Shared Decision-Making for the Cath Lab

Morton J. Kern with contributions from James Blankenship, Albuquerque, New Mexico; David Cohen, Roslyn, New York; David Cox, Charlotte, North Carolina; Kirk Garratt, Wilmington, Delaware: Spencer King, Atlanta, Georgia; Ajay Kirtane, New York City, New York: Lloyd Klein, Sonoma, California; Mike Lim, Cape Girardeau, Missouri; Kreton Mavromatis, Atlanta, Georgia; Jeffrey Moses, Long Island, New York; Steve Ramee, New Orleans, Louisiana; David Rizik, Scottsdale, Arizona; Kenneth Rosenfield, Boston, Massachusetts; Molly Szerlip, Plano, Texas; Paul Teirstein, La Jolla, California; Carl Tommaso, Dallas, Texas; Bonnie Weiner, Worchester, Massachusetts

The concept of shared decision-making (SDM) has been around for a while, but it seems the process has taken on some special meaning that escapes me. There are several definitions of SDM but as I understand it, SDM is an information exchange between the physician and the patient, usually with the family, discussing the underlying problem (eg, aortic stenosis), and current clinical status, followed by recommendations for treatment options (medicine, surgery, transcatheter aortic valve replacement [TAVR], etc.). In some cases, a heart team may be convened to get the best consensus for this patient.

As a consultant, I often state my recommendation and then may have the patient meet with the referring physician and if needed, the surgeon, to get the best input for the next steps.

Maybe my scope is too narrow, but aren't all discussions of clinical management with the patient a function of shared decision-making? I always tell them, "I work for you." We know each patient scenario is different, but the SDM path is not. A recent article from the dermatology literature[1] shows what they suggest is SDM, but the SDM seems to have some magical power as they use it. I asked my colleagues their thoughts on the SDM for our cardiology patients. Here's their responses.

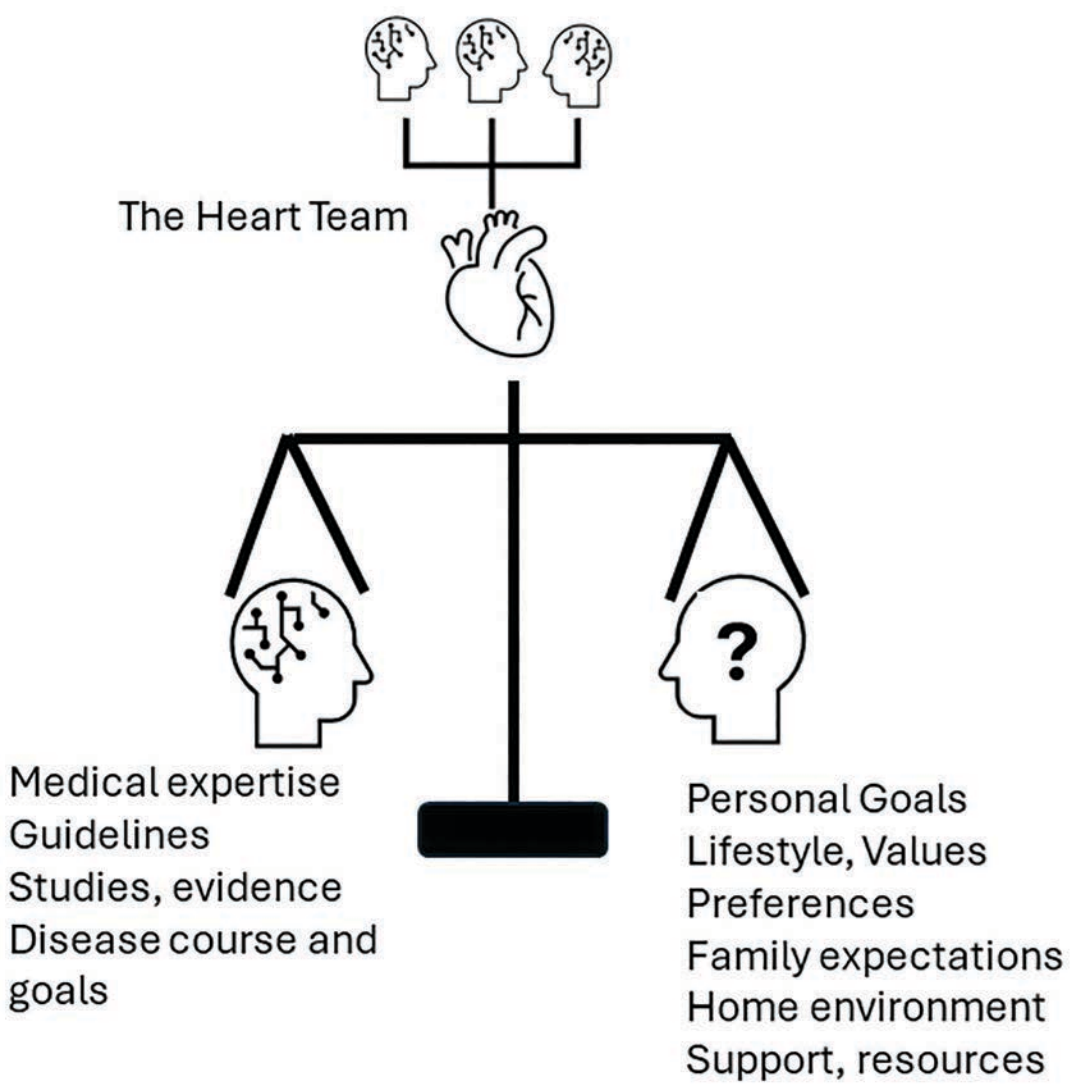

Figure 1. (Left) A depiction of shared decision-making, physician to patient. (Right) Heart team conference renders recommendation to patient for heart care.

David Cohen, Roslyn, New York: To me, "shared decision-making" is not about providing options and percentages of predicted outcomes to the patient and their family, and saying "you decide" — which is difficult enough for physicians to do for themselves and is a daunting task if done **rigorously and thoroughly** with a patient.

In contrast, true shared decision-making is supposed to be much more about probing to understand what a patient's priorities are (eg, long life, short hospital stay, quicker recovery, more complete relief of symptoms, etc.) and then helping them to make the decision that is most closely aligned with meeting those goals and priorities. The CliffsNotes version of this is, "**The doctor is the expert about the treatments; the patient is the expert about their preferences**" (Figure 1). As with many things, this is easier said than done, but there is a growing science about how to provide this service to our patients.

David Rizik, Scottsdale, Arizona: I share your confusion (if that's your point, Mort). Isn't every patient management scenario SDM? We tend to make it a more novel concept in sicker patients in whom the treatment strategy may not be as clear cut. But, in my mind, everything from ST-elevation myocardial infarction (STEMI) in a 40-year-old to TAVR in a 90-year-old really boils down to SDM.

Spencer King, Atlanta, Georgia: Shared decision-making implies informed consent (emphasis on informed). That is very hard or impossible to achieve in the current practice of ad hoc PCI, but that is frequently what is done. We published a study[2] that illustrates the magnitude of ad hoc PCI in left main coronary artery (LMCA) and multivessel disease. SDM is not possible here. The patient is happy to sign before the cath, but we should admit that they are not informed. Maybe computed tomography angiography (CTA) will enable that.

Lloyd Klein, Sonoma, California: A comprehensive dialogue that identifies and brings into focus individual patient goals within the context of the evidence base is the ideal approach to collaborative decision-making. Shared decision-making is essential to making choices about treatment preferences, and characterizes the optimal practice of evidence-based medicine and good patient care. By supporting patient autonomy and engagement, the patient and family become partners in their health care. I've been an advocate of this approach for a long time, and I've written extensively about it, including how collaborative decisions are made including patient educational aids.

Can Ad Hoc PCI Really Be SDM?

James Blankenship, Albuquerque, New Mexico: I think Dave Cohen is exactly right. It is a timely question in that the Society for Cardiovascular Angiography and Interventions (SCAI) is convening a writing group to revise the prior SCAI consensus paper on ad hoc PCI. Several articles have documented a surprisingly high incidence of ad hoc PCI in patient groups (eg, LMCA, 3-vessel coronary artery disease [3VCAD]) where there is equipoise or even possible superiority of coronary artery bypass graft surgery (CABG) over PCI. In those cases, was there shared decision-making before the diagnostic procedure that preceded ad hoc PCI? If so, what was the nature or quality of the conversation? Under what conditions is ad hoc PCI appropriate in situations where there is equipoise between PCI and CABG? I am interested to hear others' thoughts on the issue.

Bonnie Weiner, Worchester, Massachusetts: Jim, I agree. We just had this discussion at Cath Conference this morning about a left main/ostial left anterior descending (LAD)/ostial left circumflex (LCX) lesion. It is important that our general cardiology colleagues understand this issue as well. They are the ones who convey the courage of the noncombatant and may try to pressure an interventionalist into an ad hoc procedure that they would rather not take on. Also, we can't be sure that a fair and balanced presentation of the options has occurred under those circumstances.

Ajay Kirtane, New York City, New York: The way Dave Cohen summarized it was perfect (but no surprise given his expertise in the area). The challenge is that SDM is something that all of us are supposed to do every day, but few are really experts in the area or have been trained in how to do it.

The PCI/CABG part is a good example and, despite best intentions, can be a challenge. I recently had a patient that was referred for a multivessel PCI transfer (patient-requested) that I facilitated late at night. After reviewing the films, even though I favored PCI based upon anatomy, I asked for a surgical opinion in the spirit of the "heart team" approach to SDM. The next day, the surgical physician's assistant saw the patient. I subsequently went into the room and spoke with the family. They thanked me for arranging the transfer but told me that the surgical team thought that surgery was the way to go, and our interventional team was very "aggressive" with stents. When I called the surgical team (who I know well and are usually great) to ask what exactly transpired, they said that they were trying to convey that we could do things with PCI that most places couldn't, and that both were options despite the data in favor of CABG.

In this case, the choice of a single (shared) word swayed the decision entirely. Denouement: the patient underwent CABG, and when I saw the patient post-op on call last weekend, he asked me if he had made the right decision. I SHARED the following: "Of course — you made it through and look great!"

Paul Teirstein, La Jolla, California: I have a strongly held, politically incorrect view of shared decision-making. As physicians well versed in the literature, we struggle with these grey area decisions and rarely agree. In practice, I find few patients can really analyze the data and make an informed decision. I find patients make their decision based mostly on the confidence they get from the surgeon or interventionalist with whom they speak, their fear of open chest surgery, and the experiences of their friends and family. If their father had a bypass and did well, they will often want a bypass. But if their father was in an intensive care unit for three weeks, they will beg for stenting. I also find patients want to know what I, personally, would do if it was me on the table. I often find myself saying "Our heart team isn't in agreement on the best way to treat you, but if it were me or my family member, I would recommend..."

Jim, I agree, ad hoc consenting before we have any anatomic info is very challenging. I have been experimenting with asking, "What if we find your arteries are in a grey area where 50% of physicians would recommend bypass surgery and 50% would recommend stenting. Do you have any feelings about this?" This is a very imperfect question, but I find about 25% of patients have a very quick response asking me to avoid bypass if possible. This is helpful because many multivessel PCI patients are best treated with a staged procedure and asking this question before the cath can sometimes avoid making it into a 3-procedure ordeal. If the patient equivocates at all in their response, that tells me they need to come off the table and get several opinions. It's not a perfect technique but I find it helpful in some patients.

David Cox, Charlotte, North Carolina: I stand firmly with Paul on this one. In fact, I have independently evolved to using nearly identically the language he does. It seems to work and tells me who should come off the table for more discussion and who I can immediately proceed with doing part 1 of a staged PCI approach.

Heroes exist for a reason, Paul. Thanks for your insight and recognition that it likely doesn't fit with the politically correct view in the guideline-directed therapy papers. It fits superbly with my patients. Ajay's case underscores a common reality. You ask for a surgical consult and you get CABG. That happens very often without much further discussion and leaves a bad taste in my mouth.

On the other hand, we all have often gotten a phone call from the surgeon turning down a case for CABG. The paper by Dave Kandzari et al on PCI outcome in surgical turndowns is reassuring.[3] Rarely have I had a surgeon call me and say, "I've spoken with Mrs. Jones, reviewed all the data, and here's my thoughts. Let's go meet with her together and discuss a plan." Like finding a hen's tooth, it hardly ever happens.

Heart team conferences to me often degenerate into a cacophony of sound and fury with opinions fired from the hip. It helps when true equipoise exists and fails when strong opinions made by those who never talked with the patient overwhelm the group.

I do think part of the thrust behind SDM and surgical consults comes from the view of ad hoc PCI for LM and complex 3v-CAD had equipoise, recognizing the data was done before intravascular ultrasound (IVUS) and mostly with first generation drug-eluting stents (DES), meaning that many PCI docs (not on this list) were just proceeding with PCI in practically all cases. At least worshipping at the altar of SDM suggests these PCI advocates also need a surgical opinion. But then they often share with me what they get is the recommendation for surgery "because Dr Cox/Smith/Jones is very aggressive with stents" and not a balanced discussion.

My take-home messages come from David Cohen and Paul Teirstein's comments:

1. (DC) The patient is the expert about preferences. Perfect!
2. (PT) Talk to the patient before the patient is on the table, outside of STEMI/shock — it makes me a better PCI doc.

Kreton Mavromatis, Atlanta, GA: I would echo Spencer's mention of CCTA prior to cath — looking at the images is so helpful with pre-cath and revascularization planning, greatly facilitating SDM before the patient is on the table.

Molly Szerlip, Plano, Texas: Shared decision-making is an art and so is [getting the most from] a heart team. We have a conference with our surgeons every week where all cases are discussed. The surgeons have to discuss EVERY CABG that is being done and often it gets switched to PCI. We bring high-risk multivessel patients and discuss PCI versus CABG. It's not all roses and kumbaya but we get a good recommendation out of it. Because this has been so successful (now going on formally 8 years) taking a patient off the table is easier because we know there is going to be a great thought process and discussion to follow. It's hard for the patient to understand the discussion prior to knowing what the anatomy is. Every patient WANTS PCI, but that may not be in their best interest. Often CABG is also not the right option. It takes a good discussion, sitting with the patient, and understanding their goals. It also takes a frank discussion with the surgeons. This kind of SDM takes a lot of effort but is worth it. When it's successful, the patient wins (our paper on our heart team approach is under review for publication now).

Kenneth Rosenfield, Boston, Massachusetts: Every day, all of us experience the challenge of balancing patient preference with best medical evidence and physician opinion and preference. What should also be considered for SDM is the variability in skill sets and experience available at any given institution.

Kirk Garratt, Wilmington, Delaware: Kudos to Molly! You've got an optimal process, but I think it's rare. As Dave Cox points out, heart teams often fail, perhaps because too many on both sides are resistant to honest conversations about what's best for patients (the exception is structural heart, where it's succeeded wildly because CMS won't pay for services without it). As Paul Teirstein called out, a few patients will refuse surgery no matter what, but otherwise everybody deserves what you're providing.

You (Molly) noted that sometimes surgeons turn patients over for PCI after discussions. How often does it go the other way? I worry that the value of surgery in diabetics or the benefit of a left internal mammary artery (LIMA) graft for LAD disease is overlooked.

Mike Lim, Cape Girardeau, Missouri: These points make us all think more about how patients are cared for and how to get in touch with our "better angels" to guide us.

While SDM has become somewhat "formalized" for certain structural procedures, the SDM discussion has mainly focused on PCI (where there is no "mandate" by payers). I have long held the belief that patients and their families react differently to consultations and guidance when in the hospital versus out of the hospital. Many of our procedures, admittedly, are elective, and therefore, we set up the following process:

- Put patients on best medical therapy and discharge when able.
- Set an appointment in the office (<7 days) to meet with a cardiac surgeon and an interventional cardiologist. These discussions were separate, but in the same office, back-to-back. It was random who saw the patient first.
- Following the visits, the patient and their family then met with both physicians at the same time and decisions were made (still in the same setting). We did all our pre-TAVR, pre-MitraClip, and pre-multivessel PCI evaluations this way for years and the only objective measure was an exceptionally high patient satisfaction scores for our "Heart Team Clinic".

The best or worst of these encounters still sticks in my mind today — a patient who had 2-vessel coronary disease was referred for revascularization. I advocated for CABG while the surgeon advocated for PCI. The patient chose PCI. Did I "win" or "lose"? I believe I "won" because the patient got to choose and did very well. Granted, the factors that contributed to this environment are hard to duplicate. The surgeons and the cardiologists were all part of a single department, without competition for RVUs or procedure numbers. Even with that as the "reason" for trying to create a better way to care for patients, I no longer oversee this department, in many ways because having surgeons and cardiologists in a single department and fighting hard to keep RVUs from becoming a competition was a battle that I lost. I applaud the intent to work with patients in the best ways possible to provide BEST care.

Carl Tommaso, Dallas, Texas: I hate to be the cynic in this discussion. Shared decision-making is a ruse perpetrated by the medical "woke" community or someone in a C-suite, in order to have patients feel they are empowered.

The only time SDM is valid in any situation is when both parties come to the table with equal knowledge of the topic. This of course almost never happens in clinical practice. The patient comes to you for your advice and expertise.

One role of the physician is educator. It is very difficult to be an educator armed with the medical knowledge we have gained through education, experience, and literature, and not have implicit *bias* as to appropriate treatment, based on an altruistic motive. Similarly, patients may come to the table with their own *biases*, which they have gathered from the Internet, personal or family experiences, etc., and often feel that a recommendation is less than altruistic and not based on their knowledge set. Education to reality is not always possible. SDM may validate that irrationality. In the end, the patient always has the final say in accepting treatment; is that shared?

Documenting SDM

Steve Ramee, New Orleans, Louisiana: Fifteen years ago, SDM was a mandatory part of the evaluation of patients with aortic stenosis by the American College of Cardiology (ACC) and Society of Thoracic Surgeons (STS). Ideally, the cardiologist and the surgeon see the patient (and family) together, and discuss the pros and cons of conservative therapy, catheter therapy, and surgery. The cardiac specialists are the most informed about the data and as Paul points out, the patient is the expert when it comes to his preferences. Almost no one "wants" surgery, but it is the best option for some. We also put a short paragraph in our note documenting this discussion with the patient.

This process has been very valuable in our practice, has brought the surgeons and cardiologists closer together professionally, and I believe the patients also really appreciate it. It may not be practical for all coronary or peripheral vascular patients logistically, but good physicians will strive to make sure the patient is aware of all options.

Lloyd Klein, Sonoma, California: Understandably, I see some interesting responses skeptical of SDM. It is impossible to give any patient enough information to make optimal clinical decisions, and even if it were, there would be no objectivity if you were the patient. We tend to choose the perceived lowest risk option for ourselves, not necessarily the one with the best statistical outcome. But that is not what shared decision-making requires. Effective SDM is contingent on three premises:

1) Patients possess sufficiently accurate information to ask informed questions, and express personal values and opinions about their treatment options;
2) Clinicians respect patients' goals and preferences, and use them to guide recommendations and treatments when that is consistent with professional guidelines and the evidence base; and
3) A proven education tool is employed.[4,5]

This process requires time, patience, and introspection. Meanwhile, we are all being pressured to move things along quickly and let's be honest, to do as many procedures as warranted.

It is important to keep the goal in mind: helping the patient and family to become part of the process rather than passive recipients. Sometimes this is impossible: ad hoc and emergent procedures, by their nature, are not amenable to in-depth discussion. Emergent decisions cannot be 'shared', but we can try to be sure ad hoc procedures are carefully selected. Other situations have relatively straightforward best strategies, and there is science to support that approach. SDM is for circumstances when the data isn't as clear, or when the patient feels uncertainty.

Our guidelines emphasize SDM for good reasons but give no practical means to employ it. That is precisely why so many physicians think that eliciting patient preferences is a waste of time. Sometimes it is. But for the patient who wants to participate, as best they can, in their own health care, it is worthwhile slowing down the process (when and for as long as practical) of bringing people along. I believe that patients and their families are more apt to be compliant with recommendations and active participants in their recuperation when they've been involved from the start.

"You're the Doctor, What Would You Do if It was Your Roof?"

Paul Teirstein, La Jolla, California: Interesting to see no response to Carl's comments about the politicalization of shared decision-making. This silence is understandable, given today's divisive environment, but his comments are getting some discussion in our hallways. I did

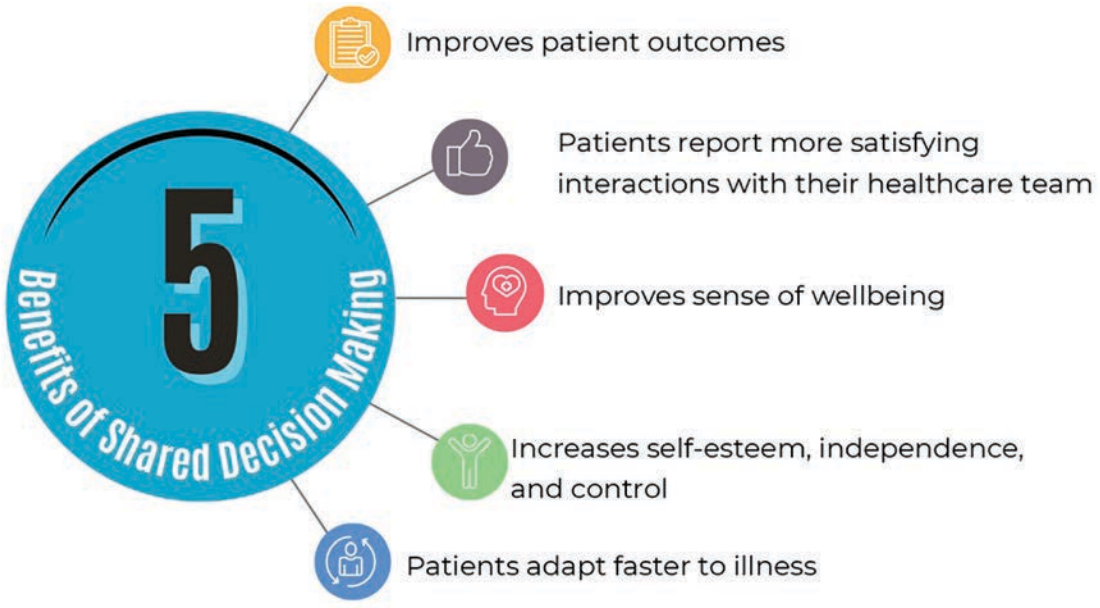

Figure 2. Benefits of shared decision-making.

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a little research and, assuming Google isn't all wrong, the shared decision-making idea came from medical ethicists and took root in the 1970s with the goal of moving physicians away from paternalism, ie, "The doctor knows best." I remember in the 70s, our teachers were authoritative, sometimes even intentionally keeping patients in the dark about their diagnosis. This sounds crazy today, but personally, when my contractor gives me three options to repair my leaky roof, I find myself responding, "You're the doctor, what would you do if it was your roof?"

I agree with Carl that shared decision-making is a lousy phrase because it's a free country and the patient gets to make the final decision. However, I also think shared decision-making has a useful political role because p values (meaning important statistical comparisons) can be significant despite small absolute differences, resulting in large numbers needed to treat. Shared decision-making allows scientists, administrators, and insurers, who focus on p values, to consider factors not captured by typical trial endpoints. What would happen if we expanded the composite outcomes of our randomized trials to include the endpoint of traumatic injury to the chest wall? The good thing about shared decision-making is it brings another perspective to the conversation.

Jeffrey Moses, New York City, New York: I learned about shared decision-making from my dad. At age 86, he had symptomatic aortic stenosis. It was very early in the U.S. TAVR experience, and we could only offer a valve through a randomized clinical trial. He refused as he wouldn't accept the convalescence of SAVR. He survived to the non-randomized access arm and got an [Edwards] Sapien XT valve.

He taught me our prime considerations of death and stroke were virtually meaningless to him despite those being the drivers of trial success. Shared decisions are about our applying our knowledge to meet the patient's goals, not saying "it's up to you". That's a dereliction of duty. If you have established a bond of trust with the patient, then this conversation emerges organically. Dad outlived the XT and had a valve-in-valve, and now is 99.

David Cohen, Roslyn, New York: I agree with Jeff on this. Many of the responses in this thread seem to conflate a heart team approach with shared decision-making. They are different, although not at all mutually exclusive. As Jeff has described, shared decision-making is designed to help you understand your patient's priorities. Is their main goal to live as long as possible? Or are there reasons why they prefer to prioritize a more rapid recovery? How concerned are they about needing additional procedures in the future? As Jeff also notes, this may not take much probing if you have a longstanding relationship with the patient. On the other hand, a heart team approach is about bringing experts together with different skill sets and areas of expertise to determine which of the available treatment options is best able to meet those goals. The one thing that is clear is that nowhere is it written in stone that the option that provides the longest life expectancy is a requirement. Ultimately, the objective of both efforts is to present the patient with a coherent plan that is targeted to their specific condition and is most likely to meet their specific priorities.

The Bottom Line

Mort Kern, Long Beach, California: SDM means different things to different physicians and nurses. Figure 2 summarizes the benefits of SDM. What is universal about SDM can be summed up by Dave Cohen, "**the doctor [and their team] is the expert about the treatments; the patient is the expert about their preferences.**" Providing the patient with your best opinion for their circumstances after understanding their goals for their future is the heart of SDM. I learned a lot from my colleagues in this conversation and hope you did as well. ■

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Morton J. Kern, MD, MSCAI, FACC, FAHA
Clinical Editor; Interventional Cardiologist, Long Beach VA Medical Center, Long Beach, California; Professor of Medicine, University of California, Irvine Medical Center, Orange, California

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Dr. Kern can be contacted at mortonkern2007@gmail.com On Twitter @MortonKern