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ABSTRACT Despite the proven efficacy of decision aids as interventions for increasing patient engagement and facilitating shared decision making, they are not used routinely in clinical care. Findings from a project designed to achieve such integration, conducted at five primary care practices in 2010–12, document low rates of distribution of decision aids to eligible patients due for colorectal cancer screening (9.3 percent) and experiencing back pain (10.7 percent). There were also no lasting increases in distribution rates in response to training sessions and other promotional activities for physicians and clinic staff. The results of focus groups, ethnographic field notes, and surveys suggest that major structural and cultural changes in health care practice and policy are necessary to achieve the levels of use of decision aids and shared decision making in routine practice envisioned in current policy. Among these changes are ongoing incentives for use, physician training, and a team-based practice model in which all care team members bear formal responsibility for the use of decision aids in routine primary care.

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Increasing patient engagement has been advocated as a top priority for improving health care quality.¹ Providing patients with information about their clinical options and activating patients to participate in informed discussions regarding their care are the foundation of shared decision making and a potential mechanism for increasing patients' engagement in their care.

These concepts are particularly relevant when preference-sensitive decisions are being made, such as the choice of method for colorectal cancer screening or of treatment for back pain.² In preference-sensitive decisions, more than one available option exists, each of which carries different risks and benefits, and patients' treatment preferences can vary.³

Although many potential pathways may be taken to help facilitate preference-sensitive decisions, the use of decision aids has been a

commonly proposed and studied intervention. Decision aids, which are specifically designed to provide patients with the information necessary to engage in shared decision making with their care providers, serve as an adjunct to clinical consultations. They come in a variety of formats, including video, print, and online.

The use of decision aids has been shown to increase patients' knowledge of available treatment options and to help clarify patients' preferences.⁴ For example, national clinical practice guidelines suggest that the decision to undergo colorectal cancer screening be a shared one between physicians and patients, because multiple efficacious screening methods are available.² Studies have shown that patients' preferences for specific methods of colorectal cancer screening vary, and the use of decision aids on this topic has been linked to increases in screening rates.⁵

However, there is evidence that despite physi-

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icians' general support for shared decision making, patients are not typically given all of the relevant information about their options, and shared decision making is not routinely taking place.⁶⁻⁸ The recent addition of increased patient engagement and shared decision making as regulatory requirements highlights the urgent need to understand and resolve this discrepancy. For example, to be eligible to participate in Medicare's Shared Savings Program, an accountable care organization must implement processes to promote patient engagement, including shared decision making.⁹

More than eighty randomized trials have demonstrated the efficacy of decision aids for increasing patient engagement in clinical decision making. Further investigation is now needed to understand how to effectively integrate the successful interventions into routine care.⁴

To examine this issue, we used data from an implementation project designed to integrate the distribution of decision aids into routine clinical care, conducted in five primary care practices in Northern California from January 2010 to June 2012.

The objectives of this project were twofold. First, it explored processes for distributing decision aids to patients in the clinical setting. Second, it identified barriers and facilitators to implementation—that is, the appropriate incorporation of those aids into the clinical encounter. Instead of testing specific hypotheses, the project collected information that could yield new insights on how best to achieve the widespread adoption envisioned in current policy, to be examined in other settings.

Study Data And Methods

The Institutional Review Board at the Palo Alto Medical Foundation Research Institute approved all aspects of the study.

SETTING Five primary care clinics in Northern California, all members of the same larger health care organization, were approached to assess their interest in participating in the project. All agreed to participate.

The project was first presented to each clinic's leadership team by the project's physician champion, who served as a liaison between the project team and the clinics. Although affiliated with the same parent organization, each clinic functioned as a separate unit and had its own leadership team, clinic culture, and workflows. And although geographically proximate, each clinic was located in a different suburban city (see Appendix Exhibit 1).¹⁰

DECISION AID DISTRIBUTION STRATEGIES Project team members collaborated with clinics

to tailor decision aid distribution methods to individual clinic workflows. Each clinic had a physician and staff champion responsible for promoting the program. Clinics were offered access to decision aids, provided by the Informed Medical Decisions Foundation, on a variety of topics. The leadership team at each clinic, which included both physicians and leaders of clinical support staff, selected decision aid topics for distribution. For a list of the decision aid topics selected, see Appendix Exhibit 2.¹⁰

Of the sixteen decision aids distributed, fourteen were DVDs with an accompanying booklet containing the same information as the DVD. The remaining two aids were booklets alone. Several of these decision aids have been shown to be efficacious in clinical studies.¹¹⁻¹³

The main objective of the project was to provide decision aids to patients. *Successful distribution* was defined as providing the decision aid to an eligible patient. The distribution strategies employed at the clinics included physician-directed distribution to patients, either by the physician in person or through the medical assistants; solicitation of patients' interest at the point of care; and direct mailing (see Appendix Exhibit 1).¹⁰

At all of the clinics, project team members engaged in academic detailing visits every other week¹⁴ and social marketing efforts to promote distribution of the decision aids. These efforts included offering lunch presentations and training sessions for physicians and staff; rewarding high distributors with modest incentives, such as coffee mugs and lunch bags; and helping revise workflows as needed.

In addition, promotional brochures and posters designed to increase patients' interest in decision aids were placed in each clinic's entrance, waiting areas, and exam rooms (see the online Appendix for details).¹⁰

DATA SOURCES For thirty months—January 2010–June 2012—four types of qualitative and quantitative data on decision aid implementation were collected: ethnographic field notes, survey responses, focus-group results, and decision aid distribution data.

▶ETHNOGRAPHIC FIELD NOTES: Project team members led by a trained anthropologist conducted participant observations of the implementation process.¹⁵ The observers conducted site visits every other week to observe the implementation process, engage in informal discussions with clinic staff and physicians, and observe formal meetings in which decision aid distribution was discussed. Ethnographic field notes documenting approximately 325 encounters were recorded (see the online Appendix for details).¹⁰

► **SURVEY RESPONSES:** A survey assessing attitudes, behaviors, facilitators, and barriers related to decision aids and shared decision making was developed, based on the existing literature (see the Appendix for details).¹⁰ The final instrument had ten questions and was sent in April 2012 to 502 physicians and 204 clinic staff, including nurses, medical assistants, and licensed vocational nurses.

Survey response rates were 50.4 percent for physicians and 52 percent for clinic staff.

► **FOCUS-GROUP RESULTS:** Seven focus groups, three with physicians and four with clinic staff, were conducted between June and October 2011. Fourteen primary care physicians and twenty-five clinic staff members, representing all five clinics, participated.

Project team members developed tailored focus-group guides covering participants' knowledge and attitudes about the use of decision aids and shared decision making. The guides also addressed barriers and facilitators to implementing both decision aids and shared decision making in actual practice (see the Appendix).¹⁰

► **DECISION AID DISTRIBUTION DATA:** Decision aid distribution began in four of the five clinics in January 2010; because of changes in leadership at the fifth clinic, distribution began there in July 2010. Each clinic initially distributed decision aids on only a small number of topics, adding topics as physicians and staff adjusted to the distribution and expressed interest in additional topics (Appendix Exhibit 2).¹⁰ Data were collected on the monthly distribution of all sixteen decision aids between January 2010 and June 2012. However, because of limitations, we were not able to calculate the number of eligible patients from the electronic health records until October 2010, yielding a total of twenty-one months of data.

For colorectal cancer screening and back pain topics, the number of patients eligible to receive decision aids was determined through electronic health records and claims data, allowing for a more precise assessment of what proportion of eligible patients received a decision aid. Patients were eligible for the screening aid if they were age fifty or older and due for screening based on an indicator in the electronic health record. Eligibility for back pain decision aids was determined by the presence of *International Classification of Diseases, Ninth Revision (ICD-9)*, diagnosis codes for back pain in claims data.

► **DATA ANALYSIS** Ethnographic field notes and transcripts of focus-group discussions were coded by the project team. Key barriers and facilitators to decision aid distribution raised in both the field notes and focus groups were coded using Atlas.ti qualitative analysis software,

version 6.2.

Survey data were collected and coded using Vovici software, and analyses were conducted using the statistical software Stata, version 11.0. Distribution data were analyzed using descriptive statistics.

► **LIMITATIONS** This study drew on multiple forms of data to assess the attitudes and beliefs of the study participants and to analyze the barriers and facilitators of the implementation project at different points in time. The advantage to this approach is the rich data it provides across the duration of the project. However, there are also several limitations.

Because data were collected at multiple points in time, we could not assess attitudinal change over time, which may or may not have occurred as a result of the project.

In addition, focus groups and surveys were based on voluntary participation, and therefore the results reflect the opinions of only those who chose to participate. The possibility of bias due to self-selection also applies to the clinics, as all five that participated chose to do so. That fact may indicate a more positive predisposition toward shared decision making than would have been the case for physicians, clinical staff, or clinics that did not volunteer to participate in the study.

These limitations imply that our findings may not be generalizable to all providers or settings. However, the richness and complexity of the data obtained yield multiple preliminary hypotheses to be tested in other settings.

This study explored the distribution of decision aids—an important first step toward patient engagement, but one that cannot be equated with actual use of the aids. Because we collected no feedback on the effect or use of the aids in the clinical encounter, the findings cannot speak to whether or not the decision aids affected the behavior of patients or providers within the context of clinical consultations.

In addition, the aids were primarily distributed at the point and time of care. They might have had a greater impact on discussions with providers if patients had been able to view them prior to a consultation. Furthermore, only decision aids from the Informed Medical Decisions Foundation were used, leaving open the possibility that distribution rates might have differed had aids on the same topics, but from other sources, been supplied.

Of the decision aids distributed, 24.2 percent were on topics other than colorectal cancer screening and back pain. We could not determine what percentage of patients eligible for those aids actually received them, because of limitations of the electronic health record data.

Furthermore, there may be reasons why

patients who were not eligible to receive aids for colorectal cancer screening and back pain were captured in our estimate of patients to whom the aids should have been distributed. For example, a physician might have forgotten to document that colorectal cancer screening had already been offered to a patient. Therefore, the number of eligible patients for those aids may have been overestimated and, as a result, the success of distribution efforts underestimated.

Study Results

Despite extensive efforts by the project team, distribution of decision aids was only modestly successful. During the study period, a total of 4,055 decision aids were handed or mailed to patients across all five clinics. The average monthly distribution across all clinics varied over time (Exhibit 1). For back pain and colorectal cancer screening—the topics that accounted for 75.8 percent of the decision aids that were distributed—aids reached only 10.7 percent and 9.3 percent of eligible patients, respectively.

Targeted interventions, such as competitions for prizes, temporarily increased distribution rates. However, the overall aggregate rate of distribution for the decision aids for colorectal cancer screening and back pain was 9.7 percent. In only five of the twenty-one months measured did more than 10 percent of eligible patients receive one of the two decision aids.

Despite low overall distribution, survey results suggest that physicians were supportive of decision aids and shared decision making in general. Ninety-six percent of surveyed physicians indicated that offering patients material intended to increase shared decision making was at least somewhat important. In addition, 92 percent of physicians indicated that patients should be involved in the decision-making process, and 87 percent agreed that engaging in shared decision making is beneficial to patients.

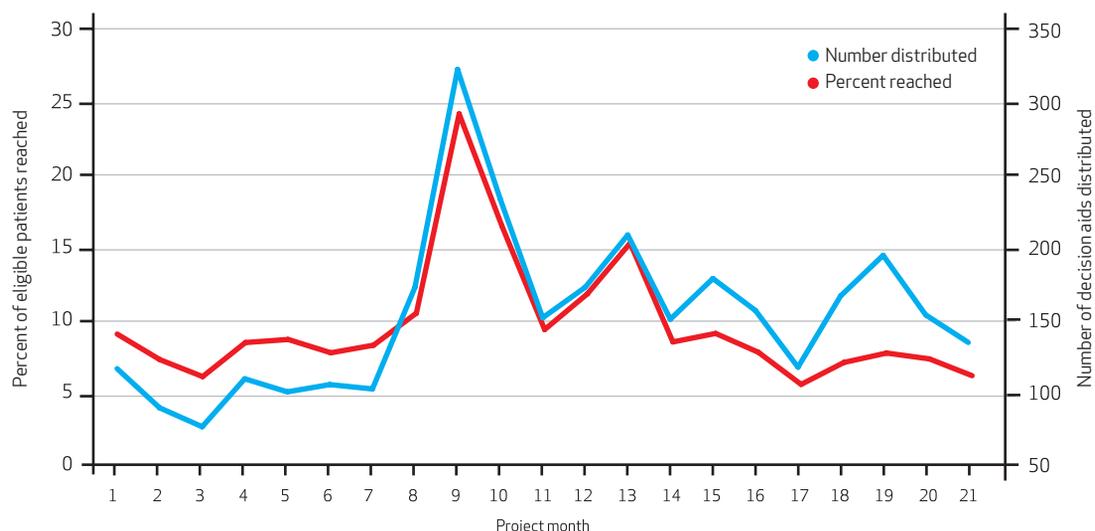
What might account for the incongruity between the attitudes expressed in the survey and the relatively low rates of decision aid distribution? The major barriers and facilitators to decision aid distribution identified in the field notes and focus groups, described next, may provide insights.

PHYSICIANS' INVOLVEMENT WAS LOW Seventy-three percent of surveyed physicians stated that they would use decision aids frequently or very frequently if the aids were available. However, the field note observations suggested that most physicians were not engaged in the distribution of decision aids, and the distribution data indicated that physicians were responsible for distributing only 26.8 percent of the aids.

Physicians' support of the aids and inclination to distribute them could have increased after the initial use of the aids. However, our distribution data suggest that this was not the case, as there did not seem to be any sustained increase in

EXHIBIT 1

Number Of All Decision Aids Distributed And Proportion Of Patients Who Received Aids For Colorectal Cancer Screening Or Back Pain



SOURCE Authors' collected distribution data, October 2010–June 2012. **NOTES** The red line depicts the percentage of potentially eligible patients who received a decision aid for either colorectal cancer screening or back pain across all five clinics in the study; it corresponds to the left-hand y axis. The blue line depicts the total number of decision aids that were given out across all five clinics for all available topics; it corresponds to the right-hand y axis.

decision aid use over time (Exhibit 1).

A few factors that may underlie physicians' limited involvement in the distribution of decision aids were documented in field observations and focus group discussions. First, some physicians appeared to disagree that the decisions addressed in the aids were indeed preference sensitive—that is, these physicians felt that patients' input was not truly warranted or desirable. This was evident in physicians' concern, documented in the field notes, that a patient who used a decision aid might opt to follow a course of action other than the one his or her physician recommended.

For example, the physician-champion in one clinic sent the following e-mail message to the project's physician champion: "Just want to pass on...that [the physician] had concerns about one of her patients choosing to do [a] stool occult blood test instead of the colonoscopy she recommended. [The physician] was concerned about passing [out] this [colorectal cancer screening decision aid] for the future."

Second, although physicians indicated their support for shared decision making on surveys, in practice they had difficulty moving away from more traditional, physician-directed decision making, as clinic staff observed. A licensed vocational nurse in one clinic commented in a focus group: "I don't think physicians are taught how to...make decisions in a shared way...with the patient. I think they're taught that...they're the ones who are the 'experts' and the patient is there just to absorb this information and then do it [what the physician recommends]."

Third, when physicians reported using decision aids, their descriptions of the process suggested that they did not fully grasp the intended use of decision aids to facilitate shared decision making. Instead, in field notes and focus groups, physicians described using the decision aids to replace discussion rather than to foster engagement with the patient. One physician in a focus group expressed a preference for "print materials or web-based materials or things that you can refer people to," observing that "we don't have time to have the conversation."

Fourth, despite major promotional efforts by the project team to train physicians and clinic staff on the project and the decision aids provided, physicians in focus groups described their lack of familiarity with the aids' content. Promotional efforts included numerous presentations about the aids and shared decision making at grand rounds and clinic staff meetings, in-clinic lunchtime viewings of the aids, and the distribution of brief synopses of their content. In one clinic, the clinical supervisor even personally delivered copies of all of the decision

aids available in that clinic to the physicians, encouraging them to view the aids.

In light of these efforts, physicians' stated lack of familiarity suggests the presence of underlying issues that the project's promotional efforts could not overcome.

TIME WAS LARGEST PERCEIVED BARRIER FOR PHYSICIANS Eighty-one percent of the surveyed physicians perceived a lack of time as the largest barrier to practicing shared decision making (Exhibit 2). The example of the implementation of a short patient self-screener in one of the clinics that assessed eligibility for colorectal cancer screening demonstrates these concerns clearly.

The self-screener was provided to patients when they checked in for an appointment. If patients were eligible and interested in receiving the decision aid, clinic staff gave it to them as they reached the exam room. Patient demand was high, and distribution increased fivefold within two weeks. However, the field notes documented that the self-screener was discontinued after three weeks because physicians reported that they did not have enough time to answer patients' questions about colorectal cancer screening.

In focus groups, many physicians also described time as a major barrier to the distribution of decision aids. One physician who did not

EXHIBIT 2

Physician And Clinic Staff Perceptions Of Barriers To The Use Of Decision Aids To Facilitate Shared Decision Making

Barrier	Respondents report that the barrier was moderate or large (%)	
	Physicians	Clinic staff
Not enough time during visit and/or competing demands	81	50
Patients have difficulty understanding what they need to know to make a decision	62	32
Patients don't want to participate in decision making or don't know what they want	15	14
Doctors are not comfortable enough with own knowledge to engage in shared decision making	6	7
Doctors are not reimbursed for shared decision making	24	— ^a
Prefer that patients rely on doctor's recommendations	4	— ^a
Doctors fear legal liability if patient makes decisions	11	— ^a
Organizational atmosphere is not supportive of shared decision making	18	— ^a

SOURCE Authors' physician and clinical staff survey, April 2012. **NOTES** Respondents (253 physicians and 106 clinic staff) were asked to rate how much of a barrier they thought each would be to routine shared decision making in clinic (large, moderate, small, no barrier). ^aBecause the question was about physicians' practices, clinic staff did not respond or responded "Don't know."

distribute decision aids frequently reported: “Realistically, I think it would be very difficult to...ask the physician to do that warm handoff [of a decision aid] when it seems like every day, there’s something more that they’re asked to do as far as preventive [medicine]. ...You just kind of run out of time.”

In contrast, physicians who used decision aids observed that they could save time. One said: “I like [the decision aids]. I like to take them out and show the patients what’s in the booklets and...I don’t spend as much time doing that as I would explaining things without [the decision aids], but then they get the information to take home with them.”

Finally, the survey data suggest that physicians might be more willing to use decision aids if structural changes were made to decrease the time needed for distribution, or if incentives were offered for use (Exhibit 3). For example, as documented in field notes, having the decision aids in exam rooms increased the likelihood that physicians would use them.

A project team member reported that the medical assistant “decided on her own to put the [decision aids] in the exam rooms so that they would be more convenient to give out. She said that before she put them in the room, [the physician] used to request about one [decision aid] every month, but once she moved them, [the physician] gives out many more than that.”

CLINIC STAFF WERE MORE RECEPTIVE Compared to the physicians, clinic staff members were more open to being involved in the distribution process. As documented in field notes and focus-group discussions, clinic staff expressed substantial support and enthusiasm for decision aids.

One clinical supervisor said: “To me that’s what shared medical decision is all about, that

all the parties that are taking care of [a patient’s] health get involved. And I’m giving...tools for [the patient] to have a discussion with the physician. ‘Okay, why do you want me to have a colonoscopy? You gave me this DVD, and I can see these are the other options. Why do you think...the colonoscopy is better for me?’ So [the patient] already...has a foundation. ...I just love these [decision aids].”

Unlike the physicians’ verbal support for decision aids, the staff’s support was associated with greater distribution. Clinic staff accounted for 73.2 percent of the decision aids that were distributed. As documented in field notes, a larger proportion of clinic staff attended training sessions than physicians, particularly when new decision aid topics were introduced to a clinic.

Decision aid distribution was also more easily incorporated into the routine workflow of the clinic staff than into that of the physicians. Some clinics even made assessing the need for a decision aid part of standard procedures for preparing exam rooms.

In one clinic, the clinical supervisor made aid distribution part of staff performance standards, emphasizing its importance in the care of each patient. In a second clinic, the clinical supervisor promoted decision aid distribution as part of the clinic staff’s normal duties. These efforts positioned distribution of the aids as an essential task and may have contributed to their more consistent distribution at these two clinics than at the other three.

SUPPORTIVE CULTURE WAS LACKING Clinic staff involvement did help attain moderate success in decision aid distribution. However, staff contributions appeared to be hindered by the lack of a supportive clinic culture. As documented in field notes, a nurse supervisor at one clinic wanted to have all medical assistants screen patients for

EXHIBIT 3

Physicians’ Opinions About Interventions To Increase Their Interest In Using Decision Aids

Intervention	Expected effect of intervention on interest in using aids (%)		
	Would increase my interest	Would make no difference	Would decrease my interest
Had access to a service that provided decision counseling to patients by qualified health coaches	82	13	5
Received reminders in electronic health record or through lists of eligible patients	47	26	27
Additional incentives were provided for doing shared decision making in practice	74	23	3
Use of decision aids was a quality measure for certain conditions	56	24	20

SOURCE Authors’ physician survey, April 2012.

eligibility for a colorectal cancer screening decision aid, but she found that some physicians' attitudes presented barriers.

And field notes about another clinic show that the clinical supervisor said that the medical assistant "came to see her...saying that she...feels that [she] will never get a chance to be the top distributor because her doctor always says no to her when she prompts him with the [decision aids]. ...She said that she thinks many of the doctors feel this way, and commented sarcastically that they 'don't want the patients to start thinking' because they will ask too many questions that there isn't time to answer during the appointment."

Eighty-two percent of surveyed physicians indicated that a lack of organizational support for shared decision making was not a serious barrier to the use of decision aids (Exhibit 2). Nevertheless, many of them also indicated that they would be more likely to use decision aids if the organization provided supportive resources such as electronic reminders (Exhibit 3). Thus, their overall responses suggested that they thought an organizational culture supportive of the use of decision aids was necessary for the aids' implementation to succeed.

Discussion

The current study illustrates the many challenges involved in attempts to incorporate the use of decision aids into routine clinical practice. However, the findings should not be interpreted as evidence that interventions designed to educate and activate patients, such as the distribution of decision aids, should be abandoned as a method for increasing patient engagement.

Patients must have access to information on their clinical options if they are to engage in medical decision making, and the necessary information is extensive. Even if substantial changes were made to physicians' work schedules, they could not be expected to provide all of the information that patients require. Decision aids represent a valuable resource that has been shown to be efficacious in research settings and that—if successfully implemented—could be a highly effective tool for increasing patients' engagement in routine clinical practice.

Nevertheless, the current findings suggest that decision aids will not reach the hands of patients to the extent envisioned by policies such as those inherent in Medicare's Shared Savings Program⁹ or the Affordable Care Act unless the major structural and cultural barriers that discourage true patient engagement in routine clinical practice are addressed.

Physicians' reluctance to cede traditional

decision-making roles and to recognize the preference-sensitive nature of many clinical decisions appeared to underlie their reluctance to distribute decision aids. In addition, many felt that time pressure discouraged their use of the aids—even though those who regularly distributed the aids felt that they actually saved time.

Although some success was achieved by having clinic staff distribute the aids and by using incentives to increase the distribution, it was short-lived. These results indicate that such tactics have only limited power and produce only temporary solutions. In addition, some conditions require a physician's assessment to determine whether a decision aid will be relevant to a patient. A distribution model relying on clinic staff may be less useful in such cases.

Without efforts to change traditional attitudes of physicians and staff toward patient involvement in decision making and to overcome perceived structural barriers, any efforts to increase patient engagement through the distribution of decision aids will not be sustainable. Experience has repeatedly shown that implementing large-scale changes in the structure and culture of health care is a complex and long-term process that requires multifaceted solutions. We offer some suggestions to begin that process.

First, physicians need better training in engaging patients in the decision-making process. A physician may think it his or her proper role to convince a patient to take a recommended action rather than to facilitate an informed decision that is based on the available options and consistent with the patient's preferences.

One reason for physicians' observed reluctance to engage patients in the decision-making process may be a lack of comprehensive training in communication and shared decision-making skills. A recent systematic review found that educating health professionals about shared decision making, together with the provision of decision aids, improved the adoption of shared decision making in clinical practice.¹⁶ Thus, proposed interventions and policies designed to promote decision aid use and facilitate greater patient engagement should include physician training—which was not extensively built into the intervention described here—to maximize the chances of success.

Second, engaging patients in shared decision making requires a team-based practice model. Empowering clinic staff to distribute decision aids was more successful than relying solely on physicians. Physicians must respond to a growing list of demands.¹⁷ Moreover, the current physician-centric system, which compensates only physicians' efforts in caring for patients, encourages them to work in isolation.¹⁸

Yet the effective distribution of decision aids appears unlikely unless members of the care team collaborate with each other toward that end. Clinic staff involvement can support, although it cannot substitute for, physician involvement in patient engagement. Offering incentives for the creation of systems promoting team-based care, such as patient-centered medical homes, may increase the involvement of clinical staff and the likelihood that decision aids will be distributed and used. In addition, decision aid distribution must be considered a routine responsibility and component of care, as short-term incentives to encourage it do not lead to sustained changes in behavior.¹⁹

Third, incentives for patient engagement must be aligned. One of the largest barriers to physicians' use of decision aids was their perception that it would increase the length of the consultation, with no increased compensation for the additional time. In truth, current payment schemes fail to reward providers for taking any extra time to fully inform patients and engage them in the decision-making process.

Initiatives such as accountable care organizations—as well as certification processes for decision aids, resource centers for shared decision making, and quality measures including the ones called for in the Affordable Care Act—are critical to establishing a medical system and culture that properly reward efforts to increase patient engagement. The exact mechanisms by which such initiatives will be implemented still need to be specified.

Fourth, quality measures need to assess and reward patient engagement. Although the parent organization whose clinics participated in this study does not engage in this practice, many institutions use quality metrics for colorectal cancer screening that reward physicians for persuading patients to have a colonoscopy. Perhaps

mistakenly, they equate ensuring that patients receive a colonoscopy with providing high-quality care.

Such policies send the message to providers that eliciting patients' preferences is neither necessary nor desired, despite evidence showing that offering choices of screening methods to patients may result in a larger proportion of patients' being screened.⁵ New quality measures that assess how well physicians actually engage patients in the decision-making process, as called for in the Affordable Care Act, are urgently needed to help eliminate such counterproductive beliefs and practices.

Conclusion

Attempting to make the distribution of decision aids a routine aspect of primary care, as documented in the current study, faces a number of challenges. These challenges suggest that major cultural and structural changes will be necessary to achieve the level of patient engagement proposed in national and state initiatives such as the Affordable Care Act and the proposed Massachusetts bill to increase patient engagement in health care decisions.²⁰

Without system changes that reward efforts to facilitate shared decision making, such as the use of decision aids, it will be difficult to overcome the ingrained medical practices and attitudes that discourage the use of aids as a means of facilitating patient engagement. To achieve patient-centered decisions, policy measures to stimulate greater patient engagement must not only address the mechanics of implementing decision support but also create a culture and structure that promote patient engagement from medical school through practice. Only then will the patient's voice truly be incorporated in medical decisions. ■

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NOTES

1 Institute of Medicine. Crossing the quality chasm: a new health system for the 21st century. Washington (DC): National Academies Press; 2001.

2 US Preventive Services Task Force. Screening for colorectal cancer: recommendation statement [Internet]. Rockville (MD): The Task Force; 2008 Oct. [cited 2012 Dec 27]. (Agency for Healthcare Research and Quality Publication No. 08-05124-

EF-3). Available from: <http://www.uspreventiveservicestaskforce.org/uspstf08/colocancer/colors.htm>

3 DeBourcy AC, Lichtenberger S, Felton S, Butterfield KT, Ahnen DJ, Denberg TD. Community-based preferences for stool cards versus colonoscopy in colorectal cancer screening. *J Gen Intern Med.* 2008;23(2):169–74.

4 Stacey D, Bennett CL, Barry MJ, Col

NF, Eden KB, Holmes-Rovner M, et al. Decision aids for people facing health treatment or screening decisions. *Cochrane Database Syst Rev.* 2011;(5):CD001431.

5 Lewis CL, Brenner AT, Griffith JM, Pignone MP. The uptake and effect of a mailed multi-modal colon cancer screening intervention: a pilot controlled trial. *Implement Sci.* 2008;3:32.

6 Joseph DA, King JB, Miller JW,

- Richardson LC. Prevalence of colorectal cancer screening among adults—Behavioral Risk Factor Surveillance System, United States, 2010. *MMWR Morb Mortal Wkly Rep.* 2012;61(Suppl 1):51–6.
- 7 Ling BS, Trauth JM, Fine MJ, Mor MK, Resnick A, Braddock CH, et al. Informed decision-making and colorectal cancer screening: is it occurring in primary care? *Med Care.* 2008;46(9 Suppl 1):S23–9.
- 8 Schroy PC 3rd, Mylvaganam S, Davidson P. Provider perspectives on the utility of a colorectal cancer screening decision aid for facilitating shared decision making. *Health Expect.* 2011 Sep 8. [Epub ahead of print].
- 9 Centers for Medicare and Medicaid Services. Medicare program: Medicare Shared Savings Program: accountable care organizations. Final rule. *Fed Regist.* 2011; 76(212):67802–990.
- 10 To access the Appendix, click on the Appendix link in the box to the right of the article online.
- 11 Phelan EA, Deyo RA, Cherkin DC, Weinstein JN, Ciol MA, Kreuter W, et al. Helping patients decide about back surgery: a randomized trial of an interactive video program. *Spine (Phila Pa 1976).* 2001;26(2): 206–211; discussion 212.
- 12 Bernstein SJ, Skarupski KA, Grayson CE, Starling MR, Bates ER, Eagle KA. A randomized controlled trial of information-giving to patients referred for coronary angiography: effects on outcomes of care. *Health Expect.* 1998;1(1):50–61.
- 13 Morgan MW, Deber RB, Llewellyn-Thomas HA, Gladstone P, Cusimano RJ, O'Rourke K, et al. Randomized, controlled trial of an interactive videodisc decision aid for patients with ischemic heart disease. *J Gen Intern Med.* 2000;15(10):685–93.
- 14 Fischer MA, Avorn J. Academic detailing can play a key role in assessing and implementing comparative effectiveness research findings. *Health Aff (Millwood).* 2012; 31(10):2206–12.
- 15 Spradley JP. Participant observation. *New York (NY): Holt, Rinehart and Winston; 1980.*
- 16 Légaré F, Turcotte S, Stacey D, Ratté S, Kryworuchko J, Graham ID. Patients' perceptions of sharing in decisions: a systematic review of interventions to enhance shared decision making in routine clinical practice. *Patient.* 2012;5(1):1–19.
- 17 Yarnall KS, Pollak KI, Østbye T, Krause KM, Michener JL. Primary care: is there enough time for prevention? *Am J Public Health.* 2003; 93(4):635–41.
- 18 Chesluk BJ, Holmboe ES. How teams work—or don't—in primary care: a field study on internal medicine practices. *Health Aff (Millwood).* 2010;29(5):874–9.
- 19 Uy V, May SG, Tietbohl C, Frosch DL. Barriers and facilitators to routine distribution of patient decision support interventions: a preliminary study in community-based primary care settings. *Health Expect.* 2012 Jan 2. [Epub ahead of print].
- 20 187th General Court of the Commonwealth of Massachusetts. Bill H.1495 [Internet]. Boston (MA): General Court; [cited 2012 Dec 28]. Available from: <http://www.malegislature.gov/Bills/187/House/H01495>

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In this month's *Health Affairs*, Grace Lin and coauthors describe a thirty-month experiment in which decision aids were distributed in five California primary care practices that agreed to use them to increase patient engagement and facilitate shared decision making. In the end, fewer than one in ten eligible patients received decision aids for colorectal cancer screening and back pain. Focus groups, field notes, and surveys suggested major structural and cultural barriers that

would have to be overcome before the decision aids gained wider distribution. These barriers include lack of training for physicians and their unwillingness to cede more authority to other members of the care team.

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