correct answer online for this question. Second, they were asked to indicate if they work in any of the listed health professions. Third, I asked whether they have ever been a plaintiff in a medical malpractice case or filed a complaint against a health professional for malpractice. Fourth, they were asked if they had ever received a medical indemnity payment. Fifth, they were asked if they had ever been sued for anything. Sixth, whether they had ever been a defendant in a malpractice case. Seventh, whether they tended to worry about their health. Eighth, whether they tended to worry about the health of the people they loved.

Finally, participants received the second attention check question that tested whether they could recall how (from which source) the settlement was paid in the scenarios they received.

All participants, regardless of their performances on the attention checks, received a completion fee corresponding to a \$12 hourly rate paid on Prolific (approximately \$0.90 for this three-minute long survey). In addition, respondents in the Coordination: Yes cells, also received a bonus of \$0.50, if they got the modal answer right on a randomly selected question.

According to power calculations, for a 0.8 power, calculating with a low-medium effect size with the main effect of the payment source manipulation and predictors, I need a minimum sample size of 400 per cell ( $N = 1200$  in total).

### 4.3 Empirical strategy and Hypotheses

I expect that the responses on the three items will correlate. Therefore, I will conduct an exploratory factor analysis to identify the maximum number of underlying factors of the three items, and will regress these factors on the payment source (henceforth, Source) term to address the main prediction. Namely, the perceived value of the indemnity payment is *higher* when it is paid from the wrongdoer's pocket than from an MLI scheme in both the Coordination: Yes and the Coordination: No cells.

I will use the following OLS specification with robust standard errors (HC1 method) to address my prediction.



$$Perceived\_value = \beta_0 + \beta_1 Source + (+\beta_2 H)(+\beta_3 D) + \epsilon \quad (2)$$

*Perceived\_value* is the mean value of each emerged component.

*Pocket* is a dummy variable of the *Source* factor, coded as 1 for *Pocket* and 0 for *Insurance*.

*H* is a vector of characteristics measured with the heterogeneity measures.

*D* is a vector of observables measured with demographic measures.

HYPOTHESIS 2. The mean *Perceived\_value* is higher in the Pocket than in the Insurance treatment,  $\beta_1 > 0$ , in the Coordination: Yes cell.

In the Coordination: No cells, I will use the following OLS specification with robust standard errors (HC1 method) to address my prediction.

$$Perceived\_value = \beta_0 + \beta_1 Source + (+\beta_2 H)(+\beta_3 D) + \epsilon \quad (3)$$

*Perceived\_value* is the mean value of each emerged component.

*Pocket* is a dummy variable of the *Source* factor, coded as 1 for *Pocket* and 0 for *Insurance*.

*H* is a vector of characteristics measured with the heterogeneity measures.

*D* is a vector of observables measured with demographic measures.

HYPOTHESIS 3. The mean *Perceived\_value* is higher in the Pocket than in the Insurance treatment,  $\beta_1 > 0$ , in the Coordination: No cell.

## 4.4 Results

### 4.4.1 Sample characteristics

One thousand two hundred and twenty-five respondents started the survey, and 1200 finished it. The final sample consists of 1200 respondents, 294 participants in the Insurance–Yes, 303 in the Pocket–Yes, 303 in the Insurance–No and 300 in the Pocket–No cells. Of the 1200 respondents, a total of 141 failed in one or two attention checks. Specifically, 31 failed in the Insurance–Yes, 39 in the Pocket–Yes, 29 in the Insurance–No and 42 in the Pocket–No cells. The failure distribution does not differ across the Source factor,  $\chi^2(1) = 2.9920$ ,  $p = 0.0837$ . Restricting the sample to those who passed the attention checks, I have 263 participants in the Insurance–Yes, 264 in the Pocket–Yes, 274 in the Insurance–No, and 258 in the Pocket–No cells. I do not exclude participants who failed either of the two attention checks, but instead I run a regression analysis with and without these participants.

When conducting the statistical tests in the remainder of this section, I will use the following procedures. When comparing the means and variances of numeric variables, I will apply *one-way ANOVA*. When comparing the distributions of nominal categorical variables, I will apply *Chi-squared test*. When comparing the distributions of ordinal categorical variables, I will apply *one-way ANOVA*.

**Table 9.** Participants’ demographics in the four treatments of Study 2

|                                    | Coordination: Yes |                   | Coordination: No  |                   | Test of statistical differences          |
|------------------------------------|-------------------|-------------------|-------------------|-------------------|------------------------------------------|
|                                    | Insurance         | Pocket            | Insurance         | Pocket            |                                          |
| <b>Gender N (%)</b>                |                   |                   |                   |                   |                                          |
| Female                             | 149 (50.7%)       | 152 (50.2%)       | 150 (49.5%)       | 152 (50.7%)       | $\chi^2(9) = 7.3371$ ,<br>$p = 0.6021$   |
| Male                               | 142 (48.3%)       | 147 (48.5%)       | 145 (47.9%)       | 145 (48.3%)       |                                          |
| Other                              | 2 (1%)            | 4 (1.3%)          | 5 (1.7%)          | 3 (1%)            |                                          |
| Prefer not to answer               | 1 (0.3%)          | 0 (0%)            | 3 (1%)            | 0 (0%)            |                                          |
| <b>Total</b>                       | <b>294 (100%)</b> | <b>303 (100%)</b> | <b>303 (100%)</b> | <b>300 (100%)</b> |                                          |
| <b>Mean (SD) Age in years</b>      | 37.3 (14.0)       | 39.9 (13.5)       | 39.5 (13.5)       | 38.5 (14.5)       | $F(3, 1196) = 1.9876$ ,<br>$p = 0.1140$  |
| <b>Race N (%)</b>                  |                   |                   |                   |                   |                                          |
| Black/African American             | 75 (25.5%)        | 73 (24.1%)        | 80 (26.4%)        | 78 (26%)          | $\chi^2(18) = 15.9367$ ,<br>$p = 0.5970$ |
| Asian                              | 23 (7.8%)         | 25 (8.3%)         | 16 (5.3%)         | 28 (9.3%)         |                                          |
| White                              | 161 (54.8%)       | 178 (58.7%)       | 181 (59.7%)       | 166 (55.33%)      |                                          |
| Hispanic                           | 19 (6.5%)         | 10 (3.3%)         | 13 (4.3%)         | 14 (4.7%)         |                                          |
| Mixed                              | 10 (3.4%)         | 11 (3.6%)         | 7 (2.3%)          | 8 (2.7%)          |                                          |
| Other                              | 4 (1.4%)          | 5 (1.7%)          | 2 (0.6%)          | 1 (0.3%)          |                                          |
| Prefer not to say                  | 2 (0.7%)          | 1 (0.3%)          | 4 (1.3%)          | 5 (1.7%)          |                                          |
| <b>Total</b>                       | <b>294 (100%)</b> | <b>303 (100%)</b> | <b>303 (100%)</b> | <b>300 (100%)</b> |                                          |
| <b>Education N (%)</b>             |                   |                   |                   |                   |                                          |
| Less than high school              | 1 (0.3%)          | 4 (1.3%)          | 3 (1%)            | 2 (0.7%)          | $F(3, 1196) = 1.0515$ ,<br>$p = 0.3688$  |
| High school or equivalent          | 40 (13.6%)        | 45 (14.9%)        | 39 (12.9%)        | 32 (10.7%)        |                                          |
| Some college                       | 69 (23.5%)        | 57 (18.8%)        | 55 (18.2%)        | 59 (20%)          |                                          |
| College                            | 121 (41.2%)       | 127 (41.9%)       | 138 (45.5%)       | 138 (46%)         |                                          |
| Master’s degree                    | 53 (18%)          | 56 (18.5%)        | 54 (17.8%)        | 46 (15.3%)        |                                          |
| Doctoral degree                    | 3 (1%)            | 2 (0.7%)          | 6 (2%)            | 12 (4%)           |                                          |
| Professional degree (e.g., MD, JD) | 7 (2.4%)          | 12 (4%)           | 8 (2.6%)          | 11 (3.7%)         |                                          |
| <b>Total</b>                       | <b>294 (100%)</b> | <b>303 (100%)</b> | <b>303 (100%)</b> | <b>300 (100%)</b> |                                          |
| <b>Income N (%)</b>                |                   |                   |                   |                   |                                          |
| Lowest 25%                         | 42 (14.3%)        | 61 (20.1%)        | 63 (20.8%)        | 59 (20%)          | $F(3, 1196) = 0.4767$ ,<br>$p = 0.6986$  |
| Between 25% and 50%                | 133 (45.2%)       | 126 (41.6%)       | 129 (42.6%)       | 128 (42.7%)       |                                          |
| Between 50% and 75%                | 89 (30.3%)        | 84 (27.7%)        | 75 (24.8%)        | 78 (26%)          |                                          |
| Top 25%                            | 12 (4.1%)         | 16 (5.3%)         | 19 (6.3%)         | 15 (5%)           |                                          |
| Prefer not to say                  | 18 (6.1%)         | 16 (5.3%)         | 17 (5.6%)         | 20 (6.7%)         |                                          |
| <b>Total</b>                       | <b>294 (100%)</b> | <b>303 (100%)</b> | <b>303 (100%)</b> | <b>300 (100%)</b> |                                          |
| <b>Political preferences N (%)</b> |                   |                   |                   |                   |                                          |
| Very liberal                       | 45 (15.3%)        | 49 (16.2%)        | 47 (15.5%)        | 52 (17.3%)        | $\chi^2(15) = 9.0862$ ,<br>$p = 0.8730$  |
| Somewhat liberal                   | 78 (26.5%)        | 83 (27.4%)        | 84 (27.7%)        | 74 (24.7%)        |                                          |
| Neither liberal nor conservative   | 64 (21.8%)        | 68 (22.4%)        | 63 (20.8%)        | 76 (25.3%)        |                                          |
| Somewhat conservative              | 49 (16.7%)        | 56 (18.5%)        | 57 (18.8%)        | 47 (15.7%)        |                                          |
| Very conservative                  | 53 (18%)          | 38 (12.5%)        | 43 (14.2%)        | 46 (15.3%)        |                                          |
| Prefer not to say                  | 5 (1.7%)          | 9 (3%)            | 9 (3%)            | 5 (1.7%)          |                                          |
| <b>Total</b>                       | <b>294 (100%)</b> | <b>303 (100%)</b> | <b>303 (100%)</b> | <b>300 (100%)</b> |                                          |

Table 9 presents the distribution of key demographic variables in the Insurance–Yes, Pocket–Yes, Insurance–No and Pocket–No cells. I display the number of respondents per choice for each question, and the statistical results of, whether the groups differ from each other. Gender distribution does not differ between cells, and it is balanced between females and males. Mean age is also the same in the four cells, and the marginal mean is 39.6198 (13.7650) in the Coordination: Yes and 39.9685 (14.0240) in the Coordination: No cell. The overall marginal mean is 39.7950 (13.8910). The majority of respondents identifies themselves as White, followed by Black / African American and Asian, and this distribution is the same across all cells. Education distribution is also the same across the treatment variations, with most respondents having a college degree in every cell. Most of the respondents consider themselves to be either between 25% and 50% or between 50% and 75% of the median income distribution in the US, and this distribution is consistent between the cells. Politics distribution is relatively balanced, too, and I find no significant difference between the four cells. In conclusion, the demographic distribution of respondents does not differ significantly between the four treatment variations.

**Table 10.** Participants’ heterogeneity in the four treatments of Study 2

|                                                     | Coordination: Yes |                   | Coordination: No  |                   | Test of statistical differences          |
|-----------------------------------------------------|-------------------|-------------------|-------------------|-------------------|------------------------------------------|
|                                                     | Insurance         | Pocket            | Insurance         | Pocket            |                                          |
| <b>Believed mandatory MLI policy in state N (%)</b> |                   |                   |                   |                   |                                          |
| Yes                                                 | 126 (51.7%)       | 130 (42.9%)       | 136 (44.9%)       | 123 (41%)         | $\chi^2(6) = 1.4392$ ,<br>$p = 0.9634$   |
| No                                                  | 25 (8.5%)         | 29 (9.6%)         | 28 (9.2%)         | 26 (8.7%)         |                                          |
| I do not know                                       | 143 (48.6%)       | 144 (47.5%)       | 139 (45.9%)       | 151 (50.3%)       |                                          |
| <b>Total</b>                                        | <b>294 (100%)</b> | <b>303 (100%)</b> | <b>303 (100%)</b> | <b>300 (100%)</b> |                                          |
| <b>Health professional N (%)</b>                    |                   |                   |                   |                   |                                          |
| Nurse                                               | 10 (3.4%)         | 8 (2.6%)          | 11 (3.6%)         | 4 (1.3%)          | $\chi^2(30) = 25.0555$ ,<br>$p = 0.7223$ |
| Therapist                                           | 2 (0.7%)          | 3 (1%)            | 5 (1.7%)          | 3 (1%)            |                                          |
| Medical Doctor                                      | 4 (1.4%)          | 3 (1%)            | 2 (0.7%)          | 5 (1.7%)          |                                          |
| Paramedic                                           | 0 (0%)            | 2 (0.7%)          | 2 (0.7%)          | 0 (0%)            |                                          |
| Midwife                                             | 0 (0%)            | 1 (0.3%)          | 0 (0%)            | 0 (0%)            |                                          |
| Dentist                                             | 0 (0%)            | 1 (0.3%)          | 2 (0.7%)          | 1 (0.3%)          |                                          |
| Dietitian                                           | 1 (0.3%)          | 1 (0.3%)          | 0 (0%)            | 0 (0%)            |                                          |
| Pharmacist                                          | 3 (1%)            | 4 (1.3%)          | 1 (0.3%)          | 2 (0.7%)          |                                          |
| Clinical psychologist                               | 2 (0.7%)          | 0 (0%)            | 2 (0.7%)          | 1 (0.3%)          |                                          |
| Other                                               | 30 (10.2%)        | 20 (6.6%)         | 29 (9.6%)         | 23 (7.7%)         |                                          |
| I am not a health professional                      | 242 (82.3%)       | 260 (85.8%)       | 249 (82.2%)       | 261 (87%)         |                                          |
| <b>Total</b>                                        | <b>294 (100%)</b> | <b>303 (100%)</b> | <b>303 (100%)</b> | <b>300 (100%)</b> |                                          |
| <b>Malpractice plaintiff N (%)</b>                  |                   |                   |                   |                   |                                          |
| Yes                                                 | 13 (4.4%)         | 13 (4.3%)         | 10 (3.3%)         | 13 (4.3%)         | $\chi^2(9) = 10.2115$ ,<br>$p = 0.3336$  |
| No                                                  | 276 (93.9%)       | 284 (93.7%)       | 286 (94.4%)       | 281 (93.7%)       |                                          |
| Other                                               | 4 (1.4%)          | 1 (0.3%)          | 4 (1.3%)          | 0 (0%)            |                                          |
| Prefer not to answer                                | 1 (0.3%)          | 5 (1.7%)          | 3 (1%)            | 6 (2%)            |                                          |
| <b>Total</b>                                        | <b>294 (100%)</b> | <b>303 (100%)</b> | <b>303 (100%)</b> | <b>300 (100%)</b> |                                          |
| <b>Received indemnity N (%)</b>                     |                   |                   |                   |                   |                                          |
| Yes                                                 | 10 (3.4%)         | 11 (3.6%)         | 9 (3%)            | 16 (5.3%)         | $\chi^2(9) = 24.2895$ ,<br>$p = 0.0038$  |
| No                                                  | 283 (96.3%)       | 288 (95%)         | 292 (96.4%)       | 271 (90.3%)       |                                          |
| Other                                               | 0 (0%)            | 3 (1%)            | 0 (0%)            | 4 (1.3%)          |                                          |
| Prefer not to answer                                | 1 (0.3%)          | 1 (0.3%)          | 2 (0.7%)          | 9 (3%)            |                                          |
| <b>Total</b>                                        | <b>294 (100%)</b> | <b>303 (100%)</b> | <b>303 (100%)</b> | <b>300 (100%)</b> |                                          |
| <b>Sued N (%)</b>                                   |                   |                   |                   |                   |                                          |
| Yes                                                 | 16 (5.4%)         | 23 (7.6%)         | 13 (4.3%)         | 17 (5.7%)         | $\chi^2(9) = 12.3603$ ,<br>$p = 0.1938$  |
| No                                                  | 275 (93.5%)       | 277 (91.4%)       | 287 (94.7%)       | 275 (91.7%)       |                                          |
| Other                                               | 2 (0.7%)          | 0 (0%)            | 0 (0%)            | 1 (0.3%)          |                                          |
| Prefer not to answer                                | 1 (0.3%)          | 3 (1%)            | 3 (1%)            | 7 (2.3%)          |                                          |
| <b>Total</b>                                        | <b>294 (100%)</b> | <b>303 (100%)</b> | <b>303 (100%)</b> | <b>300 (100%)</b> |                                          |
| <b>Malpractice defendant N (%)</b>                  |                   |                   |                   |                   |                                          |
| Yes                                                 | 7 (2.4%)          | 6 (2%)            | 6 (2%)            | 6 (2%)            | $\chi^2(9) = 10.6787$ ,<br>$p = 0.2984$  |
| No                                                  | 284 (96.6%)       | 291 (96%)         | 295 (97.4%)       | 283 (94.3%)       |                                          |
| Other                                               | 2 (0.7%)          | 2 (0.7%)          | 0 (0%)            | 3 (1%)            |                                          |
| Prefer not to answer                                | 1 (0.3%)          | 4 (1.3%)          | 2 (0.7%)          | 8 (2.7%)          |                                          |
| <b>Total</b>                                        | <b>294 (100%)</b> | <b>303 (100%)</b> | <b>303 (100%)</b> | <b>300 (100%)</b> |                                          |
| <b>Worry about own health N (%)</b>                 |                   |                   |                   |                   |                                          |
| Not at all                                          | 35 (11.9%)        | 36 (11.9%)        | 31 (10.2%)        | 22 (7.3%)         | $\chi^2(9) = 11.0345$ ,<br>$p = 0.2734$  |
| Somewhat                                            | 155 (52.7%)       | 152 (50.2%)       | 157 (51.2%)       | 162 (54%)         |                                          |
| Very much                                           | 63 (21.4%)        | 86 (28.4%)        | 84 (27.7%)        | 83 (27.7%)        |                                          |
| Extremely                                           | 41 (13.9%)        | 29 (9.6%)         | 31 (10.2%)        | 33 (11%)          |                                          |
| <b>Total</b>                                        | <b>294 (100%)</b> | <b>303 (100%)</b> | <b>303 (100%)</b> | <b>300 (100%)</b> |                                          |
| <b>Worry about health of others N (%)</b>           |                   |                   |                   |                   |                                          |
| Not at all                                          | 15 (5.1%)         | 7 (2.3%)          | 7 (2.3%)          | 5 (1.7%)          | $\chi^2(9) = 12.8336$ ,<br>$p = 0.1703$  |
| Somewhat                                            | 90 (30.6%)        | 98 (32.3%)        | 99 (32.7%)        | 92 (30.7%)        |                                          |
| Very much                                           | 117 (40%)         | 135 (44.6%)       | 136 (44.9%)       | 123 (41%)         |                                          |
| Extremely                                           | 72 (24.5%)        | 63 (20.8%)        | 61 (20.1%)        | 80 (26.7%)        |                                          |
| <b>Total</b>                                        | <b>294 (100%)</b> | <b>303 (100%)</b> | <b>303 (100%)</b> | <b>300 (100%)</b> |                                          |

Table 10 presents the distribution of key heterogeneity variables in the Insurance–Yes, Pocket–Yes, Insurance–No and Pocket–No cells. I display the number of respondents per choice for each question, and the statistical results of, whether the groups differ from each other. Believed mandatory MLI policy in state measures whether respondents believe that physicians are obligated to have MLI in their home state. The majority of respondents answered with either “Yes” or “I do not know”, and this distribution is consistent between the four cells. Health professional distribution is also the same between the treatment variations, with only a minority of the sample consisting of health professionals. Malpractice plaintiff indicates whether a respondent has been involved in a medical malpractice case as a plaintiff. Most of the respondents answered with “No”, and this distribution is consistent between the four cells. Furthermore, the majority of respondents in all four cells have not received indemnity payment before. However, this distribution seems to be statistically different across the treatments. Only a few respondents have ever been sued in their lives, and this is consistent across the cells. Malpractice defendant distribution does not differ between

the four cells, either, and it mainly consists of “No” answers. The last two items measure, whether respondents tend to worry about their own health (Worry about own health) and about the health of others, such as their children, relatives and close friends (Worry about health of others). One can see, that most participants worry at least somewhat about their own health, while they tend to worry even more about the health of others. Both of these distributions are the same between the four treatment variations. In conclusion, the distribution of heterogeneity measures of respondents does not differ significantly between the four treatment variations.

#### 4.4.2 Descriptive results

Descriptive results of key variables with all participants who finished the experiment are presented in the upper panel of Table 11. In the lower panel, the sample is further restricted to those participants who passed both attention check items. As one can see from this table, the point estimates of the means for the items *Fairness* and *Deterrence* are higher in the Pocket than in the Insurance treatment in the Coordination:Yes cells, whereas the mean of the variable *Reputation* is lower. In the Coordination: No cells, the point estimates of the means for all three items are higher in the Pocket than in the Insurance treatment.

**Table 11.** Means (SDs) of key variable in the four treatments of Study 2

| Variable   | Coordination: Yes  |                    | Coordination: No   |                    |
|------------|--------------------|--------------------|--------------------|--------------------|
|            | Insurance          | Pocket             | Insurance          | Pocket             |
| Fairness   | 2.0408<br>(0.9265) | 2.2079<br>(0.9277) | 2.1716<br>(0.9298) | 2.2433<br>(0.9767) |
| Deterrence | 2.4218<br>(0.9232) | 2.5611<br>(0.9146) | 2.4092<br>(0.9477) | 2.6467<br>(0.9227) |
| Reputation | 3.3401<br>(0.7794) | 3.2904<br>(0.7983) | 3.1914<br>(0.7825) | 3.2833<br>(0.7822) |
| <b>N</b>   | <b>294</b>         | <b>303</b>         | <b>303</b>         | <b>300</b>         |
| Fairness   | 2.0000<br>(0.9038) | 2.1818<br>(0.9255) | 2.1314<br>(0.9124) | 2.2016<br>(0.9734) |
| Deterrence | 2.3536<br>(0.8998) | 2.5530<br>(0.9172) | 2.3905<br>(0.9477) | 2.6589<br>(0.9252) |
| Reputation | 3.3308<br>(0.7672) | 3.3068<br>(0.7852) | 3.1788<br>(0.7989) | 3.3023<br>(0.7701) |
| <b>N</b>   | <b>263</b>         | <b>264</b>         | <b>274</b>         | <b>258</b>         |

*Notes:* The top panel includes all respondents who completed Study 2 in the Insurance–Yes ( $N = 294$ ), Pocket–Yes ( $N = 303$ ), Insurance–No ( $N = 303$ ) and Pocket–No ( $N = 300$ ) treatment arms. The bottom panel includes only those participants who passed both attention checks in the Insurance–Yes ( $N = 263$ ), Pocket–Yes ( $N = 264$ ), Insurance–No ( $N = 274$ ) and Pocket–No ( $N = 258$ ) treatment arms. Responses on the variables are anchored on a 4–level Likert scale: 1–Strongly disagree, 2–Disagree, 3–Agree and 4–Strongly agree.

#### 4.4.3 Addressing the hypothesis

Next, I address the hypotheses of Study 2, that the mean on all three items is higher in the Pocket than in the Insurance treatment in both the Coordination: Yes and the Coordination: No cells.

To address the predictions, I first regress the three original items on the *Source* term separately for the Coordination: Yes and No cells. Specifications (1) include all participants, while in specifications (2) I control for whether the participants passed both attention check items. In specifications (3), I exclude those participants who did not pass one of the attention check items.

Table 12 summarizes the results for the Coordination: Yes treatment arm, and I find that the mean agreement responses in the Pocket are higher than in the Insurance treatment arm for the variables *Fairness* and *Deterrence*, while I find no significant difference in the mean of the variable *Reputation*. These results are robust after controlling for passing both attention checks; see specifications (2), and are maintained when restricting the sample to those who passed both attention check items; see specification (3).

**Table 12.** Regressing Fairness, Deterrence, and Reputation on the Source term in the Coordination: Yes cells (Study 2)

|                          | Fairness              |                       |                       | Deterrence            |                       |                       | Reputation            |                       |                       |
|--------------------------|-----------------------|-----------------------|-----------------------|-----------------------|-----------------------|-----------------------|-----------------------|-----------------------|-----------------------|
|                          | (1)                   | (2)                   | (3)                   | (1)                   | (2)                   | (3)                   | (1)                   | (2)                   | (3)                   |
| Constant                 | 2.0408***<br>(0.0540) | 2.2963***<br>(0.1263) | 2.0000***<br>(0.0557) | 2.4218***<br>(0.0538) | 2.7123***<br>(0.1206) | 2.3536***<br>(0.0555) | 3.3401***<br>(0.0455) | 3.3130***<br>(0.1112) | 3.3308***<br>(0.0473) |
| Source = Pocket          | 0.1671*<br>(0.0759)   | 0.1605*<br>(0.0758)   | 0.1818*<br>(0.0797)   | 0.1393+<br>(0.0752)   | 0.1317+<br>(0.0749)   | 0.1994*<br>(0.0792)   | -0.0497<br>(0.0646)   | -0.0490<br>(0.0647)   | -0.0240<br>(0.0676)   |
| Attention check = Passed |                       | -0.2856*<br>(0.1241)  |                       |                       | -0.3248**<br>(0.1195) |                       |                       | 0.0303<br>(0.1106)    |                       |
| Observations             | 597                   | 597                   | 527                   | 597                   | 597                   | 527                   | 597                   | 597                   | 527                   |
| Adjusted R <sup>2</sup>  | -0.0007               | 0.0145                | 0.0079                | 0.0041                | 0.0153                | 0.0101                | -0.0007               | 0.0022                | 0.0017                |
| DF1                      | 1                     | 2                     | 1                     | 1                     | 2                     | 1                     | 1                     | 2                     | 1                     |
| DF2                      | 595                   | 594                   | 525                   | 595                   | 594                   | 525                   | 595                   | 594                   | 525                   |
| F-Statistic              | 4.8477*               | 5.3965**              | 5.2053*               | 3.4291+               | 5.6339**              | 6.3471*               | 0.5922                | 0.3411                | 0.1257                |

*Notes:* OLS with robust standard error estimates (i.e., HC1 method). Standard errors are in parentheses;  $p$ -values are two-sided. Specifications (1) and (2) include the whole sample. Specifications (3) include only those who passed both attention check questions. Terms are dummy coded with reference levels: Source = Insurance and Attention check = Not passed. Responses on the variables are anchored on a 4-level Likert scale: 1-Strongly disagree, 2-Disagree, 3-Agree and 4-Strongly agree.

\*\*\*  $p \leq 0.001$ , \*\*  $p \leq 0.01$ , \*  $p \leq 0.05$ , +  $p \leq 0.1$

Table 13 presents the results from the same three specifications for the Coordination: No cells. I find that the mean agreement responses in the Pocket are higher than in the Insurance treatment for the variable *Deterrence*, however, not for the variable *Fairness* and *Reputation*. The results for the variables *Fairness* and *Deterrence* are robust in both specifications (2) and specifications (3), while the coefficient for the variable *Reputation* becomes marginally significant in specifications (3).

**Table 13.** Regressing Fairness, Deterrence, and Reputation on the Source term in the Coordination: No cells (Study 2)

|                          | Fairness              |                       |                       | Deterrence            |                       |                       | Reputation            |                       |                       |
|--------------------------|-----------------------|-----------------------|-----------------------|-----------------------|-----------------------|-----------------------|-----------------------|-----------------------|-----------------------|
|                          | (1)                   | (2)                   | (3)                   | (1)                   | (2)                   | (3)                   | (1)                   | (2)                   | (3)                   |
| Constant                 | 2.1716***<br>(0.0534) | 2.4879***<br>(0.1257) | 2.1314***<br>(0.0551) | 2.4092***<br>(0.0544) | 2.4378***<br>(0.1192) | 2.3905***<br>(0.0573) | 3.1914***<br>(0.0450) | 3.1704***<br>(0.0944) | 3.1788***<br>(0.0483) |
| Source = Pocket          | 0.0717<br>(0.0777)    | 0.0562<br>(0.0776)    | 0.0702<br>(0.0819)    | 0.2374**<br>(0.0762)  | 0.2360**<br>(0.0764)  | 0.2684***<br>(0.0812) | 0.0919<br>(0.0637)    | 0.0929<br>(0.0635)    | 0.1235+<br>(0.0680)   |
| Attention check = Passed |                       | -0.3497**<br>(0.1239) |                       |                       | -0.0316<br>(0.1173)   |                       |                       | 0.0233<br>(0.0961)    |                       |
| Observations             | 603                   | 603                   | 532                   | 603                   | 603                   | 532                   | 603                   | 603                   | 532                   |
| Adjusted R <sup>2</sup>  | 0.0002                | 0.0121                | 0.0005                | 0.0143                | 0.0127                | 0.0183                | 0.0018                | 0.0002                | 0.0043                |
| Df1                      | 1                     | 2                     | 1                     | 1                     | 2                     | 1                     | 1                     | 2                     | 1                     |
| Df2                      | 601                   | 600                   | 530                   | 601                   | 600                   | 530                   | 601                   | 600                   | 530                   |
| F-Statistic              | 0.8529                | 4.6782**              | 0.7364                | 9.713**               | 4.8846**              | 10.9062**             | 2.0809                | 1.0664                | 3.288+                |

*Notes:* OLS with robust standard error estimates (i.e., HC1 method). Standard errors are in parentheses;  $p$ -values are two-sided. Specifications (1) and (2) include the whole sample. Specifications (3) include only those who passed both attention check questions. Terms are dummy coded with reference levels: Source = Insurance and Attention check = Not passed. Responses on the variables are anchored on a 4-level Likert scale: 1-Strongly disagree, 2-Disagree, 3-Agree and 4-Strongly agree.

\*\*\*  $p \leq 0.001$ , \*\*  $p \leq 0.01$ , \*  $p \leq 0.05$ , +  $p \leq 0.1$

These results notwithstanding, it is conceivable that three items may be measuring underlying preferences that may not all be distinct. Therefore, I test whether responses on the three items correlate, and I present the Pearson correlation coefficients in Table 14 and visualize the results in Figure 3. As one can see from this table and figure, there is a significant positive correlation between all three items. Among these, the highest correlation appears to be between Fairness and Deterrence. To explore if the three items can be reduced to a set of factors, I conduct a Principal Component Analysis (PCA) and given the theoretical considerations presented above, I expect one component to emerge from the PCA.

**Table 14.** Correlation matrix of Study 2 for Fairness, Deterrence, and Reputation

| Variables  | Fairness | Deterrence | Reputation |
|------------|----------|------------|------------|
| Fairness   |          | 0.4714***  | 0.1112***  |
| Deterrence |          |            | 0.2450***  |
| Reputation |          |            |            |

Note: The table displays the Pearson correlation coefficients between the items Fairness, Deterrence, and Reputation. Only the upper triangle is shown. The  $p$ -values have been corrected using the Benjamini & Hochberg adjustment. \*\*\*  $p \leq 0.001$ , \*\*  $p \leq 0.01$ , \*  $p \leq 0.05$ , +  $p \leq 0.1$

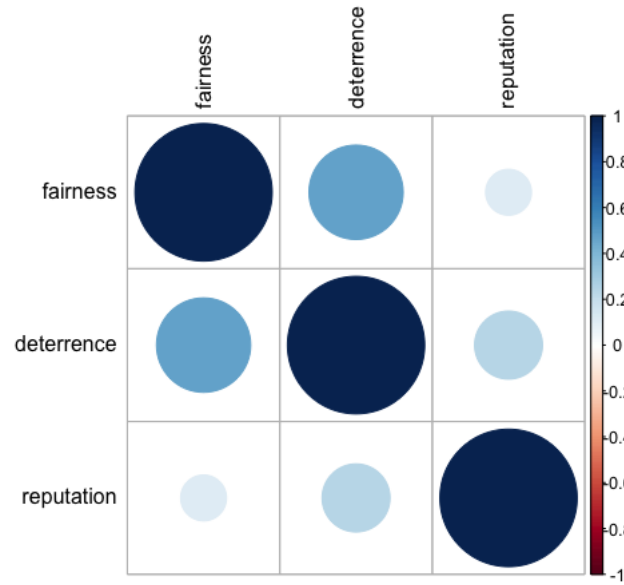


Figure 3: Correlations between the three response items in Study 2

*Notes:* The size and the color of the circles represent the strength of the correlations. Coefficients are Pearson's  $\rho$  and for all  $p \leq 0.05$ .

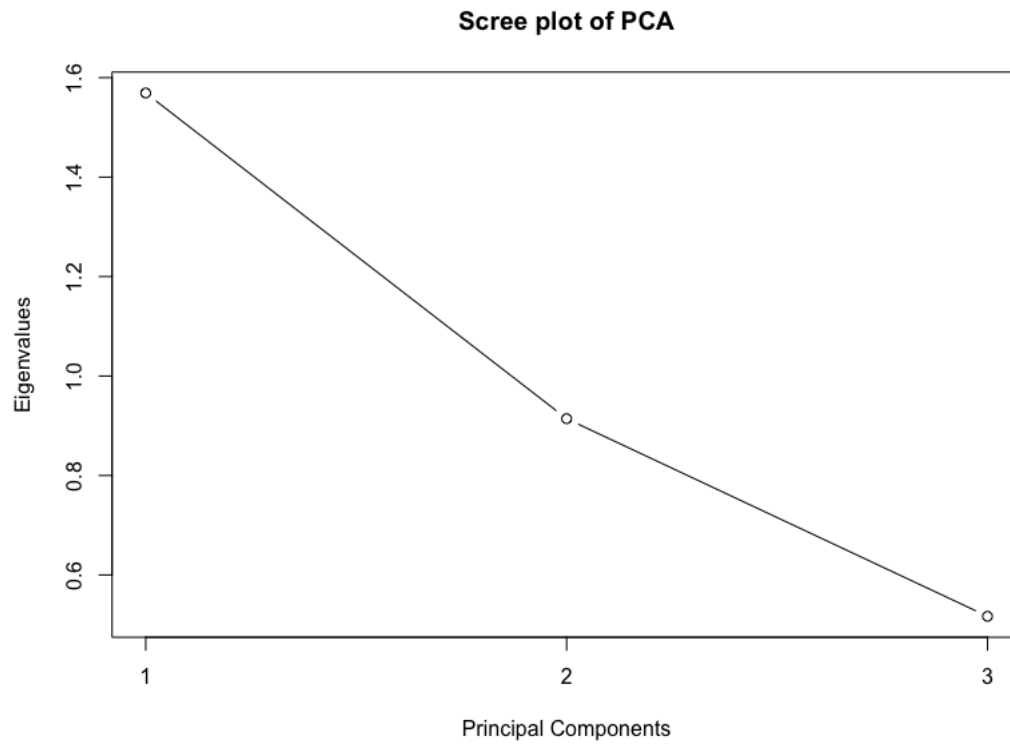


Figure 4: PCA for the three response items in Study 2

*Notes:* The scree plot indicates the Eigenvalues for the three potential PCA factors.



I visualize the Eigenvalues of the PCA exercise using a scree plot (see Figure 4), and find that, in fact, one component emerges from this analysis. This can be seen based on the so-called “elbow”, where Eigenvalues start to decrease significantly. Next, I observe the loadings of the emerged component, (see Table 15). I find that this component consists of 78.2% Fairness, 84.3% Deterrence and 49.7% Reputation, and consequently it adequately captures all three initial dimensions of the settlement payment. I call this emerged component, “Perceived value”.

**Table 15.** Summary of exploratory PCA component loadings in Study 2

|            | <b>PC1</b><br>“Perceived value” |
|------------|---------------------------------|
| Fairness   | 0.782                           |
| Deterrence | 0.843                           |
| Reputation | 0.497                           |

*Notes:* Table shows loadings for the component “Perceived value” across the factors of Fairness, Deterrence, and Reputation using the promax rotation.

Next, I regress the Perceived value on the Source term separately for the Coordination: Yes and No cells. Table 12 and Table 13 indicate that whether participants have passed both attention checks or not has an effect on the results. Therefore, I restrict my sample to only those who passed both attention check items, see specification (3), and display the results in Table 16. I find that mean agreement responses in the Pocket are higher than in the Insurance cells for the emerged component in both the Coordination: Yes and the Coordination: No cells. These results lend support to Hypothesis 2 and 3; namely, that the perceived value of an indemnity payment is higher when directly paid by the wrongdoer than indirectly, through an insurance scheme, both the Coordination: Yes (Hypothesis 2) and the Coordination: No (Hypothesis 3) treatments. An interesting pattern emerges from Table 16. Even though the coefficient for the Source term is statistically significant for both cells, the Constant is only significantly different from 0 in the Coordination: Yes cell, but not in the Coordination: No cell. This indicates that the Pocket versus Insurance difference is evaluated the same in the two cells, but there is a divergence between the valuation of the reference level, Insurance. In particular, the Insurance–vs–Pocket difference is greater in the Coordination: Yes than in the No treatment cells. This suggests that people overestimate the Insurance–vs–Pocket divergence.

**Table 16.** Regressing the emerged component on the Source term (Study 2)

|                         | Coordination: Yes                | Coordination: No                 |
|-------------------------|----------------------------------|----------------------------------|
| Constant                | -0.1248 <sup>*</sup><br>(0.0593) | -0.0948<br>(0.0618)              |
| Source = Pocket         | 0.2028 <sup>*</sup><br>(0.0836)  | 0.2427 <sup>**</sup><br>(0.0893) |
| Observations            | 527                              | 532                              |
| Adjusted R <sup>2</sup> | 0.0092                           | 0.0119                           |
| Df1                     | 1                                | 1                                |
| Df2                     | 525                              | 530                              |
| F-Statistic             | 5.8894 <sup>*</sup>              | 7.3960 <sup>**</sup>             |

Notes: OLS with robust standard error estimates (i.e., HC1 method). Standard errors are in parentheses;  $p$ -values are two-sided. The Source term is dummy coded with reference level Insurance. Responses on the variables are anchored on a 4-level Likert scale: 1-Strongly disagree, 2-Disagree, 3-Agree and 4-Strongly agree. <sup>\*\*\*</sup> $p \leq 0.001$ , <sup>\*\*</sup> $p \leq 0.01$ , <sup>\*</sup> $p \leq 0.05$ , <sup>+</sup> $p \leq 0.1$

#### 4.4.4 Robustness analysis

To see if the main results are controlling for respondents' demographic characteristics, I regress Perceived value on the demographics and present the results in Table 17. I run the robustness analysis on specifications (3) from Table 16, which only includes those respondents who passed both attention checks items. In addition to the demographic characteristics presented in Table 9, I also introduce two new variables. First, the “*Consistent location*” is a dummy, which is 1 if the respondent's answer for the zip code question matches her actual zip code based on her state and 0 otherwise. Second, the “*Mandatory insurance in state*” is a dummy, which is 1 if physicians are required to have MLI in the respondent's state and 0 otherwise.

**Table 17.** Regressing Perceived value on the Source term with demographics (Study 2)

|                                    | Coordination: Yes             | Coordination: No              |
|------------------------------------|-------------------------------|-------------------------------|
| Constant                           | 0.1699 (0.2510)               | −0.2884 (0.2106)              |
| Source = Pocket                    | 0.2584** (0.0844)             | 0.1977* (0.0854)              |
| Age                                | −0.0109*** (0.0033)           | −0.0154*** (0.0033)           |
| Gender                             |                               |                               |
| Female                             | 1.2210*** (0.2694)            | −0.1473 (0.4547)              |
| Male                               | −0.3550* (0.1570)             | 0.2535 (0.1761)               |
| Other                              | −0.2486 (0.1557)              | 0.4181* (0.1750)              |
| Race                               |                               |                               |
| Black/African American             | 0.1469 (0.2441)               | 0.1836 (0.2992)               |
| Asian                              | 0.1526 (0.1098)               | 0.0926 (0.1235)               |
| White                              | −0.2899 <sup>+</sup> (0.1644) | −0.2123 (0.1469)              |
| Hispanic                           | −0.1733 <sup>+</sup> (0.1012) | −0.2860** (0.1073)            |
| Mixed                              | −0.0082 (0.1858)              | −0.0555 (0.1966)              |
| Other                              | 0.1572 (0.2372)               | 0.0428 (0.3317)               |
| Education                          |                               |                               |
| High school or equivalent          | −0.8875 (0.5609)              | −0.5266 <sup>+</sup> (0.3128) |
| Some college                       | 0.2340 (0.1484)               | −0.2366 <sup>+</sup> (0.1302) |
| College                            | 0.0418 (0.1426)               | −0.2596* (0.1130)             |
| Master's degree                    | 0.0461 (0.1326)               | −0.0811 (0.0928)              |
| Doctoral degree                    | 0.3064* (0.1468)              | 0.0010 (0.1117)               |
| Professional degree (e.g., MD, JD) | −0.0467 (0.4040)              | 0.5305** (0.1851)             |
| Income                             |                               |                               |
| Lowest 25%                         | 0.0580 (0.1649)               | 0.0219 (0.1415)               |
| Between 25% and 50%                | −0.1046 (0.1010)              | −0.0848 (0.0937)              |
| Between 50% and 75%                | −0.0417 (0.0777)              | 0.1295 <sup>+</sup> (0.0957)  |
| Top 25%                            | 0.0449 (0.0855)               | 0.1323 (0.0890)               |
| Political preferences              |                               |                               |
| Very liberal                       | −0.4597 <sup>+</sup> (0.2438) | 0.0949 (0.2355)               |
| Somewhat liberal                   | 0.1132 (0.1057)               | −0.1972 <sup>+</sup> (0.1063) |
| Neither liberal nor conservative   | −0.0032 (0.0872)              | −0.0737 (0.0902)              |
| Somewhat conservative              | −0.0068 (0.0925)              | −0.0816 (0.0919)              |
| Very conservative                  | 0.1022 (0.1043)               | 0.0935 (0.1001)               |
| Consistent location                | −0.0963 (0.1823)              | 0.1296 (0.1376)               |
| Mandatory insurance in state       | −0.1702 (0.1774)              | −0.0021 (0.1667)              |
| Observations                       | 527                           | 532                           |
| Adjusted R <sup>2</sup>            | 0.0743                        | 0.1646                        |
| Df1                                | 28                            | 28                            |
| Df2                                | 498                           | 503                           |
| F-Statistic                        | 2.5087***                     | 4.7355***                     |

*Notes:* OLS with robust standard error estimates (i.e., HC1 method). Standard errors are in parentheses;  $p$ -values are two-sided. Scalar variables are demeaned. Reference levels for categorical variables: Source = Insurance, Gender = Prefer not to answer, Race = Prefer not to say, Education = Less than high school, Income = Prefer not to say, Political preferences = Prefer not to say. Responses on the variables are anchored on a 4-level Likert scale: 1-Strongly disagree, 2-Disagree, 3-Agree and 4-Strongly agree.

\*\*\*  $p \leq 0.001$ , \*\*  $p \leq 0.01$ , \*  $p \leq 0.05$ , <sup>+</sup>  $p \leq 0.1$

Table 17 shows that the effect of the Source term is robust after controlling for demographics in both the Coordination: Yes and the Coordination: No cells. An increase in age is associated with decreased Perceived value in both cells. It seems that females indicate higher and males indicate lower perceived values in the Coordination: Yes cell, whereas respondents with other gender are associated with a higher perceived value in the Coordination= No cell compared to those who did not prefer to answer. There are also some differences across different races. White respondents are associated with a lower perceived value in the Coordination: Yes cell, while Hispanic participants indicate a lower value in both cells of the Coordination treatment arm compared to those who preferred not to answer. Respondents with a doctoral degree indicate higher perceived values in the Coordination: Yes cell while those with either high school or equivalent education, some college or college degree are associated with lower values in the Coordination: No cell compared to participants with less than high school education. Participants with a professional degree evaluated the perceived value of the indemnity payment higher in the Coordination: No cell compared to the reference level. Compared to those who preferred not to disclose their income, respondents with income between 50% and 75% of the median income distribution in the US indicate higher perceived values in the Coordination: No treatment. Respondents who consider themselves to be very liberal indicate a lower perceived value in the Coordination: Yes cell, whereas those who consider themselves only somewhat liberal are associated with a lower value in the Coordination: No cell compared to participants who did not wish to answer.

Next, I regress the Perceived value on the heterogeneity measures, and present the results in Table 18. I run the robustness analysis on specifications (3) from Table 16 which only includes those respondents who passed both attention checks items. The results indicate that the effect of the Source term is robust after controlling for heterogeneity measures in both cells of the Coordination treatment arm; however, the coefficient becomes only marginally significant in the Coordination: Yes cell. Respondents who believe that the state which they live in does mandate MLI indicate lower perceived values in both cells, while those who think that their state does not mandate MLI are only associated with a lower value in the Coordination: No cell compared to participants who answered that they do not know. Nurses indicate higher perceived values in the Coordination: No cell, while paramedics do so in both cells of the Coordination treatment arm compared to those who are not health professionals. Moreover, dietitians are associated with a lower mean value in the Coordination: Yes cell and pharmacists indicate a higher perceived value in the Coordination: No cell compared to the reference group. Clinical psychologists also evaluated the perceived value of the indemnity payment higher in the Coordination: Yes cell compared to participants who are not healthcare professionals. Respondents who have already been plaintiffs in a medical malpractice

case indicate lower perceived values in the Coordination: No cell compared to those participants who did not prefer to answer. Respondents who have already been sued in their lives are associated with a higher perceived value in the Coordination: Yes cell, while those who have never been sued before indicate a lower value in the Coordination: No cell compared to those who did not prefer to answer. Respondents who tend to worry very much about their own health indicate lower responses, while those who extremely worry about their own health indicate higher perceived values in the Coordination: Yes cell compared to participants who do not worry about their health at all.

**Table 18.** Regressing Perceived value on the Source term with heterogeneity measures (Study 2)

|                                        | Coordination: Yes               | Coordination: No              |
|----------------------------------------|---------------------------------|-------------------------------|
| Constant                               | −0.1207 (0.3020)                | 0.3925 <sup>+</sup> (0.2192)  |
| Source = Pocket                        | 0.1629 <sup>+</sup> (0.0836)    | 0.2442 <sup>**</sup> (0.0927) |
| Believed mandatory MLI policy in state |                                 |                               |
| Yes                                    | −0.1324 <sup>*</sup> (0.0659)   | −0.1473 <sup>*</sup> (0.0693) |
| No                                     | −0.0889 (0.0691)                | −0.1651 <sup>*</sup> (0.0696) |
| Health professional                    |                                 |                               |
| Nurse                                  | 0.3906 (0.2623)                 | 0.6683 <sup>*</sup> (0.2899)  |
| Therapist                              | 0.2757 (0.4968)                 | −0.2299 (0.3466)              |
| Medical doctor                         | 0.2510 (0.3210)                 | 0.6565 (0.4288)               |
| Paramedic                              | 1.9831 <sup>***</sup> (0.3877)  | 0.8457 <sup>+</sup> (0.4382)  |
| Dietitian                              | −0.9122 <sup>***</sup> (0.1231) |                               |
| Dentist                                |                                 | −0.2431 (0.4711)              |
| Pharmacist                             | 0.4572 (0.2891)                 | 1.2814 <sup>*</sup> (0.6043)  |
| Clinical psychologist                  | 1.6420 <sup>***</sup> (0.1730)  | 0.2582 (0.5779)               |
| Other                                  | −0.1409 (0.1483)                | 0.0204 (0.1722)               |
| Malpractice plaintiff                  |                                 |                               |
| Yes                                    | 0.1241 (0.4782)                 | −0.7021 <sup>+</sup> (0.4025) |
| No                                     | −0.3498 (0.2717)                | 0.1641 (0.2282)               |
| Other                                  | 0.0425 (0.1926)                 | 0.1681 (0.1881)               |
| Received indemnity                     |                                 |                               |
| Yes                                    | −0.2185 (0.8156)                | 0.2223 (0.3573)               |
| No                                     | −0.0362 (0.3753)                | −0.0324 (0.3080)              |
| Other                                  | −0.0769 (0.3009)                | −0.2012 (0.2607)              |
| Sued                                   |                                 |                               |
| Yes                                    | 0.4271 <sup>*</sup> (0.2171)    | 0.3759 (0.6395)               |
| No                                     | −0.1441 (0.2283)                | −0.4806 <sup>+</sup> (0.2675) |
| Other                                  | 0.1821 (0.1535)                 | 0.0098 (0.2230)               |
| Malpractice defendant                  |                                 |                               |
| Yes                                    | 0.5992 (0.4884)                 | 0.2967 (0.6222)               |
| No                                     | 0.0190 (0.3146)                 | −0.3914 (0.4263)              |
| Other                                  | 0.0108 (0.2155)                 | −0.3330 (0.3207)              |
| Worry about own health                 |                                 |                               |
| Somewhat                               | −0.1528 (0.1198)                | 0.0240 (0.1252)               |
| Very much                              | −0.1526 <sup>*</sup> (0.0763)   | −0.0522 (0.0836)              |
| Extremely                              | 0.1975 <sup>*</sup> (0.0909)    | −0.0798 (0.0944)              |
| Worry about health of others           |                                 |                               |
| Somewhat                               | 0.0416 (0.2016)                 | −0.0082 (0.2059)              |
| Very much                              | −0.1218 (0.0889)                | −0.0572 (0.0961)              |
| Extremely                              | 0.0697 (0.0931)                 | −0.0238 (0.0962)              |
| Observations                           | 527                             | 532                           |
| Adjusted R <sup>2</sup>                | 0.0597                          | 0.0296                        |
| Df1                                    | 29                              | 29                            |
| Df2                                    | 497                             | 502                           |
| F-Statistic                            | 2.1515 <sup>***</sup>           | 1.5586 <sup>*</sup>           |

*Notes:* OLS with robust standard error estimates (i.e., HC1 method). Standard errors are in parentheses;  $p$ -values are two-sided. Levels with zero observations have been removed from the model. Scalar variables are demeaned. Reference levels for categorical variables: Source = Insurance, Believed mandatory MLI policy in state = I do not know, Health professional = I am not a health professional, Malpractice plaintiff = Prefer not to answer, Received indemnity = Prefer not to answer, Sued = Prefer not to answer, Malpractice defendant = Prefer not to answer, Worry about own health = Not at all, Worry about health of others = Not at all. Responses on the variables are anchored on a 4-level Likert scale: 1–Strongly disagree, 2–Disagree, 3–Agree and 4–Strongly agree. <sup>\*\*\*</sup>  $p \leq 0.001$ , <sup>\*\*</sup>  $p \leq 0.01$ , <sup>\*</sup>  $p \leq 0.05$ , <sup>+</sup>  $p \leq 0.1$

## 4.5 General discussion

Study 1 presents robust evidence that the subjective valuation of medical indemnity payments depends on the payment source (i.e., who bears the costs). In particular, it shows that the same Dollar amount is valued *higher* from a first-person perspective if it is paid out-of-pocket by the wrongdoer (i.e., the physician) than if it is paid through an MLI scheme. Study 2, particularly, the Coordination: No cells, confirms the results of Study 1 even if the settlement is evaluated from a third-person perspective. In particular, when the scenario is presented from an observer's perspective, the *higher* valuation of out-of-pocket payments remains consistent compared to the first-person perspective in Study 1. These results suggest that the divergence in valuation is not only present from the patient's perspective but also from the perspective of independent third parties, such as juries and judges. The documented divergence in valuation confirms the results of previous research on compensation-seeking ([Fehr and Gächter, 1998](#)) and emphasizes the differences emerging from direct and indirect reciprocity ([Nowak and Sigmund, 1998](#)).

Study 2 provides robust results in the Coordination: Yes treatment, too, showing that the key findings are not only present as first-order but also as second-order beliefs among respondents. Specifically, the discrepancy in perceived value is not only on a personal level, but it might also reveal a hidden descriptive social norm (e.g., [Krupka et al., 2022](#); [Krupka and Weber, 2013](#); [Nosenzo and Görges, 2020](#)). These findings suggest that the source of an indemnity payment affects the valuation of not only the wronged party involved, but also society as a whole.

The limitation of this thesis is that it does not specifically focus on legal and regulatory decision-makers, even though they play a key role in resolving medical malpractice cases and shaping the insurance industry. While the heterogeneity measures in Study 1 & 2 do partly account for different legal expertise and experience, focusing more on the valuation of such decision-makers could provide further insights into how they assess the intended functions of MLI ([Mello et al., 2020](#)).

Since legal professionals, regulators and insurance experts may have different heuristics shaping their perception of indemnity payments, further research could analyze whether the observed divergence in valuation persists among them, too. This would put stronger emphasis on understanding the legal and regulatory side of mandating MLI, while considering the effect on overall social welfare. Moreover, future research could explore the effects of payment source using other types of liability insurance products, such as general liability insurance or directors and officers (D&O) liability insurance, to examine the broader applicability of the findings of this research in different industries and insurance segments.

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# A Appendix

## Welcome and Consent

Welcome to our survey study and thanks for your willingness to participate. This survey is part of a research study by Linda Dezső at Danube University Krems, Austria and its IRB # is EK GZ 112/2021-2024.

**Summary:** The survey presents you with a medical malpractice scenario, after which you will have to answer a couple of questions about the scenario. You will also provide some basic demographic information and some information about your knowledge of health issues and experiences with health care services.

**Purpose:** The research aims to understand what factors shape the evaluations of medical malpractice scenarios.

**Procedures:** As a participant in this study, you will be asked to read a medical malpractice scenario and answer some questions about it. You will also provide some basic demographic information about yourself and answer some information about your knowledge of health issues and experiences with health care services. The study is expected to take less than 4 minutes to complete.

**Participant Requirements:** Participation in this study is limited to individuals of age 18 and older who are residents of the United States.

**Risks:** The risks and discomfort associated with participating in this study are no greater than those encountered ordinarily in daily life or other online activities. However, the medical malpractice scenario presented may evoke some mild distress in you.

**Benefits:** Your participation in the study may not result in a personal benefit, but the knowledge you gain may be valuable to the scientific community.

**Compensation and Costs:** For completing the survey, you will receive a payment as indicated on Prolific when you signed up. Participating in this study will be free (no costs).

**Future Use of Information:** We will not collect identifiable information about you in this investigation. In the future, we may use the data for our research studies or distribute them to other researchers for their research studies. We would do this without getting your additional informed consent. Sharing data with other researchers will be done only in a manner that does not identify you.

**Confidentiality:** The data captured for the research does not include any personally identifiable information about you. Your IP address will not be captured.

**Right to Ask Questions and Contact Information:** If you have any questions about this study, you should feel free to ask them by contacting the Principal Investigator Linda Dezső, Department for Economy and Health, Danube University Krems, Austria, at linda.dezso@donau-uni.ac.at. If you have questions or want additional information, please contact the Principal Investigator by e-mail.

If you have questions about your rights as a research participant or want to report concerns about this study, you should contact the Ethics Committee of the Danube University Krems, Austria, by email at ethikkommission@donau-uni.ac.at.

**Voluntary Participation:** Your participation in this research is voluntary. You may discontinue participation at any time during the research activity. You may print a copy or create a screenshot of this consent.

Please answer the following questions.

I AM AGE 18 YEARS OR OLDER

- ☐ Yes  
☐ No

I HAVE READ THE ABOVE INFORMATION

- ☐ Yes  
☐ No

I CONSENT TO PARTICIPATE IN THIS STUDY

- ☐ Yes  
☐ No

☐ I'm not a robot

reCAPTCHA  
Privacy - Terms

Next

Figure 5: General information and instructions for participants in Study 1

## Instructions

In the next couple of pages, you will read the summary of a real medical malpractice case which was settled out of court. The scenario describes the key elements and aspects of the case and also discloses the amount that was paid to the patient as an out-of-court settlement.

You will be asked to imagine that the described malpractice happened to you. Therefore, the case is described from a second-person view, as if it actually happened to you.

Please pay close attention to the text and read it carefully, because you will be asked four questions about how you evaluate different aspects of the settlement.

Next

Figure 6: Scenario-related instructions in Study 1

## The malpractice

You suffered from a diabetes-related vascular disease in the US, which resulted in the need for surgery to amputate your right leg. However, incorrectly, the surgeon removed your left leg instead of your right leg.

You, who ultimately lost both legs, ended up settling with the surgeon for \$513,000. THE SETTLEMENT WAS PAID VIA THE SURGEON'S MALPRACTICE INSURANCE.

FROM THE LIST, SELECT THE ONE YOU BELIEVE IS THE MOST COMMON CHILD'S DISEASE. INSTEAD OF THE CORRECT ANSWER, PLEASE CLICK ON THE THIRD OPTION.

- ☐ Common cold
- ☐ Chickenpox
- ☐ Croup
- ☐ Earache

Next

Figure 7: First attention check item in the Insurance treatment of Study 1

## The malpractice

You suffered from a diabetes-related vascular disease in the US, which resulted in the need for surgery to amputate your right leg. However, incorrectly, the surgeon removed your left leg instead of your right leg.

You, who ultimately lost both legs, ended up settling with the surgeon for \$513,000. THE SETTLEMENT WAS PAID VIA THE SURGEON'S MALPRACTICE INSURANCE.

THE SETTLEMENT IS FAIR.

- ☐ Strongly disagree
- ☐ Disagree
- ☐ Agree
- ☐ Strongly agree

Next

Figure 8: Response item "Fairness" in the Insurance treatment of Study 1

## The malpractice

You suffered from a diabetes-related vascular disease in the US, which resulted in the need for surgery to amputate your right leg. However, incorrectly, the surgeon removed your left leg instead of your right leg.

You, who ultimately lost both legs, ended up settling with the surgeon for \$513,000. THE SETTLEMENT WAS PAID VIA THE SURGEON'S MALPRACTICE INSURANCE.

THE SETTLEMENT APPROPRIATELY DETERS THE PRACTITIONER FROM FUTURE MALPRACTICE.

- ☐ Strongly disagree
- ☐ Disagree
- ☐ Agree
- ☐ Strongly agree

Next

Figure 9: Response item "Deterrence" in the Insurance treatment of Study 1

## The malpractice

You suffered from a diabetes-related vascular disease in the US, which resulted in the need for surgery to amputate your right leg. However, incorrectly, the surgeon removed your left leg instead of your right leg.

You, who ultimately lost both legs, ended up settling with the surgeon for \$513,000. THE SETTLEMENT WAS PAID VIA THE SURGEON'S MALPRACTICE INSURANCE.

THE SETTLEMENT APPROPRIATELY COMPENSATES ME FOR MY MONETARY LOSSES.

- ☐ Strongly disagree
- ☐ Disagree
- ☐ Agree
- ☐ Strongly agree

Next

Figure 10: Response item "Compensation" in the Insurance treatment of Study 1

## The malpractice

You suffered from a diabetes-related vascular disease in the US, which resulted in the need for surgery to amputate your right leg. However, incorrectly, the surgeon removed your left leg instead of your right leg.

You, who ultimately lost both legs, ended up settling with the surgeon for \$513,000. THE SETTLEMENT WAS PAID VIA THE SURGEON'S MALPRACTICE INSURANCE.

THE PRACTITIONER'S REPUTATION WILL APPROPRIATELY SUFFER AFTER THE MALPRACTICE AND SETTLEMENT BECOME PUBLIC KNOWLEDGE.

- ☐ Strongly disagree
- ☐ Disagree
- ☐ Agree
- ☐ Strongly agree

Next

Figure 11: Response item "Reputation" in the Insurance treatment of Study 1

## The malpractice

You suffered from a diabetes-related vascular disease in the US, which resulted in the need for surgery to amputate your right leg. However, incorrectly, the surgeon removed your left leg instead of your right leg.

You, who ultimately lost both legs, ended up settling with the surgeon for \$513,000. THE SETTLEMENT WAS PAID FROM THE SURGEON'S PERSONAL FUNDS.

FROM THE LIST, SELECT THE ONE YOU BELIEVE IS THE MOST COMMON CHILD'S DISEASE. INSTEAD OF THE CORRECT ANSWER, PLEASE CLICK ON THE THIRD OPTION.

- ☐ Common cold
- ☐ Chickenpox
- ☐ Croup
- ☐ Earache

Next

Figure 12: First attention check item in the Pocket treatment of Study 1

## The malpractice

You suffered from a diabetes-related vascular disease in the US, which resulted in the need for surgery to amputate your right leg. However, incorrectly, the surgeon removed your left leg instead of your right leg.

You, who ultimately lost both legs, ended up settling with the surgeon for \$513,000. THE SETTLEMENT WAS PAID FROM THE SURGEON'S PERSONAL FUNDS.

THE SETTLEMENT IS FAIR.

- ☐ Strongly disagree
- ☐ Disagree
- ☐ Agree
- ☐ Strongly agree

Next

Figure 13: Response item "Fairness" in the Pocket treatment of Study 1

## The malpractice

You suffered from a diabetes-related vascular disease in the US, which resulted in the need for surgery to amputate your right leg. However, incorrectly, the surgeon removed your left leg instead of your right leg.

You, who ultimately lost both legs, ended up settling with the surgeon for \$513,000. THE SETTLEMENT WAS PAID FROM THE SURGEON'S PERSONAL FUNDS.

THE SETTLEMENT APPROPRIATELY DETERS THE PRACTITIONER FROM FUTURE MALPRACTICE.

- ☐ Strongly disagree
- ☐ Disagree
- ☐ Agree
- ☐ Strongly agree

Next

Figure 14: Response item "Deterrence" in the Pocket treatment of Study 1



## The malpractice

You suffered from a diabetes-related vascular disease in the US, which resulted in the need for surgery to amputate your right leg. However, incorrectly, the surgeon removed your left leg instead of your right leg.

You, who ultimately lost both legs, ended up settling with the surgeon for \$513,000. THE SETTLEMENT WAS PAID FROM THE SURGEON'S PERSONAL FUNDS.

THE SETTLEMENT APPROPRIATELY COMPENSATES ME FOR MY MONETARY LOSSES.

- ☐ Strongly disagree
- ☐ Disagree
- ☐ Agree
- ☐ Strongly agree

Next

Figure 15: Response item "Compensation" in the Pocket treatment of Study 1

## The malpractice

You suffered from a diabetes-related vascular disease in the US, which resulted in the need for surgery to amputate your right leg. However, incorrectly, the surgeon removed your left leg instead of your right leg.

You, who ultimately lost both legs, ended up settling with the surgeon for \$513,000. THE SETTLEMENT WAS PAID FROM THE SURGEON'S PERSONAL FUNDS.

THE PRACTITIONER'S REPUTATION WILL APPROPRIATELY SUFFER AFTER THE MALPRACTICE AND SETTLEMENT BECOME PUBLIC KNOWLEDGE.

- ☐ Strongly disagree
- ☐ Disagree
- ☐ Agree
- ☐ Strongly agree

Next

Figure 16: Response item "Reputation" in the Pocket treatment of Study 1

## Some questions about you

Your gender

- ☐ Female
- ☐ Male
- ☐ Other
- ☐ Prefer not to answer

Your birth year

Your race or ethnicity

- ☐ Black/African American
- ☐ Asian
- ☐ White
- ☐ Hispanic
- ☐ Mixed
- ☐ Other
- ☐ Prefer not to say

The highest level of education you have completed

- ☐ Less than high school
- ☐ High school or equivalent
- ☐ Some college
- ☐ College
- ☐ Master's degree
- ☐ Doctoral degree
- ☐ Professional degree (e.g., MD, JD)

Your income level in the population

- ☐ Lowest 25%
- ☐ Between 25% and 50%
- ☐ Between 50% and 75%
- ☐ Top 25%
- ☐ Prefer not to say

Your political affiliation

- ☐ Very liberal
- ☐ Somewhat liberal
- ☐ Neither liberal nor conservative
- ☐ Somewhat conservative
- ☐ Very conservative
- ☐ Prefer not to say

Your zipcode

In which US state do you currently live?

Figure 17: Demographics measures in Study 1

To the best of your knowledge, does the state in which you live require physicians to maintain malpractice insurance? Please do not look up the right answer!

- ☐ Yes
- ☐ No
- ☐ I do not know

Do you work in any health profession? Check the answer that applies.

- ☐ Nurse
- ☐ Therapist
- ☐ Medical doctor
- ☐ Paramedic
- ☐ Midwife
- ☐ Dentist
- ☐ Pharmacist
- ☐ Dietitian
- ☐ Clinical psychologist
- ☐ Other
- ☐ I am not a health professional

Have you ever been a plaintiff in a medical malpractice case or filed a complaint against a health professional for malpractice?

- ☐ Yes
- ☐ No
- ☐ Other
- ☐ Prefer not to answer

Have you ever received a medical indemnity payment?

- ☐ Yes
- ☐ No
- ☐ Other
- ☐ Prefer not to answer

Have you ever been sued for anything?

- ☐ Yes
- ☐ No
- ☐ Other
- ☐ Prefer not to answer

Have you ever been a defendant in a malpractice case?

- ☐ Yes
- ☐ No
- ☐ Other
- ☐ Prefer not to answer

Do you tend to worry about your health?

- ☐ Not at all
- ☐ Somewhat
- ☐ Very much
- ☐ Extremely

Do you tend to worry about the health of the people you love?

- ☐ Not at all
- ☐ Somewhat
- ☐ Very much
- ☐ Extremely

Next

Figure 18: Heterogeneity measures in Study 1

## Finally ...

How was the settlement paid in the described malpractice scenario?

- ☐ From the physician's personal funds
- ☐ Through the physician's malpractice insurance
- ☐ I cannot remember

Next

Figure 19: Second attention check item in Study 1

## Thank you!

Thank you very much for completing our survey!

In the field below, type in any comments or message you would want us to read and consider. If you have no comments or messages to us, you can leave this field blank.

Comments

You will receive your payment via Prolific after we have collected all responses. This will not take more than two weeks. Your Prolific completion code is:

CG4YP9YQ

When you proceed to the next page, we will try to redirect you back to Prolific and automatically submit your completion code. However in case this does not work, please copy this code and submit it manually on the Prolific website.

Next

Figure 20: Upon completion of Study 1, participants receive the following instructions with the option to add further comments.

## Welcome and Consent

Welcome to our survey study and thanks for your willingness to participate. This survey is part of a research study by Linda Dezső at Danube University Krems, Austria and its IRB # is EK GZ 112/2021-2024.

**Summary:** The survey presents you with a medical malpractice scenario, after which you will have to answer a couple of questions about the scenario. You will also provide some basic demographic information and some information about your knowledge of health issues and experiences with health care services.

**Purpose:** The research aims to understand what factors shape the evaluations of medical malpractice scenarios.

**Procedures:** As a participant in this study, you will be asked to read a medical malpractice scenario and answer some questions about it. You will also provide some basic demographic information about yourself and answer some information about your knowledge of health issues and experiences with health care services. The study is expected to take less than 4 minutes to complete.

**Participant Requirements:** Participation in this study is limited to individuals of age 18 and older who are residents of the United States.

**Risks:** The risks and discomfort associated with participating in this study are no greater than those encountered ordinarily in daily life or other online activities. However, the medical malpractice scenario presented may evoke some mild distress in you.

**Benefits:** Your participation in the study may not result in a personal benefit, but the knowledge you gain may be valuable to the scientific community.

**Compensation and Costs:** For completing the survey, you will receive a payment as indicated on Prolific when you signed up. Additionally, depending on your luck and choices, you may also earn an additional 0.40 GBP (approximately \$0.50). You will learn about your bonus payment after all responses are collected. Participating in this study will be free (no costs).

**Future Use of Information:** We will not collect identifiable information about you in this investigation. In the future, we may use the data for our research studies or distribute them to other researchers for their research studies. We would do this without getting your additional informed consent. Sharing data with other researchers will be done only in a manner that does not identify you.

**Confidentiality:** The data captured for the research does not include any personally identifiable information about you. Your IP address will not be captured.

**Right to Ask Questions and Contact Information:** If you have any questions about this study, you should feel free to ask them by contacting the Principal Investigator Linda Dezső, Department for Economy and Health, Danube University Krems, Austria, at [linda.dezso@donau-uni.ac.at](mailto:linda.dezso@donau-uni.ac.at). If you have questions or want additional information, please contact the Principal Investigator by e-mail.

If you have questions about your rights as a research participant or want to report concerns about this study, you should contact the Ethics Committee of the Danube University Krems, Austria, by email at [ethikkommission@donau-uni.ac.at](mailto:ethikkommission@donau-uni.ac.at).

**Voluntary Participation:** Your participation in this research is voluntary. You may discontinue participation at any time during the research activity. You may print a copy or create a screenshot of this consent.

Please answer the following questions.

I AM AGE 18 YEARS OR OLDER

- ☐ Yes  
☐ No

I HAVE READ THE ABOVE INFORMATION

- ☐ Yes  
☐ No

I CONSENT TO PARTICIPATE IN THIS STUDY

- ☐ Yes  
☐ No

☐ I'm not a robot

  
reCAPTCHA  
[Privacy](#) - [Terms](#)

Next

Figure 21: General information and instructions for participants in Study 2

## Instructions

In the next couple of pages, you will read the summary of a real medical malpractice case which was settled out of court. The scenario describes the key elements and aspects of the case and also discloses the amount that was paid to the patient as an out-of-court settlement.

You will be asked to imagine that the described malpractice happened to a patient. Therefore, the case is described from a third-person view.

Please pay close attention to the text and read it carefully, because you will be asked three questions about how you evaluate different aspects of the settlement.

Next

Figure 22: Scenario-related instructions in Study 2

## The malpractice

A patient suffered from a diabetes-related vascular disease in the US, which resulted in the need for surgery to amputate the patient's right leg. However, incorrectly, the surgeon removed the patient's left leg instead of the right leg.

The patient, who ultimately lost both legs, ended up settling with the surgeon for \$513,000. THE SETTLEMENT WAS PAID VIA THE SURGEON'S MALPRACTICE INSURANCE.

Please answer the following question! After all participants have submitted their responses, one of the three scenario-related questions will be selected. Then, the computer program will check whether your response to this question matches the most frequent response given by the sample of respondents who are US residents and recruited from Prolific just as you were. If yours and the most frequent response match, you will receive an approximately \$0.50 bonus. Therefore, we recommend that you carefully choose your response to this question.

FROM THE LIST, SELECT THE ONE YOU BELIEVE IS THE MOST COMMON CHILD'S DISEASE. INSTEAD OF THE CORRECT ANSWER, PLEASE CLICK ON THE THIRD OPTION.

- ☐ Common cold
- ☐ Chickenpox
- ☐ Croup
- ☐ Earache

Next

Figure 23: First attention check item in the Insurance–Yes treatment of Study 2

## The malpractice

A patient suffered from a diabetes-related vascular disease in the US, which resulted in the need for surgery to amputate the patient's right leg. However, incorrectly, the surgeon removed the patient's left leg instead of the right leg.

The patient, who ultimately lost both legs, ended up settling with the surgeon for \$513,000. THE SETTLEMENT WAS PAID VIA THE SURGEON'S MALPRACTICE INSURANCE.

Please answer the following question! After all participants have submitted their responses, one of the three scenario-related questions will be selected. Then, the computer program will check whether your response to this question matches the most frequent response given by the sample of respondents who are US residents and recruited from Prolific just as you were. If yours and the most frequent response match, you will receive an approximately \$0.50 bonus. Therefore, we recommend that you carefully choose your response to this question.

THE SETTLEMENT IS FAIR.

- ☐ Strongly disagree
- ☐ Disagree
- ☐ Agree
- ☐ Strongly agree

Next

Figure 24: Response item "Fairness" in the Insurance–Yes treatment of Study 2

## The malpractice

A patient suffered from a diabetes-related vascular disease in the US, which resulted in the need for surgery to amputate the patient's right leg. However, incorrectly, the surgeon removed the patient's left leg instead of the right leg.

The patient, who ultimately lost both legs, ended up settling with the surgeon for \$513,000. THE SETTLEMENT WAS PAID VIA THE SURGEON'S MALPRACTICE INSURANCE.

Please answer the following question! After all participants have submitted their responses, one of the three scenario-related questions will be selected. Then, the computer program will check whether your response to this question matches the most frequent response given by the sample of respondents who are US residents and recruited from Prolific just as you were. If yours and the most frequent response match, you will receive an approximately \$0.50 bonus. Therefore, we recommend that you carefully choose your response to this question.

THE SETTLEMENT APPROPRIATELY DETERS THE PRACTITIONER FROM FUTURE MALPRACTICE.

- ☐ Strongly disagree
- ☐ Disagree
- ☐ Agree
- ☐ Strongly agree

Next

Figure 25: Response item "Deterrence" in the Insurance–Yes treatment of Study 2

## The malpractice

A patient suffered from a diabetes-related vascular disease in the US, which resulted in the need for surgery to amputate the patient's right leg. However, incorrectly, the surgeon removed the patient's left leg instead of the right leg.

The patient, who ultimately lost both legs, ended up settling with the surgeon for \$513,000. THE SETTLEMENT WAS PAID VIA THE SURGEON'S MALPRACTICE INSURANCE.

Please answer the following question! After all participants have submitted their responses, one of the three scenario-related questions will be selected. Then, the computer program will check whether your response to this question matches the most frequent response given by the sample of respondents who are US residents and recruited from Prolific just as you were. If yours and the most frequent response match, you will receive an approximately \$0.50 bonus. Therefore, we recommend that you carefully choose your response to this question.

THE PRACTITIONER'S REPUTATION WILL APPROPRIATELY SUFFER AFTER THE MALPRACTICE AND SETTLEMENT BECOME PUBLIC KNOWLEDGE.

- ☐ Strongly disagree
- ☐ Disagree
- ☐ Agree
- ☐ Strongly agree

Next

Figure 26: Response item "Reputation" in the Insurance–Yes treatment of Study 2

## The malpractice

A patient suffered from a diabetes-related vascular disease in the US, which resulted in the need for surgery to amputate the patient's right leg. However, incorrectly, the surgeon removed the patient's left leg instead of the right leg.

The patient, who ultimately lost both legs, ended up settling with the surgeon for \$513,000. THE SETTLEMENT WAS PAID VIA THE SURGEON'S MALPRACTICE INSURANCE.

Please answer the following question!

FROM THE LIST, SELECT THE ONE YOU BELIEVE IS THE MOST COMMON CHILD'S DISEASE. INSTEAD OF THE CORRECT ANSWER, PLEASE CLICK ON THE THIRD OPTION.

- ☐ Common cold
- ☐ Chickenpox
- ☐ Croup
- ☐ Earache

Next

Figure 27: First attention check item in the Insurance–No treatment of Study 2

## The malpractice

A patient suffered from a diabetes-related vascular disease in the US, which resulted in the need for surgery to amputate the patient's right leg. However, incorrectly, the surgeon removed the patient's left leg instead of the right leg.

The patient, who ultimately lost both legs, ended up settling with the surgeon for \$513,000. THE SETTLEMENT WAS PAID VIA THE SURGEON'S MALPRACTICE INSURANCE.

Please answer the following question!

THE SETTLEMENT IS FAIR.

- ☐ Strongly disagree
- ☐ Disagree
- ☐ Agree
- ☐ Strongly agree

Next

Figure 28: Response item "Fairness" in the Insurance–No treatment of Study 2

## The malpractice

A patient suffered from a diabetes-related vascular disease in the US, which resulted in the need for surgery to amputate the patient's right leg. However, incorrectly, the surgeon removed the patient's left leg instead of the right leg.

The patient, who ultimately lost both legs, ended up settling with the surgeon for \$513,000. THE SETTLEMENT WAS PAID VIA THE SURGEON'S MALPRACTICE INSURANCE.

Please answer the following question!

THE SETTLEMENT APPROPRIATELY DETERS THE PRACTITIONER FROM FUTURE MALPRACTICE.

- ☐ Strongly disagree
- ☐ Disagree
- ☐ Agree
- ☐ Strongly agree

Next

Figure 29: Response item "Deterrence" in the Insurance–No treatment of Study 2

## The malpractice

A patient suffered from a diabetes-related vascular disease in the US, which resulted in the need for surgery to amputate the patient's right leg. However, incorrectly, the surgeon removed the patient's left leg instead of the right leg.

The patient, who ultimately lost both legs, ended up settling with the surgeon for \$513,000. THE SETTLEMENT WAS PAID VIA THE SURGEON'S MALPRACTICE INSURANCE.

Please answer the following question!

THE PRACTITIONER'S REPUTATION WILL APPROPRIATELY SUFFER AFTER THE MALPRACTICE AND SETTLEMENT BECOME PUBLIC KNOWLEDGE.

- ☐ Strongly disagree
- ☐ Disagree
- ☐ Agree
- ☐ Strongly agree

Next

Figure 30: Response item "Reputation" in the Insurance–No treatment of Study 2



## The malpractice

A patient suffered from a diabetes-related vascular disease in the US, which resulted in the need for surgery to amputate the patient's right leg. However, incorrectly, the surgeon removed the patient's left leg instead of the right leg.

The patient, who ultimately lost both legs, ended up settling with the surgeon for \$513,000. THE SETTLEMENT WAS PAID FROM THE SURGEON'S PERSONAL FUNDS.

Please answer the following question! After all participants have submitted their responses, one of the three scenario-related questions will be selected. Then, the computer program will check whether your response to this question matches the most frequent response given by the sample of respondents who are US residents and recruited from Prolific just as you were. If yours and the most frequent response match, you will receive an approximately \$0.50 bonus. Therefore, we recommend that you carefully choose your response to this question.

FROM THE LIST, SELECT THE ONE YOU BELIEVE IS THE MOST COMMON CHILD'S DISEASE. INSTEAD OF THE CORRECT ANSWER, PLEASE CLICK ON THE THIRD OPTION.

- ☐ Common cold
- ☐ Chickenpox
- ☐ Croup
- ☐ Earache

Next

Figure 31: First attention check item in the Pocket–Yes treatment of Study 2

## The malpractice

A patient suffered from a diabetes-related vascular disease in the US, which resulted in the need for surgery to amputate the patient's right leg. However, incorrectly, the surgeon removed the patient's left leg instead of the right leg.

The patient, who ultimately lost both legs, ended up settling with the surgeon for \$513,000. THE SETTLEMENT WAS PAID FROM THE SURGEON'S PERSONAL FUNDS.

Please answer the following question! After all participants have submitted their responses, one of the three scenario-related questions will be selected. Then, the computer program will check whether your response to this question matches the most frequent response given by the sample of respondents who are US residents and recruited from Prolific just as you were. If yours and the most frequent response match, you will receive an approximately \$0.50 bonus. Therefore, we recommend that you carefully choose your response to this question.

THE SETTLEMENT IS FAIR.

- ☐ Strongly disagree
- ☐ Disagree
- ☐ Agree
- ☐ Strongly agree

Next

Figure 32: Response item "Fairness" in the Pocket–Yes treatment of Study 2

## The malpractice

A patient suffered from a diabetes-related vascular disease in the US, which resulted in the need for surgery to amputate the patient's right leg. However, incorrectly, the surgeon removed the patient's left leg instead of the right leg.

The patient, who ultimately lost both legs, ended up settling with the surgeon for \$513,000. THE SETTLEMENT WAS PAID FROM THE SURGEON'S PERSONAL FUNDS.

Please answer the following question! After all participants have submitted their responses, one of the three scenario-related questions will be selected. Then, the computer program will check whether your response to this question matches the most frequent response given by the sample of respondents who are US residents and recruited from Prolific just as you were. If yours and the most frequent response match, you will receive an approximately \$0.50 bonus. Therefore, we recommend that you carefully choose your response to this question.

THE SETTLEMENT APPROPRIATELY DETERS THE PRACTITIONER FROM FUTURE MALPRACTICE.

- ☐ Strongly disagree
- ☐ Disagree
- ☐ Agree
- ☐ Strongly agree

Next

Figure 33: Response item "Deterrence" in the Pocket-Yes treatment of Study 2

## The malpractice

A patient suffered from a diabetes-related vascular disease in the US, which resulted in the need for surgery to amputate the patient's right leg. However, incorrectly, the surgeon removed the patient's left leg instead of the right leg.

The patient, who ultimately lost both legs, ended up settling with the surgeon for \$513,000. THE SETTLEMENT WAS PAID FROM THE SURGEON'S PERSONAL FUNDS.

Please answer the following question! After all participants have submitted their responses, one of the three scenario-related questions will be selected. Then, the computer program will check whether your response to this question matches the most frequent response given by the sample of respondents who are US residents and recruited from Prolific just as you were. If yours and the most frequent response match, you will receive an approximately \$0.50 bonus. Therefore, we recommend that you carefully choose your response to this question.

THE PRACTITIONER'S REPUTATION WILL APPROPRIATELY SUFFER AFTER THE MALPRACTICE AND SETTLEMENT BECOME PUBLIC KNOWLEDGE.

- ☐ Strongly disagree
- ☐ Disagree
- ☐ Agree
- ☐ Strongly agree

Next

Figure 34: Response item "Reputation" in the Pocket-Yes treatment of Study 2

## The malpractice

A patient suffered from a diabetes-related vascular disease in the US, which resulted in the need for surgery to amputate the patient's right leg. However, incorrectly, the surgeon removed the patient's left leg instead of the right leg.

The patient, who ultimately lost both legs, ended up settling with the surgeon for \$513,000. THE SETTLEMENT WAS PAID FROM THE SURGEON'S PERSONAL FUNDS.

Please answer the following question!

FROM THE LIST, SELECT THE ONE YOU BELIEVE IS THE MOST COMMON CHILD'S DISEASE. INSTEAD OF THE CORRECT ANSWER, PLEASE CLICK ON THE THIRD OPTION.

- ☐ Common cold
- ☐ Chickenpox
- ☐ Croup
- ☐ Earache

Next

Figure 35: First attention check item in the Pocket–No treatment of Study 2

## The malpractice

A patient suffered from a diabetes-related vascular disease in the US, which resulted in the need for surgery to amputate the patient's right leg. However, incorrectly, the surgeon removed the patient's left leg instead of the right leg.

The patient, who ultimately lost both legs, ended up settling with the surgeon for \$513,000. THE SETTLEMENT WAS PAID FROM THE SURGEON'S PERSONAL FUNDS.

Please answer the following question!

THE SETTLEMENT IS FAIR.

- ☐ Strongly disagree
- ☐ Disagree
- ☐ Agree
- ☐ Strongly agree

Next

Figure 36: Response item "Fairness" in the Pocket–No treatment of Study 2

## The malpractice

A patient suffered from a diabetes-related vascular disease in the US, which resulted in the need for surgery to amputate the patient's right leg. However, incorrectly, the surgeon removed the patient's left leg instead of the right leg.

The patient, who ultimately lost both legs, ended up settling with the surgeon for \$513,000. THE SETTLEMENT WAS PAID FROM THE SURGEON'S PERSONAL FUNDS.

Please answer the following question!

THE SETTLEMENT APPROPRIATELY DETERS THE PRACTITIONER FROM FUTURE MALPRACTICE.

- ☐ Strongly disagree
- ☐ Disagree
- ☐ Agree
- ☐ Strongly agree

Next

Figure 37: Response item "Deterrence" in the Pocket–No treatment of Study 2

## The malpractice

A patient suffered from a diabetes-related vascular disease in the US, which resulted in the need for surgery to amputate the patient's right leg. However, incorrectly, the surgeon removed the patient's left leg instead of the right leg.

The patient, who ultimately lost both legs, ended up settling with the surgeon for \$513,000. THE SETTLEMENT WAS PAID VIA THE SURGEON'S MALPRACTICE INSURANCE.

Please answer the following question! After all participants have submitted their responses, one of the three scenario-related questions will be selected. Then, the computer program will check whether your response to this question matches the most frequent response given by the sample of respondents who are US residents and recruited from Prolific just as you were. If yours and the most frequent response match, you will receive an approximately \$0.50 bonus. Therefore, we recommend that you carefully choose your response to this question.

THE PRACTITIONER'S REPUTATION WILL APPROPRIATELY SUFFER AFTER THE MALPRACTICE AND SETTLEMENT BECOME PUBLIC KNOWLEDGE.

- ☐ Strongly disagree
- ☐ Disagree
- ☐ Agree
- ☐ Strongly agree

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Figure 38: Response item "Reputation" in the Pocket–No treatment of Study 2

## Some questions about you

Your gender

- ☐ Female
- ☐ Male
- ☐ Other
- ☐ Prefer not to answer

Your birth year

Your race or ethnicity

- ☐ Black/African American
- ☐ Asian
- ☐ White
- ☐ Hispanic
- ☐ Mixed
- ☐ Other
- ☐ Prefer not to say

The highest level of education you have completed

- ☐ Less than high school
- ☐ High school or equivalent
- ☐ Some college
- ☐ College
- ☐ Master's degree
- ☐ Doctoral degree
- ☐ Professional degree (e.g., MD, JD)

Your income level in the population

- ☐ Lowest 25%
- ☐ Between 25% and 50%
- ☐ Between 50% and 75%
- ☐ Top 25%
- ☐ Prefer not to say

Your political affiliation

- ☐ Very liberal
- ☐ Somewhat liberal
- ☐ Neither liberal nor conservative
- ☐ Somewhat conservative
- ☐ Very conservative
- ☐ Prefer not to say

Your zipcode

In which US state do you currently live?

Figure 39: Demographics measures in Study 2

To the best of your knowledge, does the state in which you live require physicians to maintain malpractice insurance? Please do not look up the right answer!

- ☐ Yes
- ☐ No
- ☐ I do not know

Do you work in any health profession? Check the answer that applies.

- ☐ Nurse
- ☐ Therapist
- ☐ Medical doctor
- ☐ Paramedic
- ☐ Midwife
- ☐ Dentist
- ☐ Pharmacist
- ☐ Dietitian
- ☐ Clinical psychologist
- ☐ Other
- ☐ I am not a health professional

Have you ever been a plaintiff in a medical malpractice case or filed a complaint against a health professional for malpractice?

- ☐ Yes
- ☐ No
- ☐ Other
- ☐ Prefer not to answer

Have you ever received a medical indemnity payment?

- ☐ Yes
- ☐ No
- ☐ Other
- ☐ Prefer not to answer

Have you ever been sued for anything?

- ☐ Yes
- ☐ No
- ☐ Other
- ☐ Prefer not to answer

Have you ever been a defendant in a malpractice case?

- ☐ Yes
- ☐ No
- ☐ Other
- ☐ Prefer not to answer

Do you tend to worry about your health?

- ☐ Not at all
- ☐ Somewhat
- ☐ Very much
- ☐ Extremely

Do you tend to worry about the health of the people you love?

- ☐ Not at all
- ☐ Somewhat
- ☐ Very much
- ☐ Extremely

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Figure 40: Heterogeneity measures in Study 2

## Finally ...

How was the settlement paid in the described malpractice scenario?

- ☐ From the physician's personal funds
- ☐ Through the physician's malpractice insurance
- ☐ I cannot remember

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Figure 41: Second attention check item in Study 2

## Thank you!

Thank you very much for completing our survey!

In the field below, type in any comments or message you would want us to read and consider. If you have no comments or messages to us, you can leave this field blank.

Comments

You will receive your payment via Prolific after we have collected all responses. This will not take more than two weeks. Your Prolific completion code is:

CG4YP9YQ

When you proceed to the next page, we will try to redirect you back to Prolific and automatically submit your completion code. However in case this does not work, please copy this code and submit it manually on the Prolific website.

Next

Figure 42: Upon completion of Study 2, participants receive the following instructions with the option to add further comments.