The quality and cost of medical care is determined in large part by the decisions that clinicians and patients make every day about seeking care, having tests, starting treatments, and stopping treatments. There are situations in medicine in which a treatment or approach has considerable evidence of significant benefit with minimal or no harm. High-quality decisions in these situations are about efficiently delivering proven, effective care to all those who may benefit.

**Articles see p 251 and 260**

A surprising number of medical decisions, however, do not have a single “best” answer; instead, they require clinicians and patients to make tradeoffs. In these situations, often called preference-sensitive decisions, the quality of the decision is determined by whether the test or treatment is clinically appropriate and reflects patient’s informed goals and preferences. Shared decision-making is one approach to ensure that patients are informed and involved in decision-making and that treatments are tailored to their goals. Recent clinical guidelines put out by the American College of Cardiology and the American Heart Association emphasize the relevance of this approach and state that “patients should be informed of the risks, benefits, and alternatives to a particular treatment and be involved in shared decision-making whenever feasible.”

Patient decision aids are tools designed to support shared decision-making. There are established criteria for the development of these tools and more than 86 randomized, controlled trials documenting their efficacy. In general, the tools have been shown to improve the patient’s knowledge, reduce decisional conflict, and increase concordance between the patient’s goals and their choices. Two studies in this issue of *Circulation: Cardiovascular Quality and Outcomes* evaluate the impact of patient decision aids on the quality of decisions for two different situations: management of acute coronary syndrome and vascular access for coronary angiography.

These studies advance our understanding of the application of decision aids in cardiovascular disease. The first study, by Hess and colleagues tested a short decision aid in the emergency department for low-risk patients being evaluated for acute coronary syndrome. These patients faced a decision about whether to be admitted to the hospital for observation and stress testing or be sent home with outpatient follow-up within 72 hours. The patient decision aid described the options and used a validated risk calculator to present personalized risk information. The primary outcome was patient knowledge, though a considerable number of additional outcomes were collected including decisional conflict, 30-day major adverse cardiac events, and physician satisfaction. The study demonstrated that the decision aid had a positive impact on decision-making. In particular, patients in the decision aid arm had higher knowledge, less decisional conflict, and were more engaged in decision-making. Further, the decision aid arm had significantly fewer admissions to the observation unit (58% versus 77%) compared with the control group, and there was no difference in 30-day cardiac adverse events.

The second study, a randomized, controlled trial by Schwalm and colleagues, evaluated a patient decision aid that focused on femoral versus radial artery access for coronary angiography. The decision aid was a 3-page booklet that patients reviewed immediately before the catheterization. The study found that the decision aid resulted in a significant reduction in decisional conflict (unadjusted results), an increase in knowledge, and an increase in percentage of patients who made an informed, values-congruent choice. There was no difference in the rates of procedures, nor in the success or safety of the procedures between the two groups, although the study was not powered to detect such differences.

Both studies confirm findings from the Cochrane Systematic review of decision aids—namely that patient decision aids are acceptable and help patients make more informed decisions. However, these studies also extend the field in important ways. Many decision-making researchers would not consider these situations to be ones that would lend themselves to shared decision-making or decision aids. For example, many have argued that patients cannot be engaged in decisions in urgent situations, as is the case with most decisions made in the emergency department. Similarly, many have argued that shared decision-making should be focused on significant decisions, leaving the more technical decisions, such as whether to use the radial or femoral artery, up to the clinician. The Hess and Schwalm studies challenged conventional wisdom and showed that decision aids can have a positive impact, even in these environments.

Decision aids are not designed to affect rates of treatments—rather, the goal is to match the right patient to the right treatment. In situations with significant overuse or
underuse, however, they have been shown to have an impact on rates of certain tests or treatments. For example, the Cochrane systematic review contains 11 trials that involved elective surgery decisions and found that patients in the decision aid arms were 20% less likely to choose surgery. The Hess study similarly found that when patients are informed and involved in decisions, they were less likely to want to be admitted to the hospital. The tendency of clinicians to order more tests than patients want or need to be sure they have not missed anything has been documented across different conditions. Decision aids that help patients convey their informed preferences may be able to counter-balance this tendency toward defensive medicine.

Despite considerable evidence from the many studies of decision aids, few of these tools are used routinely in practice. Studies have documented several barriers to adoption of decision aids, such as concerns about requiring too much time, concerns about limited interest from patients, lack of financial incentive to use the tools, and the potentially negative financial impact associated with their use (by reducing utilization of well-reimbursed tests or procedures). One strength of the Hess and Schwalm studies was that the design of the decision aids included careful attention to issues of implementation. The decision aids were designed to be used in the clinic and were short and easily accessible. Whether these design innovations are enough to overcome the challenges to implementation remains to be seen.

Some limitations of the studies and of the use of decision aids are important to note. For example, not all hospitals or organizations may be able to offer the options discussed in the aids. The Chest Pain Choice decision aid was delivered in an integrated delivery system in which coordination of a timely follow-up appointment was a feasible task. It is hoped that current health policy initiatives, such as the move toward accountable care organizations, will align incentives to support this type of coordinated care more widely. Another important issue that surfaced in the vascular access decision aid study is the need for ongoing review and updating of these tools to reflect changing evidence and practice. As these issues illustrate, the effective use of a decision aid is not simply about handing it to the patient, but also requires infrastructure and coordination with organizational capacity.

As Brindis and Spertus note, cardiology “is poised to make substantial contributions to the entire healthcare system by developing methods to support shared decision-making.” This kind of change, however, will not happen without the contribution of multiple stakeholders including patients, clinicians, researchers, administrators, and payers. Patients can help by using decision aids, like the ones evaluated here, and by being ready to share their goals and concerns. Clinicians and researchers can help by continuing their commitment to continuously improving the evidence base, with a focus on developing and refining risk models to inform patients and clinicians about the likelihood of different outcomes. Finally, administrators and payers can help by aligning incentives so that clinicians are provided with the time and tools to inform patients and are rewarded for tailoring care to the patient’s goals and preferences. Shared decision-making holds enormous potential to improve quality of care and increase value for patients but will require new collaborations as well as ongoing research and evaluation. These studies illustrate that such change is possible today.

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