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Title: Physician Perspectives Regarding the Use of Shared Decision Making in the Emergency Department

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Abstract

Purpose: A focus on improving the patient-centeredness of care in the Emergency Department (ED) has led to increased promotion of Shared Decision Making (SDM). However, it is unclear whether there may be unique barriers and facilitators to SDM in the ED, as no exploratory research has focused specifically on ED care or the views of ED physicians. This study sought to better understand physician-identified barriers to and facilitators of SDM in the ED.

Methods: We conducted semi-structured interviews with practicing Emergency Physicians (EPs). Interviews were transcribed verbatim, and a three-member team coded all transcripts in an iterative fashion, using a directed approach to qualitative content analysis. We identified emergent themes and organized themes based on an integrative theoretical model that combined the Theory of Planned Behavior and Social Cognitive Theory.

Results: Fifteen practicing EPs were interviewed, and multiple relevant themes were identified. Physicians described the following barriers that often deterred them from using SDM: time constraints, clinical uncertainty, fear of a bad outcome, certain patient characteristics, lack of follow-up, and other emotional and logistical stressors. They noted that risk stratification methods, the perception that SDM decreased liability, and their own improving clinical skills facilitated their use of SDM. They also noted that the culture of the institution could play a role in discouraging or promoting SDM and that patients could encourage SDM by specifically asking about alternatives.

Key words: Shared decision making, emergency medicine, qualitative methods

Purpose/Objectives:

Shared decision making (SDM) is formally defined as the "collaborative process that allows patients and their providers to make healthcare decisions together, taking into account the best scientific evidence available as well as the patient's values and preferences."[1] SDM has been promoted in primary and outpatient care for decades but has only recently made inroads in acute care settings.[2,3]

Although Emergency Physicians (EPs) report that they use SDM in the ED,[4] a number of questions remain about SDM use in the ED. With increased attention focused on the delivery and promotion of patient-centered care, the use of SDM in the ED requires further characterization and understanding.[2] SDM is a conversation between patients/families and clinicians, but it is usually initiated by the clinician in the setting of emergency care.[5] That makes the understanding of the perspective of the physician-as-stakeholder paramount to efforts to promote SDM. Interventional studies intended to test the value of SDM, such as "Chest Pain Choice," have used stakeholder engagement methods in the context of decision aid development to understand the perspectives of those who will be using an intervention.[6] However, an in-depth understanding of the *overarching* barriers and facilitators that ED physicians face in their day-to-day use of SDM is lacking. A broader approach to understanding EPs perspectives could yield insights that could be generalized to many SDM scenarios, facilitating the uptake and use of SDM for a range of clinical encounters. Although studies of other physicians outside of Emergency Medicine suggest that time constraints, the clinical scenario, and certain patient characteristics are the biggest barriers to SDM, to date no exploratory research exists investigating the barriers and facilitators to SDM that EPs deem relevant.[7] For example, though SDM has been purported as particularly relevant in low-evidence, high-uncertainty clinical situations,[8,9] little is known about how uncertainty effects EPs' use of SDM.

The objective of the current study was to specifically examine the EP-identified *barriers to* and *facilitators of* the use of SDM in the ED. In designing this study, this analysis was planned *a priori*, with the idea that future research should examine these barriers and facilitators in a wider and more representative sample of EPs. We also sought to use this data to explore physicians' motivation for using SDM (paper 1) and how physician's use of SDM affected residents' learning opportunities (paper 2). Last, we sought to use the qualitative data to develop a survey to examine these issues in a larger and more diverse sample of EPs.

Scope

At the time this study was initiated, little data regarding the effect of EPs perspectives on the use SDM in the ED existed. We sought to explore EPs' perspectives to better understand both how to study SDM in the ED and how to promote SDM in the ED. Participants were limited to EPs practicing in western Massachusetts at the time of the study, with the goal of creating a survey to assess the perspectives of a wider sample.

Methods

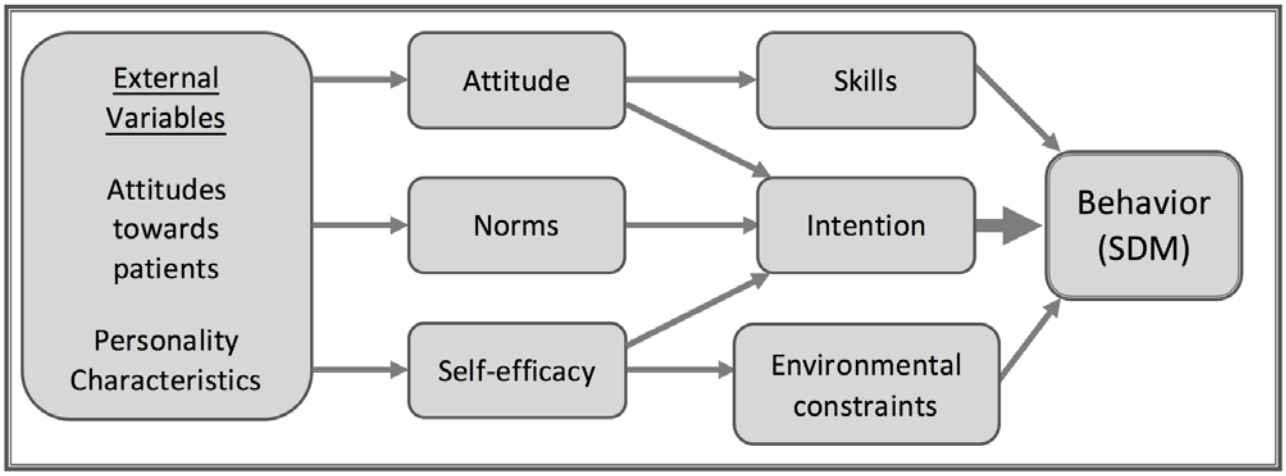
Study Design

We conducted semi-structured interviews with practicing EPs and used established qualitative methods for our analysis.[11-13] The study was granted exempt status by the local Institutional Review Board but utilized written informed consent, because we recorded the interviews. Participants were reimbursed $25 for their time. The study was designed to comply with published standards for reporting qualitative research.[11-13]

Interview Guide

We based the interview guide on an integrative theoretical model that combined the Theory of Planned Behavior and Social Cognitive Theory. This framework (Figure 1) organizes the factors that influence an individual's performance of a behavior, such as initiating a SDM conversation.[14] We also incorporated concepts from previous qualitative literature that included interviews with non-emergency physicians, as there was no published qualitative data regarding EPs' attitudes.[7,15-18] The interview guide was piloted, and we made minor additions to question probes following the first several interviews, but no changes were made to the guide after the fifth interview. Both interviewers took field notes during interviews and discussed these notes after interviews.

Figure 1. The theoretical framework, drawn from an Integrative Model: Social Cognitive Theory & the theory of Planned Behavior,[11] demonstrating how various factors affect a behavior (Shared Decision Making).



Participants were given a standard definition of SDM.[1] They were then asked to discuss scenarios where they used SDM techniques. They were asked more questions about what helped them use SDM at that time (facilitators), and then they were asked to think about and discuss scenarios where they could have used SDM but chose not to and were asked to elaborate on the reasons why they did not use SDM (barriers). After they discussed scenarios, they were asked whether they could think of other factors that prevented them or their colleagues from using SDM more frequently.

Study Setting and Selection of Participants

We chose a purposeful sample of EP physicians based on gender, years in practice since residency, region (rural/suburban vs. urban) of primary employment, academic versus community practice setting, and location of training (inside versus outside of the state).[19] Physicians who met these criteria were identified via professional networks and enrollment continued until *thematic saturation* was achieved (the point when additional interviews fail to lead to new concepts).[19]

Data Collection

Participants provided written informed consent and provided demographic and background information. Interviews were conducted in person at private locations. The interview team consisted of two female,

practicing EPs (EMS and TRE) who trained and piloted interviews under a senior investigator with qualitative methods experiences (SLG). All interviews were audio recorded and transcribed. After verbatim transcription, *member checking* was performed by providing participants with a short summary of the major points they discussed and asking them for their agreement, disagreements, or comments.[13]

Data Analysis

Transcripts were entered into Dedoose qualitative data management and analysis software (Dedoose Version 7.0.18 Los Angeles, CA: SocioCultural Research Consultants, LLC). Coding was performed by three research team members (EMS, ERK, KEP). The codebook was developed using a directed approach to qualitative content analysis: we combined *a priori* codes drawn from previous literature and our theoretical framework with emergent codes that came directly from line-by-line coding of the transcripts.[19,20] We coded transcripts of interviews in an iterative process; transcripts were re-coded as the codebook was refined. Each transcript was coded at least twice by at least two coders, and agreement was calculated for final coding iterations. Disagreements were discussed until consensus was reached.

Our data analysis focused on three contexts:

1. We explored EPs motivations, including how various research findings may or may not motivate EPs (manuscript 1).
2. We explored how EPs perceptions influenced the opportunities residents were given to practice SDM (manuscript 2).
3. We explored EPs perceived barriers and facilitators to SDM in the ED, and we developed the findings into a survey (attached).

Results

Between June 2015 and November 2015, we interviewed 15 EPs. One additional EP was not included, as we were unable to schedule an interview. No distinct new codes emerged from the last three interviews, indicating that thematic saturation was achieved.[13] Participant characteristics are described in Table 1.

Table 1. Participant Demographics

Participant Characteristics (N=15)	**N (%)**
Age – mean (range)	46 (31-65)
Female	6 (40%)
Race/ethnicity:	
White	10 (67%)
Black	1 (7%)
Asian/Indian	2 (13%)
Did not answer	2 (13%)
100% Academic	6 (40%)
100% Community	4 (27%)
Combined Academic/Community	5 (33%)
Years since residency – mean (range)	13.1 (1-30)
Residency in Emergency Medicine	13 (87%)
Residency (training) location:	
Regional Academic Hospital (1 site)	4 (27%)
In current state of practice but not at regional training site	3 (20%)
Outside current state of practice	8 (53%)
Total different practice sites where participants had worked within past year	14

Paper 1 (Summary): Several EPs had not heard of the specific phrase “shared decision making,” but all understood the concept and felt they used SDM techniques to some degree. Most noted they had often had an agenda when they used SDM, which often motivated them to have the conversation. Agendas described included counteracting an algorithmic or defensive approach to diagnosis and treatment, avoiding harmful

tests, or sharing uncertainty. All participants believed patients benefited from SDM in terms of satisfaction, engagement, or education. Nearly all participants identified research outcomes that they felt would encourage their use of SDM (e.g., improvements in patient engagement, mitigation of risk), and many prioritized patient-centered outcomes over systems outcomes such as improved resource utilization. Little consensus was seen, however, regarding the importance of individual outcomes: of the eight potential research outcomes participants endorsed, no single outcome was endorsed by even half the physicians interviewed.

Paper 2 (Summary): Multiple themes were noted to have negative implications for residents' acquisition of this skill: 1) challenges related to the complex relationships between patients, residents, and attendings, 2) challenges related to residents' skill levels, 3) challenges related to the setting of a busy Emergency Department, and 4) attending factors. One theme was noted as facilitating resident training: the changing culture (cultural shifts toward patient-centered care).

Paper 3 (Summary): Domains and themes most relevant to EPs regarding the question of barriers and facilitators are seen in the Table below.

Domain:	1. Environmental Constraints		2. Attitudes Towards Patients	4. Skills	4. Norms
	1A. Emotional Challenges	1B. Logistical Challenges			
Theme	• The effects of certainty and uncertainty • Fear of a bad outcome • The challenge of confidence- and trust-building with ED patients	• Time • Scenario • Follow-up care • Frequent Interruptions • Challenges due to multiple clinicians • Effort • Challenges due to physical space	• Stubborn or aggressive patients • Capacity • Desire to be involved • Education/Intelligence • Cultural/Language barriers • Patient doesn't tolerate or understand risk or uncertainty	• Clinical Skills • SDM Skills	• Culture of the institution

Survey developed during grant period: Attached after references.

Discussion

Our study expanded our understanding of the barriers faced by EPs when they consider using SDM in the setting of emergency care. Physicians recognized and expanded upon numerous barriers and facilitators regarding their use of SDM in the ED. Although several of these themes have emerged from previous studies of other non-EM physicians, many are new and specific to Emergency Medicine. Though logistic concerns such as time, space, and lack of follow-up are clearly important barriers, the emotional barriers such as the stress of uncertainty and the fear of a bad outcome are likely to be more difficult to address – and appear to be significant obstacles for many of the clinicians interviewed.

The challenges of addressing uncertainty are not new, and though many believe that situations of increased clinical uncertainty are exactly the place for SDM,[8,9] research suggests that the communication of uncertainty may decrease decision satisfaction.[21] Portnoy et al. demonstrated that physicians not only have varying degrees of comfort with uncertainty but also have a perception of their patients' "ambiguity aversion" – their tolerance of uncertainty – that predicted their likelihood of using shared decision making: physicians were less likely to offer choices to patients whom they perceived to be intolerant of ambiguity.[22] Our participants echoed this but phrased it differently; they noted that the patient needed to be able to tolerate *risk* in order to participate in SDM, and a failure to understand or accept *risk* led the physician to avoid SDM. It has been previously noted that, for patients to participate in SDM, they need to "appreciate that there is uncertainty in medicine."[23] Our results suggest that EPs would agree with this and may withhold SDM for patients they believe will have difficultly with uncertainty. What is unknown is how much uncertainty or risk ED patients are willing to accept, although it is likely this varies considerably by patient and by clinical scenario.[24] Although research exists to bolster accurate risk communication, it is unclear whether we can affect our "ambiguity aversion" as a culture.[25,26] Certainly, it is possible that physicians in the ED may be overestimating their patients' ambiguity aversion and avoiding SDM in situations when it would be acceptable to patients.

Many EPs noted that reliable follow-up care was a prerequisite for SDM and that patients without follow-up received more tests and were more likely to be admitted. As avoidable ED care is more expensive than reliable primary care, this is yet an additional reason for the government, policymakers, and insurers to

improve access to primary care. Although we cannot draw conclusions from this small exploratory investigation, our participants clearly report that patients with reliable follow-up care are more likely to be offered SDM, which has the potential to improve their care and decrease costs.

Regarding physicians' skills, two different skill sets emerged as relevant in relationship to SDM: clinical skills and communication skills. A number of physicians noted that they used SDM more frequently as their clinical skills improved. This is likely due to improved clinical acumen and to their increased ability to tolerate uncertainty. Second, many noted that they had no training in SDM, but they recognized the importance of communication skills. Although a few physicians noted that they may not be "doing it right," no physician stated that they needed training in SDM, implying that the physicians themselves did not see this lack of training as a barrier. However, a lack of recognition of the need for formal training does not mean it is not warranted – in contrast, this lack of recognition is a barrier in itself, as these physicians are unlikely to seek training in this skill or recognize their own ability to improve at this skill.

Last, as was noted by Kanzaria et al., the perception exists that many patients do not want SDM or cannot understand the medical issues well enough to meaningfully participate.[4] The clinicians in our study gave numerous examples of starting conversations and then navigating away from SDM when they felt that patient characteristics made SDM impossible. Though it is heartening that many clinicians gave examples in which they did attempt SDM before changing the direction of the conversation, it is possible that whatever shortcomings were present could have been overcome by clinician training, access to a decision aid, or some other means. It is possible that the patient's limited understanding represents a failing not on the part of the patient but on the part of the physician's ability to facilitate this conversation. Theoretically, improved SDM skills could expand the number of patients with the "capacity" to meaningfully participate in SDM.

Many clinicians noted that it is simply harder – logistically and emotionally – to engage in SDM than to unilaterally make "physician-directed" decisions.[3] Neither the logistical barriers, such as lack of follow-up, nor the emotional barriers, such as the stress of "doing less," are amenable to easy solutions, but neither are they insurmountable. Solutions from multiple angles are likely to have differential effects on individual physicians, but positive effects overall. Patients can be encouraged to ask about alternatives; institutions can promote a pro-SDM culture, making physicians feel supported; insurers and government can increase access to primary care and put in place reimbursement for important discussions. Additional research is warranted to investigate which of the barriers and facilitators presented here are most significant regarding the promotion of SDM nationally and to examine the issue of barriers and facilitators from the point of view of patients and other stakeholders.

Conclusions

1. Many barriers to using SDM are logistic issues: Time constraints and lack of follow-up often prevent the use of SDM in the ED and need to be addressed from a systems standpoint.
2. Physicians are motivated to use SDM both to engage patients and to decrease their use of resources or deviate from standard practice when they think the deviation is in the patient's best interests.
3. Physicians are split as to whether the believe their use of SDM makes them more or less likely to be sued.
4. Physicians reported using SDM less when supervising residents for a multitude of reasons, with the implication that residents are getting fewer opportunities to practice SDM than are actually available.
5. Many physicians believe that SDM is not possible or beneficial for a subset of patients who are perceived to either not want SDM or not be capable of understanding SDM.
6. The culture of medicine is changing to be more supportive of patient involvement in decision making.

Significance & Implications

Our findings are significant and very helpful in planning future research and interventions to promote SDM. First, our findings support the need for ongoing training in SDM for both attending physicians and physicians in training. Second, our findings suggest that an evaluation of ED patient preferences is warranted. Third, our findings suggest that a closer examination of the effect of SDM on physician liability and likelihood of a lawsuit would be both of interest and potentially persuasive for a number of physicians who may be hesitant to use SDM in the ED. Our findings support the need for the development of decision aids to help clinicians perform SDM as well as risk stratification tools to aid the process. Last, our findings demonstrate a secular trend, with many physicians commenting about how they "do SDM more now than I used to." EPs

commented that the culture is changing to encourage more patient involvement, and they all saw this as a positive thing, despite the challenges to implementation.

Accordingly, our research has led to a number of next steps, many of which we have already started or completed.

1. We have completed a qualitative study of emergency department patients.

> **Schoenfeld EM**, Downs G, Wenger R, Goff S, Lindenauer PK, Mazor KM. A qualitative analysis of Emergency Department patients' desire to be involved in decision-making: "I want to be involved, but…" Lightening Oral Abstract, National Society for Academic Emergency Medicine, Orlando, FL, May 2017

2. We have completed a multi-center survey, designed based on the results of our qualitative inquiry, of emergency department patients.

> **Schoenfeld EM,** Kanzaria HK, Quigley DD, Nayyar N, Sabbagh SH, Probst MA. Evaluating the frequency and quality of Shared Decision-Making conversations in the Emergency Department – A multi-center survey study. National Society for Medical Decision-Making, Pittsburg, PA October 2017

> **Schoenfeld EM,** Kanzaria HK, Quigley DD, Nayyar N, Sabbagh SH, Probst MA. Patient perceptions of Shared Decision-Making in the Emergency Department – A multi-center survey study. American College of Emergency Physicians Annual Meeting, Washington, DC, October 2017

3. We have designed a randomized experiment to test the hypothesis that the use of SDM decreases a patient's likelihood of initiating a lawsuit in the case of an adverse event, and we have completed this experiment and submitted the abstract.

> **Schoenfeld EM**, Mader S, Wegner R, Houghton C, Schoenfeld DA, Lindenauer PK, Mazor KM. The Effect of Shared Decision-Making on Patients' Likelihood of Filing a Complaint or Lawsuit. Submitted: National SAEM Meeting, 2018.

4. We have designed a survey to assess a nationwide sample of EPs regarding perceived barriers and facilitators. (Attached below)

We believe that this study has been an important step in understanding the use of SDM in the ED and has catalyzed a number of projects supporting our overall goals of promoting SDM and making ED care more patient centered.

List of Publications:

1. Schoenfeld EM, Goff SL, Elia TR, Khordipour ER, Poronsky KE, Nault KA, Lindenauer PK, Mazor KM. The Physician-as-Stakeholder: An Exploratory Qualitative Analysis of Physicians' Motivations for Using Shared Decision Making in the Emergency Department. Acad Emerg Med. 2016 Dec;23(12):1417–27.

2. Schoenfeld EM, Goff SL, Elia TR, Khordipour ER, Poronsky KE, Nault KA, Lindenauer PK, Mazor KM. A Qualitative Analysis of Attending Physicians' Use of Shared Decision-Making: Implications for Resident Education. Accepted 9/17 to be published Feb 2018: Journal of Graduate Medical Education.

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Survey:

Shared Decision Making in the ED: What matters to clinicians?

We'd like your input regarding Shared Decision Making in the Emergency Department. By giving us your opinion, you are helping to shape future research. This survey should take about 7 minutes to complete and is completely voluntary.

Definition: ***Shared decision making (SDM)*** *is a collaborative process that allows patients and their providers to make healthcare decisions together. It involves a conversation initiated by the provider about the clinical evidence available, as well as the patient's values and preferences.*

Example: After a negative ED workup, a clinician is on the fence about whether to admit or discharge a patient who presented with chest pain, so the clinician discusses the risks and benefits of admission versus PCP follow-up with the patient and elicits their concerns and preferences, and they make a decision they are both comfortable with.

We are interested in your views on SDM in the ED.

A. Your Current Use

Based on the definition above, how often do you initiate a shared decision-making conversation in the following scenarios? (with the patient or a surrogate)

When deciding whether or not to….	Never	Sometimes	Often	Almost Always
1. … **give tPA** to a patient with an acute stroke				
2. … obtain an **abdominal CT** in a young patient who is low risk (but not no risk) for appendicitis				
3. … **admit** a patient with chest pain who is low risk for ACS				
4. …perform a **CT scan** for a young, well-appearing patient with a history and physical consistent with a kidney stone				
5. … perform a **head CT on a child** with a minor head injury				
6. … perform a **head CT on an adult** with a minor head injury				
7. … **prescribe** opiates				
8. … **admit** a patient for syncope who has had a negative workup in the ED				
9. … **perform an LP** after a negative head CT for ruling out sub-arachnoid hemorrhage				
10. … **intubate** an elderly demented patient presenting with respiratory distress (assuming surrogates are present)				

B. What matters to you?

Many factors influence how physicians practice. For each of the following factors, please indicate whether that factor, if present, would encourage your use of Shared Decision Making in the ED.

	Not important to me, *would not encourage my use*	**A little important** to me, *might encourage* my use	**Important** to me, *would encourage* my use	**Very important** to me, *would definitely encourage* my use
Policy				
Institutional Guidelines supporting your use of SDM in specific scenarios				
Guidelines from national organizations supporting the use of SDM in specific scenario				
Reimbursement specifically for shared decision-making conversations (like a procedure code)				
If patients…				
…had reliable **follow-up**				
…had easily accessible **medical records** (such as in your electronic health records)				
...asked about their **options**				
If I had…				
… **more training** on how and when to effectively and efficiently have an SDM conversation				
… easy access/communication with the patient's **primary care doctors**				
… better **clinical prediction tools** to give me accurate patient-specific risk calculations (like the HEART score)				
… more **time** in my shift to talk to patients				

If there was evidence from well-designed studies of SDM in specific scenarios that showed…				
…decreased length of stay				
…improved morbidity and mortality				
…reduced your risk of malpractice				
…safely decreased CT scan use				
…safely decreased admission rates				
…improved patient understanding and knowledge of their condition				
…improved patient engagement (involvement in their own care) and empowerment				
…improved patient satisfaction				

Other things that would affect your use of SDM: _____

C. SDM in specific clinical scenarios

Renal Colic:
We are designing a study to help physicians use a shared decision making decision aid for young healthy patients with classical presentations of renal colic. Only healthy, young, afebrile patients with flank pain, no abdominal tenderness, and no signs of infection would be included. After pain control and an ultrasound to exclude those with severe hydronephrosis, physicians will discuss CT versus watchful waiting, describing the risks and benefits of both options and eliciting the patient's preferences. Assuming this study was well designed and powered appropriately, please rate how important the following study outcomes would be TO YOU personally.

	Not important to me	**A little important** to me	**Important** to me	**Very important** to me
If use of the decision aid affected…				
… the CT rate				
… the admission rate				
… the urologic procedure rate				
… the rate of repeat visits to the ED				
… the rate of missed or delayed important alternative diagnoses (like appendicitis)				
Whether the decision-aid …				
… was easy to use (as judged by the doctors)				
… didn't take too long to use				

Is there anything else that would influence how you would view a study like this?
_____

Syncope
We are designing a study to assess the impact of using a patient decision aid to facilitate SDM for stable adult patients over 40 who came to the ED with syncope, have had a full ED workup and have no serious diagnosis identified. This decision aid would help explain disposition options regarding admission versus discharge with rapid outpatient follow-up. Assuming this study was well designed and powered appropriately, please rate how important the following study outcomes would be TO YOU personally.

	Not important to me	**A little important** to me	**Important** to me	**Very important** to me
If use of the decision aid affected…				
… the admission rate				
… the rate of missed or delayed serious diagnoses				
… the downstream testing rate (e.g., CT, echo)				
Whether the decision-aid …				
… was easy to use (as judged by the doctors)				
… didn't take too long to use				

Is there anything else that would influence how you would view a study like this?

_____

D. Background Information: Please tell us a little about yourself

Your age: _____

Your gender:_____

Your race/ethnicity: _____

You are a(n): ☐1 Attending/Fellow

→ Years since residency (circle one): 0-5 6-10 11-15 >15

→ Are you board certified in Emergency Medicine? ☐1 Yes ☐2 No

☐2 Resident → PGY (circle one): 1 2 3 4

☐3 Advanced Practitioner (PA or NP)

☐3 Other: _____

In what type of **hospital** do you work clinically **(check all that apply)**?

☐1 Academic medical center (*most patients seen with residents*)

☐2 Public or county hospital

☐3 Community-based setting (*or community affiliate, most patients seen without residents*)

☐4 Group-based HMO

☐5 Urgent Care

☐6 Other: _____

What **region** best describes where you work clinically **(check all that apply)**?

☐1 Urban

☐2 Suburban

☐3 Rural

☐4 Outside of the United States - If checked, where? _____

How are you reimbursed **(check all that apply)**?

☐1 Salaried (residents check here)

☐2 Fee-for-service

☐3 Hourly wage

☐4 Combination of salary plus bonuses based on productivity

The State(s) in which you practice: _____