The Effect of Shared Decisionmaking on Patients' Likelihood of Filing a Complaint or Lawsuit: A Simulation Study

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Study objective: Shared decisionmaking has been promoted as a method to increase the patient-centeredness of medical decisionmaking and decrease low-yield testing, but little is known about its medicolegal ramifications in the setting of an adverse outcome. We seek to determine whether the use of shared decisionmaking changes perceptions of fault and liability in the case of an adverse outcome.

Methods: This was a randomized controlled simulation experiment conducted by survey, using clinical vignettes featuring no shared decisionmaking, brief shared decisionmaking, or thorough shared decisionmaking. Participants were adult US citizens recruited through an online crowd-sourcing platform. Participants were randomized to vignettes portraying 1 of 3 levels of shared decisionmaking. All other information given was identical, including the final clinical decision and the adverse outcome. The primary outcome was reported likelihood of pursuing legal action. Secondary outcomes included perceptions of fault, quality of care, and trust in physician.

Results: We recruited 804 participants. Participants exposed to shared decisionmaking (brief and thorough) were 80% less likely to report a plan to contact a lawyer than those not exposed to shared decisionmaking (12% and 11% versus 41%; odds ratio 0.2; 95% confidence interval 0.12 to 0.31). Participants exposed to either level of shared decisionmaking reported higher trust, rated their physicians more highly, and were less likely to fault their physicians for the adverse outcome compared with those exposed to the no shared decisionmaking vignette.

Conclusion: In the setting of an adverse outcome from a missed diagnosis, use of shared decisionmaking may affect patients' perceptions of fault and liability. [Ann Emerg Med. 2019;74:126-136.]

Please see page 127 for the Editor's Capsule Summary of this article.

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INTRODUCTION

Background

Shared decisionmaking, an approach in which clinicians and patients share the best available evidence when faced with the task of making decisions, and in which clinicians support patients in considering options to achieve informed preferences, has been called "the pinnacle of patient-centered care."[1,2] It has been promoted and studied for decades under the premise that it enables patient-centered care, facilitates patient autonomy, and may improve resource use.[3-5] Shared decisionmaking has also been proposed as a method to decrease overtesting because some evidence suggests that when patients fully understand risks and benefits, they are less likely to choose invasive or aggressive options.[6,7] In this way, shared decisionmaking may reduce defensive medicine, in which tests of marginal utility are ordered primarily to decrease the physicians' perceived medicolegal risk.[8] The practice of defensive medicine is thought to cost an estimated $46 billion annually in the United States, where the majority of physicians report overusing tests to mitigate their liability.[8,9]

Importance

More than 75% of emergency physicians will be named in a malpractice claim at some point in their career, and those who are will spend an average of greater than 4 years engaged in that claim.[10] Emergency medicine has high malpractice risk because of the undifferentiated patient population, limited time, and high medical acuity.[11] Most emergency physicians admit to ordering medically unnecessary imaging and cite fear of malpractice as a main

Editor's Capsule Summary

What is already known on this topic

The practice of emergency medicine puts practitioners at risk of malpractice litigation. We have limited understanding of how to mitigate this risk.

What question this study addressed

Does the practice of shared decisionmaking change the likelihood that a patient with a bad outcome will initiate a lawsuit?

What this study adds to our knowledge

According to a written simulation of delayed diagnosis presented to a nonrandom general population through the Internet, the use of shared decisionmaking may alter patients' sense of fault and reduce liability risk.

How this is relevant to clinical practice

This work provides tentative additional support for the use of shared decisionmaking in daily practice.

reason, but also recognize that involving patients in shared decisionmaking could help decrease the number of medically unnecessary tests ordered.[7] However, no clear evidence exists in regard to the effect of shared decisionmaking on malpractice risk, and physicians have cited this as a barrier to implementation of such decisionmaking.[12-14]

Goals of This Investigation

Decreasing unnecessary testing and reducing physicians' medicolegal risk are not the primary objectives of shared decisionmaking. However, to gather evidence to support implementation efforts, and in response to input from physician-stakeholders,[12] we sought to assess the potential medicolegal consequences of shared decisionmaking. Specifically, we sought to determine whether emergency department (ED) patients would have different perceptions of fault and liability when physicians engaged them in shared decisionmaking compared with when physicians conveyed the same information but used a physician-centered approach to clinical decisionmaking. We hypothesized that participants in a simulation would self-report a lower likelihood of intention to contact a lawyer if shared decisionmaking was used.

MATERIALS AND METHODS

Study Design

We conducted a randomized experiment by questionnaire (Figure 1). Instrument design, development, and testing are described below.

Selection of Participants

We used Amazon Mechanical Turk (MTurk) to recruit respondents aged 18 years and older and residing in the United States (Amazon MTurk Beta, Seattle, WA).[15] MTurk is an online, Web-based platform that allows researchers to crowd-source tasks such as surveys and experiments. Its use for academic research has been extensively studied, and a recent systematic review found that results obtained through MTurk were largely comparable to those collected by more conventional means such as convenience sample recruiting.[16-18] Respondents were asked various questions to assess their similarity to ED patients (such as relating to their own use of the ED). Respondents were provided an incentive according the standard MTurk guidelines based on the duration of participation (8 to 12 minutes) and federal minimum wage ($7.25/hour), which resulted in a payment of $1.50. Respondents are prevented from answering surveys more than once. Because MTurk closes a task once the requested number of respondents is reached, a response rate cannot be calculated. The platform directed participants to the survey, which was created with Qualtrics, allowing randomization of each participant to 1 of 3 groups (version 11.17; Qualtrics, Provo, UT). The study was granted exempt status by the Baystate Medical Center institutional review board.

Interventions

A vignette-based questionnaire was developed with previous literature and input from practicing emergency physicians.[19,20] Three versions of the questionnaire were developed, with each version varying the degree of shared decisionmaking that occurred (no shared decisionmaking, brief shared decisionmaking, and thorough shared decisionmaking). The questionnaire was refined through 29 cognitive interviews and was piloted twice in 2 groups of 30 participants. We decided to use the clinical scenario of suspected appendicitis for 2 reasons; first, physicians report using shared decisionmaking in this scenario, and second, "failure or delay in diagnosis" is the most common reason a lawsuit is filed against an emergency provider.[12,21]

The final questionnaire (Appendixes E1 to E4, available online at http://www.annemergmed.com) consisted of 6 sections: a vignette describing the patient's presentation to the ED for abdominal pain; 1 of 3 possible patient-physician dialogues in regard to the ordering of a computed tomography (CT) scan of the abdomen and pelvis; a manipulation check to assess whether participants read the dialogue carefully and recognized the aspects of communication presented; the conclusion of the scenario, which resulted in a repeated ED visit and a CT demonstrating a ruptured appendix (and an explanation of

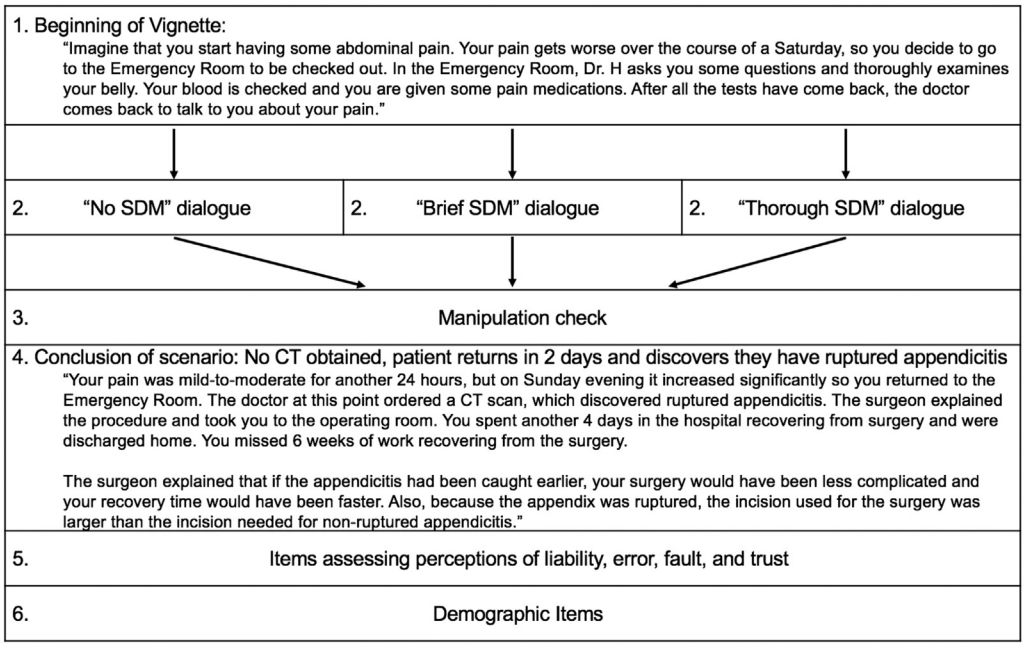

Figure 1. Components of the questionnaire presented to participants (full questionnaire and dialogues in Appendixes E1 to E4, available online at http://www.annemergmed.com). *SDM*, Shared decisionmaking.

the adverse consequences of the delay in diagnosis); items assessing the participants' response to the scenario and dialogue in light of the adverse outcome; and demographic variables. None of the sections varied other than the second, and each section is described in detail below.

A detailed description of dialogue development is available in Appendix E5 (available online at http://www.annemergmed.com). To ensure realistic dialogues, 301 practicing emergency clinicians contributed to dialogue development by indicating what concepts they usually convey both when having a shared decisionmaking conversation in the simulated clinical scenario and when not engaging patients in decisionmaking about the use of a CT scan. In regard to content, the no shared decisionmaking dialogue contained the same information and was the same length as the brief shared decisionmaking one (eg, reasons to return to the ED). The difference between the no shared decisionmaking and brief shared decisionmaking scenarios was that the physician explained that a decision needed to be made and solicited the preferences of the patient. In the brief shared decisionmaking scenario, the physician points out that he or she is giving the "advantages and disadvantages," but the actual information conveyed is the same as in the no shared decisionmaking group. The thorough shared decisionmaking dialogue contained additional information and was longer.

Final questionnaires differed only in the dialogue between the patient and physician (Figure 1); the rest of the vignette was identical across all 3 groups (the initial explanation of the patient's presenting concern and the final outcome). In all vignettes, a CT scan was not obtained and the patient came back to the ED with a ruptured appendix requiring an extensive surgical procedure, a prolonged recovery, and a 6-week absence from work. In all vignettes, after the ruptured appendix was diagnosed, a physician explained that had the CT been obtained on the first ED visit, the surgical procedure and recovery would have been significantly reduced. Each participant received only one vignette and was not aware of the manipulated variable.

Methods of Measurement

A manipulation check asks participants directly about the manipulated variable—in this case, the degree of shared decisionmaking—to ensure that the variable is truly perceived as different between groups.[22] To assess whether the dialogues communicated the degree of shared decisionmaking intended, participants were given a description of shared decisionmaking and asked whether the dialogue, in their opinion, met the definition provided. They also completed the Shared Decision Making Questionnaire–9, a validated measure of shared decisionmaking that asks 9 questions about whether a conversation met the criteria for shared decisionmaking

(such as "My physician made clear that a decision needs to be made").[23]

Participants were instructed to consider both what happened at their first ED visit (the manipulated dialogue) and the conclusion of the scenario (the adverse outcome) when answering the remaining questions. A set of 5 items was developed to assess participants' behavioral intentions, with behaviors ranging from complaining to friends and family to contacting a lawyer and initiating a lawsuit. Because all 5 items referred to behaviors (eg, "How likely would you be to file a formal complaint with the claims department about your first ED visit?"), the 5 response options were "very unlikely," "somewhat unlikely," "neutral," "somewhat likely," and "very likely." In accordance with our previous work involving medical error, 7 items were developed to assess feelings of blame and fault (eg, "The physician in this case was at fault"), and 5 response options were provided: "strongly disagree," "disagree," "neutral," "agree," and "strongly agree."[19] Four items assessed perception of overall care (the Hospital Consumer Assessment of Healthcare Providers and Systems), whether the dialogue was perceived to be realistic, and the physician's communication skills.[24] Last, participants were asked to fill out a validated 5-item Trust in Physician Scale.[25]

The final set of items elicited standard demographic information (eg, age, race, primary language, education, health insurance) and previous experience with medical malpractice. To assess for generalizability with ED patients, participants were also asked whether they had been to an ED as a patient, family member, or friend, and how many visits they had had in the past 12 months.

Outcome Measures

The primary outcome was the proportion of participants in each group who, after reading the entire vignette, responded that they were "somewhat likely" or "very likely" to contact a lawyer to discuss their options. Secondary outcomes included other measures of fault and blame, physician ratings, and reported Trust in Physician score.

Primary Data Analysis

The sample size needed for this study was calculated according to the assumption that a difference in "intent to sue" from 20% to 10% would be clinically meaningful. In accordance with this assumption, 250 participants per group would give a power of 86% to detect this degree of difference at a 2-sided .05 significance level. Because we had 3 groups and wanted to account for missing data, we planned to have approximately 800 total respondents.

Descriptive statistics were used to describe the characteristics of participants. χ^2 And Fisher's exact tests were used to assess whether degree of shared decisionmaking influenced responses to the items intended to measure intent to sue and secondary measures, and 95% confidence intervals (CIs) were calculated. Perception of liability was dichotomized, with "somewhat likely" and "very likely" combined, and "very unlikely," "somewhat unlikely," and "neutral" combined. Statistical analyses were completed with R (version 3.4; R Foundation for Statistical Computing, Vienna, Austria; http://www.R-project.org/).

RESULTS

Characteristics of Study Subjects

A total of 812 respondents were randomized and 804 had complete data for the manipulation check and the primary outcome. Participants were aged 19 to 73 years, with a mean age of 36 years, and were 46% women and 79% white (Table 1). Eighty-eight percent of participants had visited an ED as a patient or friend or family member. There were no significant differences between groups in regard to collected demographics. Twenty-two percent of participants reported that they or a family member had had an experience with a similar medical scenario (with or without an adverse outcome), and 3% reported they had filed a claim or lawsuit against a health care provider.

The results of the manipulation check indicated that respondents understood the vignettes and recognized the presence or absence of shared decisionmaking. In the no shared decisionmaking group, 22% of respondents (95% CI 17% to 27%) reported that there was shared decisionmaking, whereas for the brief shared decisionmaking and thorough shared decisionmaking groups, this proportion was 89% (95% CI 83% to 93%) and 94% (95% CI 91% to 97%). Measurement through the Shared Decision Making Questionnaire–9 concurred, with mean scores of 36 of 100, 78 of 100, and 84 of 100, respectively (95% CI 30% to 41%, 73% to 83%, and 79% to 88%, respectively; $P<.01$ for between-group differences for all 3 groups). In regard to the realism of the vignette, 70%, 77%, and 74% of each group agreed that the description of what the physician said was realistic (95% CI 65% to 75%, 72% to 82%, and 69% to 79%, respectively; $P=.13$).

Main Results

Within the no shared decisionmaking group, 41% of respondents reported that they were "somewhat" or "very likely" to contact a lawyer to discuss litigation; these percentages were 12% and 11% for the brief and thorough shared decisionmaking groups, respectively. Comparing brief shared decisionmaking with no shared

Table 1. Participant characteristics.

Characteristic	No SDM, n=270	Brief SDM, n=274	Thorough SDM, n=260
Age, mean (median), y	36.0 (33)	35.0 (32)	36.2 (34)
Sex, No. (%)			
Men	141 (52.6)	150 (54.9)	139 (53.7)
Women	126 (47.0)	120 (44.0)	118 (45.6)
Nonbinary/third gender	0	3 (1.1)	2 (0.8)
Race/ethnicity, No. (%)			
White	205 (75.9)	219 (79.9)	206 (79.2)
Black	24 (8.9)	24 (8.8)	24 (9.2)
Asian	20 (7.4)	18 (6.6)	17 (6.5)
Multiracial	10 (3.7)	5 (1.8)	6 (2.3)
American Indian or Alaska Native	2 (0.7)	4 (1.5)	1 (0.4)
Other	4 (1.5)	2 (0.7)	4 (1.5)
Prefer not to answer	5 (1.9)	2 (0.7)	2 (0.8)
Ethnicity, No. (%)			
Not Hispanic or Latino	245 (91.8)	228 (83.5)	221 (86.7)
Hispanic or Latino	15 (5.6)	39 (14.3)	29 (11.4)
Prefer not to answer	7 (2.6)	6 (2.2)	5 (2.0)
Primary language, No. (%)			
English	263 (98.5)	267 (98.5)	251 (97.7)
Spanish	2 (0.7)	0	1 (0.4)
Chinese	1 (0.4)	1 (0.4)	2 (0.8)
Other	1 (0.4)	3 (1.1)	3 (1.2)
Education, No. (%)			
>4-year college degree	24 (9.0)	33 (12.1)	35 (13.6)
4-year college degree	105 (39.3)	108 (39.7)	91 (35.4)
Some college or 2-year degree	103 (38.6)	88 (32.4)	90 (35.0)
High school graduate or general equivalency diploma	33 (12.4)	41 (15.1)	40 (15.6)
Some high school but did not graduate	1 (0.4)	1 (0.4)	1 (0.4)
Prefer not to answer	1 (0.4)	1 (0.4)	0
Employment status, No. (%)			
Employed, working ≥40 h/wk	161 (60.1)	191 (70.0)	165 (64.0)
Employed, working 1–39 h/wk	57 (21.3)	40 (14.7)	47 (18.2)
Not employed, looking for work	16 (6.0)	13 (4.8)	17 (6.6)
Not employed, not looking for work	6 (2.2)	10 (3.7)	9 (3.5)
Student	10 (3.7)	5 (1.8)	10 (3.9)
Retired	8 (3.0)	5 (1.8)	6 (2.3)
Disabled, not able to work	6 (2.2)	4 (1.5)	2 (0.8)
Prefer not to answer	4 (1.5)	5 (1.8)	2 (0.8)
Ever worked in health care, No. (%)			
Yes	36 (13.5)	42 (15.5)	47 (18.1)
Ever worked in law or the legal system, No. (%)			
Yes	9 (3.4)	22 (8.1)	20 (7.8)
Total household income last year, No. (%), $			
<25,000	46 (17.2)	50 (18.3)	57 (22.0)
25,000–34,999	45 (16.8)	40 (14.7)	37 (14.3)
35,000–49,999	54 (20.1)	55 (20.1)	43 (16.6)
50,000–74,999	58 (21.6)	69 (25.3)	61 (23.6)
75,000–99,999	34 (12.7)	30 (11.0)	27 (10.4)
100,000–149,999	20 (7.5)	16 (5.9)	19 (7.3)
≥150,000	5 (1.9)	9 (3.3)	11 (4.2)
Prefer not to answer	6 (2.2)	4 (1.5)	4 (1.5)
Ever visited a US ED as a patient or friend/family member, No. (%)			
Yes	236 (88.4)	240 (88.9)	220 (85.6)
No. of times ED visited in the past year, No. (%)			
0	161 (60.1)	171 (62.6)	164 (63.3)
1–2	94 (35.1)	81 (29.7)	86 (33.2)
3–5	12 (4.5)	18 (6.6)	7 (2.7)
≥6	1 (0.4)	3 (1.1)	2 (0.8)
Self-rating of participant's overall health, No. (%)			
Excellent	36 (13.5)	41 (15.0)	49 (18.9)
Very good	100 (37.5)	107 (39.2)	87 (33.6)
Good	89 (33.3)	91 (33.3)	93 (35.9)
Fair	37 (13.9)	30 (11.0)	26 (10.0)
Poor	5 (1.9)	4 (1.5)	4 (1.5)
Type of insurance, No. (%)			
Private or commercial	148 (56.8)	156 (57.6)	150 (59.5)
Medicaid or another insurance plan through home state	46 (17.6)	68 (25.1)	45 (17.9)
Medicare (usually for people >65 y or disabled)	16 (6.1)	12 (4.5)	15 (6.0)
No insurance	50 (19.2)	32 (11.8)	40 (15.9)
Other	1 (0.4)	3 (1.1)	2 (0.8)
Ever filed a claim or lawsuit of any sort against a physician or other health care provider, No. (%)			
Yes	3 (1.1)	10 (3.7)	12 (4.7)
Had an experience, either as a patient or as a friend/family member in a medical scenario similar to this example, No. (%)			
Yes	68 (25.4)	56 (20.5)	53 (20.6)

decisionmaking, the odds ratio for contacting a lawyer was 0.20 (95% CI 0.12 to 0.31), and the odds ratio for the same question in comparing thorough shared decisionmaking with no shared decisionmaking was 0.17 (95% CI 0.11 to 0.28). That is, participants exposed to any degree of shared decisionmaking were 80% less likely to report a plan to contact a lawyer compared with those not exposed to shared decisionmaking.

The differences between the no shared decisionmaking group and both shared decisionmaking groups were also present for other measures of dissatisfaction and perceived liability (Figure 2); however, there were no statistically significant differences between responses for the 2 shared decisionmaking groups.

Responses about blame and fault were similar to those for primary outcome measures (Table 2). Fewer participants in the 2 shared decisionmaking groups believed an error had occurred, fewer thought the physician was at fault, and more believed the patient and the physician shared responsibility for the outcome.

Overall ratings of the ED visit improved as the degree of shared decisionmaking increased. This was also observed for the ratings of the physician's communication skills (Figure 3).

In regard to the 5-item Trust in Physician Scale, scores were significantly different between groups. Of a possible 25 points, the no shared decisionmaking group had a mean score of 11.2 points, and brief and thorough shared decisionmaking groups had mean scores of 16.7 and 18.4 points, respectively (95% CI 9.7 to 12.7, 15.3 to 18.1, and 17 to 19.7, respectively; $P<.01$ for between-group differences for all 3 groups).

LIMITATIONS

Our study has several limitations. First, we use hypothetical vignettes. Because of the difficulties in assessing the effect of shared decisionmaking on actual lawsuits, we chose to use a hypothetical scenario with potential ED patients to assess reactions to an adverse event, an approach we have used before.[19] By using vignettes and dialogues, we were able to randomize participants to controlled versions of a patient-clinician interaction and assess the likelihood of an outcome that is relatively rare. From an ethical perspective, we would have been unable to perform this study without using hypothetical vignettes. Additionally, previous research on the use of "analogue patients" (vignettes) has concluded that this method is valid and reliable for gathering patient-perception data.[22,26]

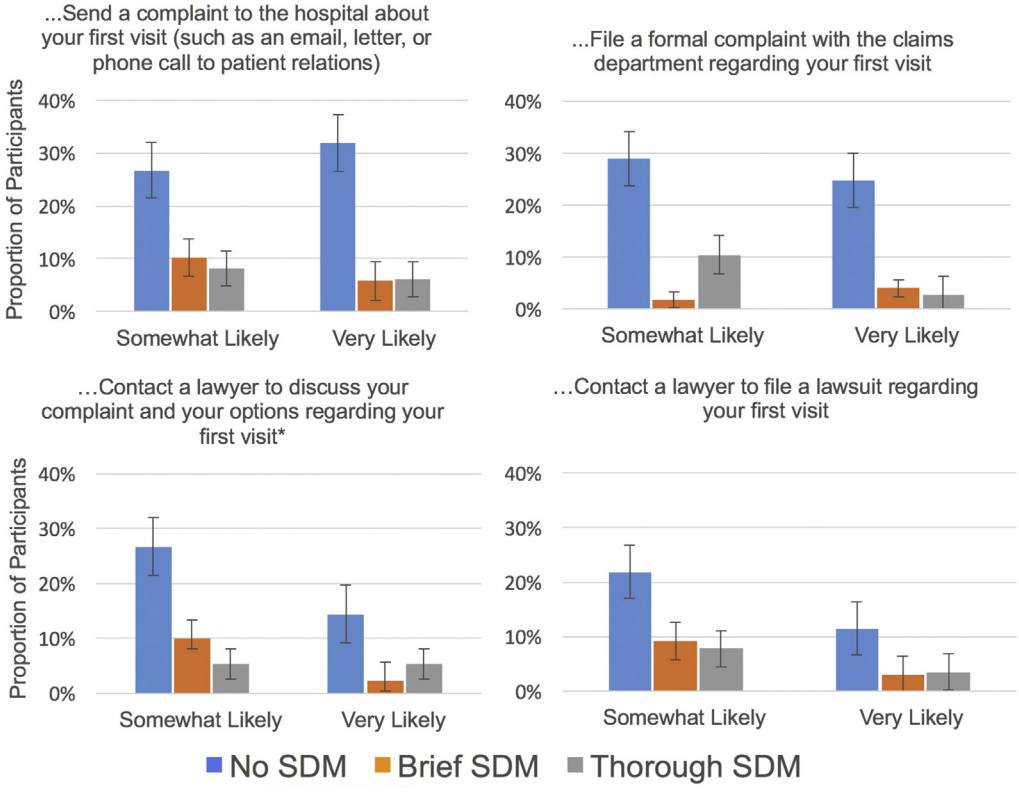

Figure 2. Participants' responses to "How likely would you be able to…"

Table 2. Responses in regard to blame and responsibility.

Question	No SDM, No. (%)	Brief SDM, No. (%)	Thorough SDM, No. (%)	OR
In this scenario, who made the decision not to obtain a CT scan on the first visit?				
The patient alone	6 (2.2)	43 (15.8)	66 (25.4)	No SDM vs brief: OR 0.03 (95% CI 0.02–0.05)
The physician alone	235 (87.0)	14 (5.1)	5 (1.9)	
The physician and the patient together*	26 (9.6)	211 (77.6)	184 (70.8)	No SDM vs thorough: OR 0.04 (95% CI 0.03–0.07)
Not sure	3 (1.1)	4 (1.5)	5 (1.9)	
In your opinion, for a decision like this, who should make the decision?				
The patient alone	8 (3.0)	19 (7.0)	28 (10.8)	No SDM vs brief: OR 1 (95% CI 0.7–1.6)
The physician alone	31 (11.5)	33 (12.2)	44 (17.0)	
The physician and the patient together*	212 (78.5)	208 (77.0)	179 (69.1)	No SDM vs thorough: OR 1.6 (95% CI 1.1–2.4)
Not sure	19 (7.0)	10 (3.7)	8 (3.1)	
In your opinion, not ordering a CT scan at the first visit was:				
Not a medical mistake	24 (8.9)	69 (25.4)	98 (37.8)	No SDM vs brief: OR 3.6 (95% CI 2.6–5)
A minor medical mistake	68 (25.3)	109 (40.1)	78 (30.1)	
A serious medical mistake*	177 (65.8)	94 (34.6)	83 (32.0)	No SDM vs thorough: OR 4 (95% CI 2.8–5.8)
The physician in this case made an error.				
Agree/somewhat agree*	234 (86.7)	124 (35.4)	86 (33.3)	No SDM vs brief: OR 7.8 (95% CI 5.1–12)
Neutral	13 (4.8)	56 (20.5)	39 (15.1)	
Somewhat disagree/disagree	23 (8.5)	93 (34.1)	134 (51.7)	No SDM vs thorough: OR 13 (95% CI 8.5–20)
The physician in this case was at fault.				
Agree/somewhat agree*	222 (82.5)	95 (34.9)	75 (28.9)	No SDM vs brief: OR 8.8 (95% CI 5.8–13)
Neutral	28 (10.4)	60 (22.1)	46 (17.7)	
Somewhat disagree/disagree	19 (7.1)	117 (43.0)	139 (53.5)	No SDM vs thorough: OR 11 (95% CI 7.7–17.6)
The patient in this case was at fault.				
Agree/somewhat agree*	32 (11.8)	77 (28.3)	84 (32.3)	No SDM vs brief: OR 0.5 (95% CI 0.3–0.8)
Neutral	31 (11.5)	62 (22.8)	55 (21.2)	
Somewhat disagree/disagree	127 (76.7)	133 (28.9)	121 (46.6)	No SDM vs thorough: OR 0.4 (95% CI 0.25–0.63)
In this case, the patient and the physician share the responsibility for the outcome.				
Agree/somewhat agree*	32 (11.8)	165 (60.4)	166 (63.9)	No SDM vs brief: OR 0.09 (95% CI 0.06–0.14)
Neutral	39 (14.4)	49 (17.9)	44 (16.9)	
Somewhat disagree/disagree	199 (73.7)	59 (21.7)	50 (19.2)	No SDM vs thorough: OR 0.07 (95% CI 0.05–0.12)

OR, Odds ratio.
*ORs presented are based on pairwise comparisons for these responses.

Our method assumes that patients' responses to our scenarios are at least somewhat predictive of what their real behavior would be in the same situation, but this cannot be fully known. Psychology literature, including a meta-analysis of greater than 80,000 subjects, demonstrates a positive correlation between intention and behavior.[27] Sheeran et al[27] also note that the "intention-behavior gap" (when intention and behavior do not match) is due much more to "inclined abstainers"—those who self-report intention but do not engage in the behavior—than those who report no intention and then engage in the behavior. A systematic review of clinicians' intentions and behavior supports this notion.[28] Taken as a whole, although it is possible or even likely that the proportion of participants who would sue reported in this study is different from what would be observed in reality, the direction of the difference caused by shared decisionmaking is likely accurate.

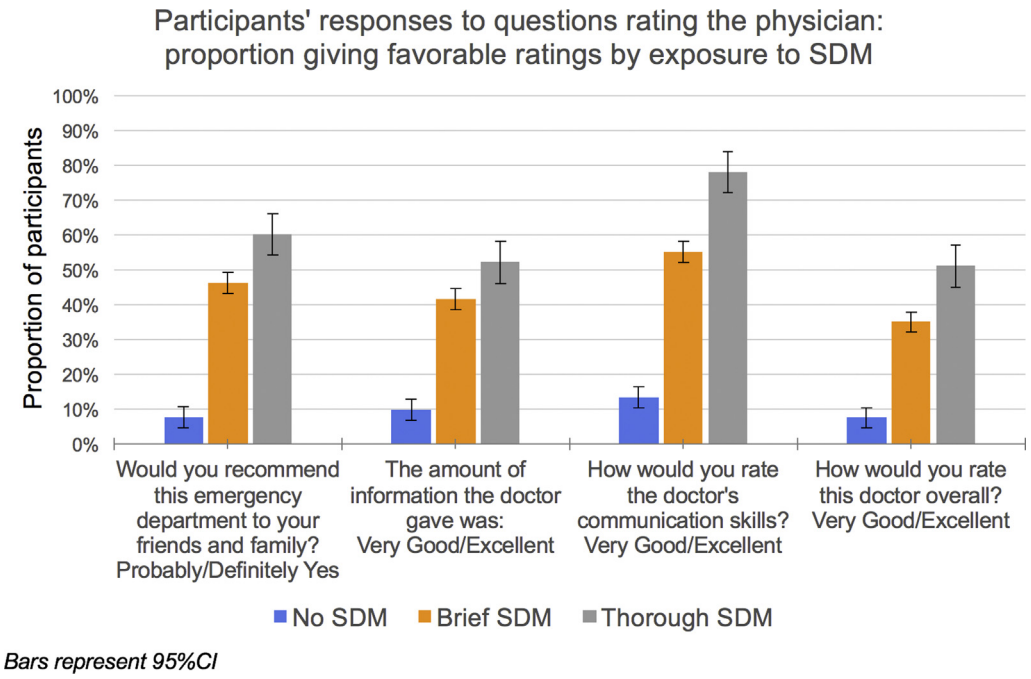

Figure 3. Participants' responses to questions rating the ED and physician.

Additionally, whether a patient considers suing does not alone predict whether a lawsuit will be brought against a physician because numerous other factors influence whether a case is pressed. Furthermore, the demographic characteristics of the MTurk responders suggest that they have higher educational attainment and better health compared with patients surveyed recently in a multisite survey of urban EDs, suggesting a higher mean socioeconomic status.[29] Evidence suggests patients with lower socioeconomic status sue physicians less frequently, but it is unknown whether the effects of shared decisionmaking on liability would be as robust in a different population.[30] Although the MTurk population may not have had the same mind-set as ED patients, the majority reported an ED visit, and 3% reported having filed a claim or lawsuit against a health care provider.

Last, our study assessed only one scenario and one setting—missed appendicitis in the ED—and our findings may not generalize to other scenarios in the ED or other settings. Although it is unclear whether the effects of shared decisionmaking would endure for a more significant adverse outcome, 3% of the participants in this study reported filing a claim or lawsuit against a health care provider. This is much higher than reported rates of lawsuits, which have been estimated to be related to 0.001% and 0.03% of all hospital visits, suggesting that this group of participants was an appropriate cohort for testing whether an intervention changed litigiousness.[11,31]

DISCUSSION

To our knowledge, this is the first large study to assess whether the use of shared decisionmaking confers medicolegal protection in the setting of an adverse outcome. Although intent as reported on a survey does not always predict behavior, our results suggest that the use of shared decisionmaking confers medicolegal protection in the event of an adverse outcome. The consistent dose-response curve observed in our secondary outcomes (Figure 3 and Trust in Physician Scale) is further evidence of the effect of shared decisionmaking on the outcomes measured.

Our results are consistent with those of a similar experimental study by Barry et al[32] assessing hypothetical jurors' attitudes toward malpractice in a case involving a decision aid for prostate cancer screening. Rather than using hypothetical jurors, we thought that asking potential patients to be respondents was more relevant to our question because avoiding a lawsuit altogether is more relevant to both physicians and patients than the success or failure of litigation.

We used practicing clinicians to create realistic scenarios and attempted to balance the actual content of information exchanged. The no shared decisionmaking and the brief shared decisionmaking scenarios were equivalent in their informational content. Therefore, differences found are not due to amount of information exchanged. All participants had an unfavorable outcome. Despite this and the retrospective bias it created, significantly fewer participants

in the groups who engaged in shared decisionmaking expressed that they thought the physician had made an error and was at fault. They reported higher marks for communication and greater trust. Similarly, the brief shared decisionmaking and no shared decisionmaking scenarios were the same length. Although in reality engaging a patient in shared decisionmaking may take more time than explaining one's decision (such as in the no shared decisionmaking dialogue), our findings suggest that time spent in conversation was not the driving factor. It is notable that a conversation that was the same length and conveyed the same information had such notable differences in meaning to the participants as to elicit such different responses regarding blame and fault.

Our results support the assertion that shared decisionmaking provides patient-centered care that is valued and appreciated by patients.[2,33] Despite a bad outcome, the majority of participants who had "thorough shared decisionmaking" reported they would "probably" or "definitely" recommend this ED, as compared with less than 8% of participants who did not receive shared decisionmaking. Greater than 80% of participants gave their physician overall positive ratings, with greater than 90% reporting that the physician had good to excellent communication skills. For many participants, the positive effects of the shared decisionmaking managed to overcome the negative effects of the adverse outcome in terms of their relationship with the physician. Although multiple studies have shown that uncertainty can negatively affect patients' perceptions, such as increasing decisional conflict and decreasing trust, our study suggests shared decisionmaking may mitigate this.[34] When uncertainty was presented with clear options, participants rated physicians as more trustworthy than when no shared decisionmaking occurred. The demonstrated effects on physician trust, even in the setting of an adverse outcome, have potential downstream consequences for patients' overall trust in physicians and the health care system, and may meaningfully benefit future care and adherence. This may indicate that shared decisionmaking could be particularly powerful in the setting of ED care, when patients have no previous relationship with their physicians.[35] This may reflect the true promise of shared decisionmaking: that a conversation has the power to connect 2 strangers in a way that not only improves understanding but also increases trust and empowers patients.[36]

Our findings are consistent with those of previous research: the majority of patients want to be involved in medical decisionmaking, even in emergency care.[29,35] A minority of patients believed that the physician should have made the decision to obtain a CT scan unilaterally, even when hindsight suggested that in deciding together, the decision led to an adverse event.

In the context of what is known about why patients initiate litigation, our findings are not surprising. Numerous studies have shown poor communication to be associated with patient complaints and litigation.[37-42] Recent studies in emergency medicine have failed to find physician characteristics that lead to increased litigation, other than simply volume of patients treated.[11] Although this study is by no means conclusive in regard to the relationship between shared decisionmaking and malpractice, high-quality empiric data are not likely to be forthcoming because shared decisionmaking is variably used and variably documented. Rather than focusing on the effects of shared decisionmaking on liability, physicians and researchers should work to promote clinical care that is rational and inclusive of patients' preferences.

In summary, the desire to avoid litigation should not be the underlying rationale for using shared decisionmaking.[43] This patient-centered practice should be promoted and implemented because of its ethical foundation in respect for patient autonomy. Our study should ease concerns that using shared decisionmaking will increase litigation, and it should support the ethical and patient-centered basis for shared decisionmaking. "People don't remember what you said[;] they remember how you made them feel."[44] This study suggests that the feelings imparted by even a brief shared decisionmaking conversation were significantly different from those experienced when shared decisionmaking was not used, and this translated to a number of important downstream effects. The positive and patient-centered interaction of shared decisionmaking, called "a human expression of care that is careful and kind," appears to have mitigated the negativity of the adverse outcome.[33] Physicians should be aware that respectful and patient-centered communication may be medicolegally protective in the event of an adverse outcome.

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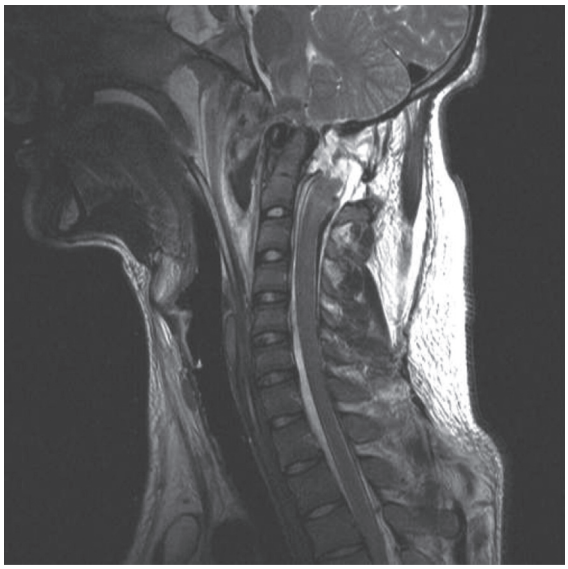

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