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ORIGINAL CONTRIBUTION

Emergency Physician Perceptions of Shared Decision-making

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Abstract

Objectives: Despite the potential benefits of shared decision-making (SDM), its integration into emergency care is challenging. Emergency physician (EP) perceptions about the frequency with which they use SDM, its potential to reduce medically unnecessary diagnostic testing, and the barriers to employing SDM in the emergency department (ED) were investigated.

Methods: As part of a larger project examining beliefs on overtesting, questions were posed to EPs about SDM. Qualitative analysis of two multispecialty focus groups was done exploring decision-making around resource use to generate survey items. The survey was then pilot-tested and revised to focus on advanced diagnostic imaging and SDM. The final survey was administered to EPs recruited at four emergency medicine (EM) conferences and 15 ED group meetings. This report addresses responses regarding SDM.

Results: A purposive sample of 478 EPs from 29 states were approached, of whom 435 (91%) completed the survey. EPs estimated that, on average, multiple reasonable management options exist in over 50% of their patients and reported employing SDM with 58% of such patients. Respondents perceived SDM as a promising solution to reduce overtesting. However, despite existing research to the contrary, respondents also commonly cited beliefs that 1) “many patients prefer that the physician decides,” 2) “when offered a choice, many patients opt for more aggressive care than they need,” and 3) “it is too complicated for patients to know how to choose.”

Conclusions: Most surveyed EPs believe SDM is a potential high-yield solution to overtesting, but many perceive patient-related barriers to its successful implementation.

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In shared decision-making (SDM), physicians and patients collaboratively discuss potential management strategies when more than one reasonable option exists and together reach a decision based on both the available evidence and the patient’s values and preferences.^{1,2} This process involves patients playing a greater role in decisions concerning their health, which is a central objective of patient-centered care and has been written into law with passage of the Affordable

Care Act.^{1,3} SDM programs have been shown to enhance knowledge base, reduce decisional conflict, set more realistic expectations, improve agreement between preferences and ultimate health care choices, increase active decision-making, and possibly lower health care costs and utilization.^{1,4-8}

For example, one of the most methodologically robust and highly cited studies of SDM in emergency medicine (EM) focused on cardiac stress testing in ED patients

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with chest pain deemed to be low risk for acute coronary syndrome. Patients were randomized to usual care or care aided by an evidenced-based decision aid intended to educate and engage patients in the choice either to be admitted for urgent cardiac stress testing or to have outpatient follow-up with a physician within 72 hours. Patients who engaged in SDM with the decision aid had greater knowledge and engagement and less often decided to be admitted for stress testing.⁷

Despite the potential benefits of SDM, it may be particularly difficult to integrate into emergency department (ED) care. This clinical environment involves unscheduled acute care with a previously unfamiliar provider in an emotionally charged context.⁹ Additionally, patients and physicians in the ED have pressing time constraints under which to actually make decisions. ED patients may not be able to seek help in decision-making from family or other trusted individuals, while emergency physicians (EPs) may feel pressure to make rapid, unilateral decisions to increase throughput. Moreover, there is generally a higher degree of uncertainty and a greater risk of life-threatening illness in ED patients compared to the outpatient setting. Some have proposed that in preference-sensitive decisions, patients need exact probabilities of harms and benefits associated with each option to appropriately weigh the pros and cons of each;⁶ however, these probabilities are often not available in EM, and even when they are, both patients and physicians may be limited by the inherent challenges of effective risk communication.¹⁰⁻¹⁴ Finally, patients who are potentially critically ill may prefer that clinicians take a more dominant role in decision-making.¹⁵⁻¹⁸

Despite nationwide efforts and focus on patient-centeredness, viewpoints of frontline practicing clinicians on how practically to achieve increased patient engagement remain largely unknown. The few robust studies of SDM in EM have demonstrated that SDM is in fact feasible in practice and that time-related barriers may be overcome.^{7,9,19} However, it remains unclear if the typical EP has adopted SDM into his or her regular practice and, if not, for what reasons. Understanding EP perceptions regarding this topic is critical to facilitate increased adoption of SDM in EM.

We sought to determine EP perceptions on the frequency with which they engage patients in SDM processes, given the appropriate clinical context. We additionally aimed to identify EP perceptions of the potential effect of SDM for reducing medically unnecessary diagnostic testing, as well as barriers to employing SDM in ED management decisions. Finally, we sought to explore the association between perceived barriers to SDM and self-reported use of SDM in practice.

METHODS

Study Design and Population

The details of the study's methods are reported in the companion article.²⁰ Briefly, this was a cross-sectional survey approved by our institutional review board. The final survey was administered to a nationally distributed, purposive sample of EPs recruited at four EM conferences (including Society for Academic Emergency

Medicine and continuing medical education conferences) and 15 distinct ED group meetings. Participants were approached in-person, based on a directed script and completed a paper-based questionnaire (see Data Supplement S1, available as supporting information in the online version of this paper).

Survey Content and Administration

We conducted two multispecialty focus groups to explore the topic of decision-making around resource utilization and used qualitative analysis to generate preliminary survey questions. The initial items were pilot-tested on 184 physicians, including 15 EPs, practicing in two health systems for item refinement. The refined survey tool was further adapted using feedback from eight physicians known for their work on overtesting and decision-making in EM. Next, the survey was pilot-tested on 12 EPs practicing across six different EDs that included academic, community, safety-net, and government-owned practice settings. Based on this process, the survey was finalized and focused on advanced diagnostic imaging and SDM (Data Supplement S1).

Physicians were asked to rate their enthusiasm for multiple proposed solutions to curb overuse of medically unnecessary advanced imaging, including involvement of patients in SDM. Physicians were provided the following definition of SDM, after which several questions were posed:

In shared decision-making (SDM), physicians and patients collaboratively discuss the potential clinical options. A decision is made based on both the best available evidence and the patient's values and preferences. Some have proposed that physicians should involve patients in SDM when there is more than one reasonable diagnostic or treatment option, each with its own risks and benefits. We are interested in your views on SDM in the ED.²¹

Emergency physicians were asked to estimate the percentage of patients for whom they care where there is more than one reasonable diagnostic or treatment option (and thus, where SDM would be appropriate) and the percentage of patients within this group where they employ SDM. Respondents were asked to rate barriers to SDM in EM using a five-point Likert scale (i.e., strongly disagree to strongly agree). Barriers were subsequently categorized into three subgroups: concerns about physician limitations, concerns about mutualistic decision-making, and practical concerns. *Concerns about physician limitations* included those barrier statements characterized by a self-perceived lack of training in, or comfort with, SDM reported by the physician respondent. *Concerns about mutualistic decision-making* included statements typified by a perception of passive patients and dominant clinicians. *Practical concerns* included statements related to perceived time constraints, medicolegal risk, or inappropriateness of SDM given a lack of multiple reasonable evidenced-based options.

This article addresses the survey responses regarding SDM. We present the descriptive statistics of the SDM substudy, including exploratory analysis assessing the relationship between perceived barriers to SDM and self-reported SDM use in practice.

Data Analysis

A trained research assistant, blinded to the study hypotheses, entered the data with less than 0.03% error rate noted upon double-checking a random 10% sample of questionnaires. For the analyses, similar Likert responses were grouped together (i.e., agree and strongly agree; disagree and strongly disagree). All analyses were conducted using Stata 13.0, using standard Stata commands (e.g., *tab*, *bysort*, *ci*, *sum* etc.).

RESULTS

We approached 478 EPs, of whom 435 completed the survey (91% response rate). The average age of these EPs was 42 years, 31% were female, 68% were board-certified in EM, they practiced in 29 different states, and their average duration of clinical practice was 14 years. Academic and community EPs were equally represented, while EPs practicing in California and salaried physicians were overrepresented.

On average, EPs estimated that multiple reasonable management options exist in over half (56%) of their patients, and reported employing SDM in 58% of such patients. Self-reported use of SDM in appropriate patients was slightly more common among female physicians (63% vs. 57%) and physicians practicing in a community ED (62% vs. 55%), compared to their male and academic counterparts. No major differences appeared to be present when the results were stratified by board certification, length of clinical practice, or reimbursement method (Table 1).

Almost all respondents (92%) reported that involvement of patients in SDM for low-probability emergent outcomes would be “extremely,” “very,” or “somewhat” helpful to reducing medically unnecessary advanced radiology testing. Perceived usefulness of SDM for curtailing unnecessary imaging was independent of sex, board certification, length of clinical practice, reimbursement method, and practice setting.

The most commonly cited barriers to using SDM in the ED were the belief that 1) “many patients prefer that the physician decides;” 2) “when offered a choice, many patients opt for more aggressive care than they need;” and 3) “it is too complicated for patients to know how to choose.” Out of a list of 10 options, respondents most often selected “agree” or “strongly agree” for these potential obstacles (68, 53, and 47%, respectively). Approximately one-third of physicians perceived SDM to require too much time, while lack of training in SDM and discomfort with engaging patients in SDM were cited by 12 and 4% of respondents, respectively (see Table 2).

On average, physicians who more strongly endorsed barriers to SDM were less likely (as a group) to report personally using SDM in their own practices. For example, physicians who agreed or strongly agreed with the barrier statement “Many patients prefer that doctors decide what to do” were less likely to report personal use of SDM than were physicians who disagreed or strongly disagreed with that statement. This relationship between endorsement of a barrier and decreased use of SDM was true for barriers statements in other subgroups as well, including but not limited to those pertaining to concerns with one’s own ability to perform SDM and concerns about SDM taking too much time (see Table 3).

Table 1
Perceptions of Shared Decision-making Use by Emergency Physician Characteristics (*n* = 435)

Physician Characteristics	Percentage of Appropriate Patients You Engage in SDM
Entire cohort	
Mean (\pm SD)	58.5 (\pm 28.3)
Median (IQR)	50 (40–80)
Sex	
Male	56.6 (53.3–59.9)
Female	62.8 (58.4–67.2)
Board certification	
Yes	58.6 (55.2–61.9)
No	58.0 (53.5–62.5)
Years of clinical practice	
Under 10 yr	58.5 (54.8–62.1)
Over 10 yr	58.5 (54.6–62.4)
Reimbursement method	
Fee-for-service or bonuses based on productivity	58.9 (55.9–61.8)
Salary or hourly wage	58.9 (51.9–64.5)
Practice type	
Academic	54.5 (50.7–58.3)
Community	62.1 (58.1–66.2)
Group health maintenance organization	66.2 (59.8–72.6)
Non-group health maintenance organization	59.4 (54.1–64.7)

Data are reported as mean (95% CI) unless otherwise noted. IQR = interquartile range.

DISCUSSION

While there are relatively few robust studies of SDM in EM, the concept of SDM has received increasing attention within the field. Many have advocated its use as a potential avenue to facilitate patient engagement, increase patient satisfaction and knowledge, and decrease resource utilization, while maintaining patient safety.^{7,9,22–24} The 2016 *Academic Emergency Medicine* consensus conference on SDM will likely set the primary research agenda moving forward.²² However, given the recent call to action within EM to provide high-value, cost-conscious care—including specifically through SDM tools—understanding physician beliefs on the barriers they face within this domain is critical to achieving this goal.

In this large national survey study of EPs, an overwhelming majority of respondents felt that increased engagement of patients in SDM could help reduce medically unnecessary advanced imaging.²⁰ While several studies have suggested that SDM may lower health care costs and usage,^{4,5,7,8} others have questioned its ability to do so.²⁵ In either case, we believe that it would be inappropriate to promote SDM predominantly as a cost-saving measure, as the primary goal of SDM relates to its role in supporting the ethical obligation of physicians to ensure that patients have the opportunity to choose the care that is most suitable for them, when a reasonable choice exists.^{26,27} Along those lines,

Table 2
Perceived Barriers to SDM among Emergency Physicians (n = 435)

Barriers to SDM	Agree or Strongly Agree	Neutral	Disagree or Strongly Disagree
Many patients prefer that doctors decide what to do.	292 (67.5)	95 (21.9)	46 (10.6)
When offered a choice, many patients opt for more aggressive care than they need.	228 (52.7)	121 (27.9)	84 (19.4)
It is too complicated for patients to know how to choose.	204 (47.1)	110 (25.4)	119 (27.5)
It is my job as a physician to decide what tests and treatments are indicated.	186 (43.1)	128 (29.6)	118 (27.3)
I am more likely to be sued if I do not make the best choice for my patients.	180 (41.6)	111 (25.6)	142 (32.8)
SDM takes too much time.	145 (33.6)	117 (27.1)	170 (39.3)
I am not trained to do SDM.	52 (12.1)	91 (21.1)	288 (66.8)
When offered a choice, many patients opt for less aggressive care than I feel comfortable providing.	46 (10.6)	104 (24.0)	283 (65.4)
SDM is inappropriate because there is often only one reasonable diagnostic and treatment option.	28 (6.5)	49 (11.3)	356 (82.2)
I do not feel comfortable engaging patients in SDM.	19 (4.4)	39 (9.0)	374 (86.6)

Data are reported as number (%). Sorted by sum of "agree" and "strongly agree."
SDM = shared decision-making.

respondents endorsed the belief that multiple different reasonable management options exist in more than half the patients for whom they personally care. This suggests that there is a significant opportunity for SDM in emergency care.

The perceived frequency of SDM use was greater than 50%. It is encouraging that so many EPs feel that they are engaging patients in a collaborative decision-making process. However, since the majority of respondents felt that SDM could be helpful to reducing over-testing, and since our results still suggest SDM is not universally practiced in a substantial number of patients in whom it would be appropriate, there is clearly room for improvement. The ultimate goal should be to engage all patients in decision-making to the degree that they wish, as suitable for the clinical context.^{9,28}

To the extent that EPs do not engage patients in decision-making, the main perceived barriers were patient-related. While lack of time for SDM and lack of comfort or training in SDM have been cited as potential obstacles, these were rarely endorsed by our respondents.^{2,22} Instead, EPs stressed that many patients prefer to take passive roles in emergency care decisions and also cited a reluctance to engage patients for fear it may lead to overly aggressive care.

These perceived barriers appear at odds with findings of previous studies. One randomized trial of a decision support intervention for ED patients with low-risk chest pain demonstrated *reduced* health care utilization without compromising patient safety.⁷ Prior studies have shown that clinicians often misjudge the expectations of patients—including their desire to be involved in decision-making—and that patient characteristics are not consistent predictors of how involved they wish to be in health care decisions.^{2,28–30} Prior ED studies have shown that almost all patients express a strong desire to receive medical information, irrespective of acuity, and be actively involved in decision-making.^{22,31,32}

Given the contrast between the existing literature and the perceptions of our respondents, future research is needed to assess the reasons for this disconnect and to evaluate ways to bridge this knowledge gap. Qualitative

studies of ED patients could further assess to what extent, and in what manner, patients want to be involved in emergency care decisions. Additional studies of decision aids across multiple clinical scenarios may be needed to confirm that increased involvement of patients does not actually lead to more aggressive or costly care.²⁵ Given that physicians who more strongly endorsed barriers to SDM were less likely to employ SDM, educating both physicians and patients about the potential value of SDM may be needed. However, beyond both research and education efforts, there will also need to be a cultural shift within medicine, where it becomes routine to ask patients if, and how, they wish to be involved in their health care decisions.

LIMITATIONS

We surveyed a nonrandom group of EPs, and therefore our findings may not be representative of EPs in general. Thus, we have presented only simple descriptive statistics, as it would be misleading to conduct hypothesis testing with statistical measures of comparison.³³ However, we were able to capture a broad range of characteristics typical of U.S. EPs; compared to prior estimates of the demography of the U.S. EP workforce, our sample was similar, although not identical, in terms of age, sex, length of clinical practice, and proportion of board-certified respondents.^{34–37} Because there is no reason to suspect our sample was extremely atypical, we believe that the sentiments expressed may resonate with, at the very least, a nontrivial amount of EPs.

Additionally, given that our survey assessed self-reported physician perceptions, our results may suffer from both social desirability and recall bias. While it is encouraging that the perceived frequency of SDM use reached over 50%, this estimate may well be inflated, given the potential for bias in survey research. In studies done in other health care settings, many clinicians state that they are practicing SDM even when recorded audio transcripts show that true SDM takes place in only a minority of patient interactions.^{38,39} Additionally, while we provided our respondents an accepted

Table 3
Relation Between Physician Endorsement of Barriers to SDM and Those Physicians' Stated Personal Use of SDM: Self-reported Use of SDM Is Lower in Physicians Who More Strongly Perceive Barriers to SDM* (*n* = 435)

Perceived Barriers to SDM	Response Category	Stated Use of SDM, Mean % (95% CI)
<i>Concerns about physician limitations</i>		
I am not trained to do SDM	<ul style="list-style-type: none"> • Agree or strongly agree • Neutral • Disagree or strongly disagree 	<ul style="list-style-type: none"> • 51.3 (43.6–59.0) • 51.0 (45.1–57.0) • 62.4 (59.2–65.6)
I do not feel comfortable engaging patients in SDM	<ul style="list-style-type: none"> • Agree or strongly agree • Neutral • Disagree or strongly disagree 	<ul style="list-style-type: none"> • 46.3 (31.4–61.2) • 39.7 (32.0–47.4) • 61.4 (58.6–64.2)
<i>Concerns about mutualistic decision-making</i>		
Many patients prefer that doctors decide what to do	<ul style="list-style-type: none"> • Agree or strongly agree • Neutral • Disagree or strongly disagree 	<ul style="list-style-type: none"> • 56.9 (53.6–60.2) • 57.3 (51.6–63.0) • 72.3 (64.9–79.7)
It is too complicated for patients to know how to choose	<ul style="list-style-type: none"> • Agree or strongly agree • Neutral • Disagree or strongly disagree 	<ul style="list-style-type: none"> • 52.4 (48.6–56.2) • 61.7 (56.4–67.1) • 66.5 (61.5–71.5)
It is my job as a physician to decide what tests and treatments are indicated	<ul style="list-style-type: none"> • Agree or strongly agree • Neutral • Disagree or strongly disagree 	<ul style="list-style-type: none"> • 54.8 (50.8–58.9) • 58.5 (53.5–63.4) • 64.8 (59.6–70.0)
When offered a choice, many patients opt for more aggressive care than they need	<ul style="list-style-type: none"> • Agree or strongly agree • Neutral • Disagree or strongly disagree 	<ul style="list-style-type: none"> • 57.7 (54.1–61.3) • 60.8 (55.8–65.7) • 58.2 (51.2–65.1)
When offered a choice, many patients opt for less aggressive care than I feel comfortable providing	<ul style="list-style-type: none"> • Agree or strongly agree • Neutral • Disagree or strongly disagree 	<ul style="list-style-type: none"> • 58.5 (50.9–66.0) • 59.3 (53.6–64.9) • 58.4 (55.1–61.8)
<i>Practical concerns</i>		
SDM takes too much time	<ul style="list-style-type: none"> • Agree or strongly agree • Neutral • Disagree or strongly disagree 	<ul style="list-style-type: none"> • 49.5 (44.8–54.2) • 57.7 (52.5–62.8) • 67.0 (63.1–71.0)
I am more likely to be sued if I do not make the best choice for my patients	<ul style="list-style-type: none"> • Agree or strongly agree • Neutral • Disagree or strongly disagree 	<ul style="list-style-type: none"> • 57.2 (53.0–61.5) • 60.1 (54.9–65.3) • 59.3 (54.6–64.0)
SDM is inappropriate because there is often only one reasonable diagnostic and treatment option	<ul style="list-style-type: none"> • Agree or strongly agree • Neutral • Disagree or strongly disagree 	<ul style="list-style-type: none"> • 52.9 (42.0–63.9) • 44.6 (36.6–52.5) • 61.0 (58.1–63.9)

SDM = shared decision-making.

*In general, physicians who more strongly endorsed barriers to SDM (i.e., agreed or strongly agreed with the barrier statement) reported less use of SDM in their own personal practice.

definition of SDM,²¹ our definition was broader than that used in prior SDM studies in EM.⁷

Finally, while this substudy was framed in the context of overimaging, and while reducing both over- and underuse may be a beneficial consequence of SDM, the main goal of SDM should be to promote truly patient-centered care. Future studies should assess the broader applications of SDM to support the integration of patients' values and preferences into the health care choices that are made when reasonable alternatives exist.

CONCLUSIONS

Physician respondents in our survey believed shared decision-making could be a high-yield solution to

overtesting, but many perceived patient-related barriers. Physicians who perceived greater barriers to shared decision-making reported less use of it in their own practices. Thus, widespread adoption of shared decision-making in emergency care will require addressing such perceptions.

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Supporting Information

The following supporting information is available in the online version of this paper:

Data Supplement S1. Survey.

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