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Research Article

Shared decision making in 21st century health care – best practices

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Abstract: Shared decision making is an interactive and collaborative process between patients and health care providers that is used to establish and execute health care decisions. This process is characterized by several features of the patient-provider interaction including eliciting and acknowledging patients' preferences for participation; providing choices as to how the decision-making process will proceed; and mutually respecting and adhering to the ultimate choices established by patients. Shared decision making takes place based on the premise that patients have a right of self-determination. An expectation also exists that patient involvement in shared decision-making can increase the likelihood of treatment adherence by patients, improved health care outcomes, and decreased health care expenditures. This notwithstanding, the altruistic and beneficial practice of shared decision making is potentially fraught with challenges including a perceived excessive time commitment to the process with incomplete adherence by providers. In addition, contextualizing this process can represent a challenging task for providers. Finally, the touted benefits of shared decision making, including patient satisfaction with decision (SWD), improved patient outcomes, and decreased health care expenditures must be scientifically scrutinized to justify the best practices designation and widespread implementation of SDM.

Keywords: shared decision making, informed decision making, patient satisfaction, deliberation

Introduction

Physicians and other health care providers have been trained to make difficult and commonly autonomous decisions regarding the care of patients with complex and challenging medical and surgical diagnoses. The education and training of these providers formidably prepares them to meet these challenges through extensive schooling and co-regulated clinical training in a variety of specialty and subspecialty disciplines. Twenty-first century health care providers do not shirk this responsibility but most commonly welcome the opportunity to practice their trade confidently, authoritatively, and frequently without significant input from patients.

For many patients, the initial clinical consultation is the point in their interaction with the health care system and provider when they receive diagnoses, learn about health care issues, and consider steps they can take to preserve or improve their own health. The initial consultation appointment may also represent the time when strategic treatment plans are offered to the patient by the health care provider, including when a surgical procedure is being considered. The engagement of patients in their own health care is far greater in scope and magnitude than what occurs during a consultation appointment. These moments of connection between the patient and physician, however, offer a unique opportunity to involve patients in the process known as shared decision making (SDM).

Shared decision making in health care has recently been promoted in the United States as holding promise for protecting and improving the health of populations and individual patients, while also helping control health care costs. Initiatives such as the patient-centered medical home reinforce the importance of implementing shared decision making across the health care spectrum, with an emphasis on placing the patient at the center of care processes and decision making. Shared decision making also offers a mechanism for translating the results of comparative effectiveness research, another endeavor supported by policy, into clinical decisions. The purpose of comparative effectiveness research is to help patients, clinicians, purchasers, and policy makers make informed decisions that will improve health care at both the individual and population levels.

In the United States, engaging patients in their own healthcare through a shared decision-making model has been highlighted at the national level by the Agency for Healthcare Research and Quality (AHRQ), the Institute of Medicine (IOM), and the Affordable Care Act (ACA) Section 3506 that aims to facilitate shared decision making. Specifically, Section 3506 of the ACA funds an independent entity that would develop consensus-based standards and certify patient decision aids for use by federal health programs and other interested parties. In addition, the Secretary of Health and Human Services is empowered to fund, through grants or contracts, the development and evaluation of these tools. Decision aids are meant to be evidence-based and inform patients of the risks and benefits of their health care interventions, their relative effectiveness, and the costs associated with these

interventions. Health care providers will be eligible to receive grants to implement these tools and to receive training and technical support for shared decision making at new resource centers. The ACA also authorizes the Center for Medicare and Medicaid Services (CMS) to test shared-decision making models designed to improve patients' and providers' understanding of medical decisions and assist them to make informed care decisions. For approaches that provide savings or improve quality of care, implementation can be mandated throughout Medicare without additional legislation.

At its core, shared decision making is an interpersonal, interdependent process in which the patient and health care provider converse and influence each other as they collaborate in making decisions about the patient's specific care. Shared decision making is patient specific, and it depends not only upon medical evidence, but also on the clinician's expertise and experience, and the unique attributes of the patient and his or her family. Programs are in place in the United States to promote SDM by implementing patient decision aids (PtDAs). The Cochrane review of SDM tools for people facing treatment or screening decisions is the key evidence cited in policy statements that propose to implement, distribute, and use certified PtDAs [1]. There are at least 2 distinct types of SDM tools, PtDAs and conversation aids, occasionally referred to as within-encounter decision aids [1]. Both types of tools describe the current science about a specific medical condition and about the available options to address it, yet they serve different purposes. Patient decision aids intend to provide patients with relevant information, increase patient knowledge, and encourage shared decision making. As such, they directly assist patients in making their own decisions, so-called informed decision making, or indirectly by preparing them to engage in SDM conversations with their clinicians. In contrast, conversation aids are designed to encourage and directly support the conversations that patients and clinicians have as part of shared decision sessions [2]. Their aim is to improve the quality of the SDM process rather than surrogate outcomes such as patient knowledge.

Overview of the problem

Three key elements of shared decision making must exist for this process to effectively take place. First, and foremost, the patient and health care provider must collectively acknowledge that a decision is required. Translating evidence into best clinical practices has for many years been equivalent to implementing clinical practice guidelines. Adhering to such guidelines belies the complexity of clinical practice and disavows the essential nature of shared decision making. Secondly, both individuals must understand the best available evidence concerning the risks and benefits of each treatment diagnostic or treatment option. Achieving this objective requires patient comprehension of medical evidence that might be complicated by unfavorable levels of health literacy by some patients. Moreover, medical research evidence is accompanied by numbers and many patients have difficulty with simple numerical tasks [3]. This notwithstanding, at the hallmark of shared decision making is informed decision making that exists when a patient truly understands the process and becomes an informed agent of their own health care. Thirdly, shared decision making must account for the patient's values and preferences as well as the provider's guidance. The process of clarification of values and preference designation is fraught with difficulties. For example, a prostate cancer patient's priorities may be quality of life while the surgeon might believe that the patient's priorities lie in removal of the cancer. The nature of the problem associated with shared decision making requires that decision support tools be made available to patients, an organizational culture exists that prioritizes patient values and preferences, and the realization of a decision has been reached. To this end, the barriers of time constraints, the perception that shared decision making cannot occur due to patient characteristics, and the nature of the specific clinical situation could impede shared decision making.

The purpose of this review is to examine the process of shared decision making while considering many of its controversial issues, and largely unanswered questions. First and foremost, how often is shared decision making actively practiced in contemporary health care settings? Do most physicians, nurses, physician's assistants, and patients engage in this reportedly valuable exercise and best practice? If not, what are the impediments to shared decision making? If yes, what does shared decision making look like in contemporary health care settings and are its touted benefits realized including the improvement of the health of populations and individual patients, and the control of health care costs? In the final analysis, are patients satisfied with their decisions? Finally, what does shared decision making of the future look like? These are some of the questions that will be assessed through a review of the literature on shared decision making with an ultimate analysis of its strengths and weaknesses.

Review of the literature

An acceptable knowledge base and compassion were the primary qualities required by health care providers of the not too distant past to properly care for patients and their diagnoses. With the passage of time, advances in medical science have provided new options that, although often improving outcomes, have inadvertently distanced physicians from their patients. Examples include sophisticated imaging studies that can detect disease in very early stages such that these studies could substitute for a physical examination. Many blood tests can designate people who are predisposed to cancer or patients who have cancer when the result is elevated above a specific threshold. Clinical pathways provide algorithms to providers to establish treatment decisions based on available evidence. All of these advances have resulted in a relatively impersonal health care environment in which patients and their families are occasionally excluded from decision making whereby a patient default mechanism of trust for the doctor has become paramount. The practice of medicine has become technology driven and doctor centric rather than patient centric [4]. While the discussions about patient-centered care through shared decision making are

ubiquitous in contemporary health care settings, the concept of SDM has received greater attention than implementation in these settings [5]. How often shared decision making processes are truly occurring in these settings is an important question to first consider.

How often is shared decision making occurring in health care settings?

Informed decision making is one formal element of shared decision making that has been studied in the literature. Braddock, Edwards, and Hasenberg [6] examined 1057 patient encounters involving 59 primary care physicians and 65 surgeons with an analysis of audiotaped patient-physician discussions for elements of informed decision making. The seven specific elements of the informed decision making process included the patient's role in decision making; the nature of the decision; alternatives to the recommended procedure; pros and cons of the alternatives; uncertainties associated with the decision; an assessment of the patient's understanding of the decision; and an exploration of the patient's preferences. The 1057 audiotaped encounters contained 3552 clinical decisions. When examined across all decision categories, only 9.0% of the clinical decisions met criteria for completeness of informed decision making. In general, surgeons had more complete informed decision making than primary care physicians. These authors concluded that shared decision making in the form of an informed consent process is incomplete at best. As part of SDM, informed decision making should be distinguished from the informed consent process. An informed consent procedure represents a meaningful dialogue between the physician and the patient with the clinician's dutiful disclosure of all potential risks, complications, and benefits of a procedure with an opportunity for the patient to ask questions regarding that procedure. The informed consent procedure typically occurs after the shared decision making process occurs and is therefore a distinct process.

Fried [7] pointed out that the role the patient is asked to play in the shared decision making process is frequently not appropriately matched to the clinical circumstances underlying the decision. For example, the greater the uncertainty surrounding the options of the procedure, and the greater the clinician's ambivalence regarding the proper choice, the greater the likelihood that the patient will be asked by the clinician to make the final decision regarding care. Conversely, the greater the precision with which a decision's outcomes can be predicted, the greater the likelihood that the physician will make a strong recommendation. Fried has suggested that the opposite should occur under these two circumstances. In other words, clinicians are more likely to leave decisions to patients when they don't have strong feelings about the best course of action, but these are perhaps exactly the decisions that patients may benefit most by a recommendation from the clinician. Further, it is necessary for clinicians to resist their natural impulses to tell the patient what decision to make when certain of what's best and to leave the patient to decide without clinician input when they're not certain. The shared decision making procedure can therefore occur in a somewhat counterintuitive fashion, and under these circumstances, the patient's decision truly becomes shared in its nature.

The aforementioned-discussion on the lack of quantitative and qualitative adherence to the shared decision making process calls attention to the impediments to this process. Interestingly, lack of quantitative and qualitative adherence, as discussed, seem to stem from failure of the clinician to fully embrace the issue of shared decision making. As such, a more granular examination of the impediments to the shared decision making process can occur through an analysis of the available literature.

What are the impediments to implementation of shared decision making?

Legare and Witteman [3] affirmed conclusions of other authors that despite recognized potential benefits, shared decision making has not been widely implemented in the clinical practice of medicine and surgery. In their systematic review of 38 studies of the barriers to and facilitators of implementation, the three most common barriers were time constraints (n = 24); unfavorable patient characteristics (n = 18) such as older patients, people with less education, and lower numeracy; and lack of applicability due to the clinical situations (n = 16) such as specific medical and surgical procedures [8]. The three most identified facilitators were motivation of the health professional (n = 22), the perception that shared decision-making leads to favorable impact on patient outcomes (n = 16), and the perception that shared decision-making leads to a positive impact on the clinical process (n = 15). In terms of time constraints, no robust evidence exists that more time is required to engage in shared decision making than usual care. Legare and Witteman [3] pointed out that perceived time constraints are the most frequently cited barrier to any change in the practice of clinical medicine such that implementing shared decision making is not different from implementing any other practice improvement. These authors and others [9] also point out that vulnerable patient populations, specifically older patients, immigrants, people with less education, and those with lower numeracy, report less interest in shared decision making than other groups of patients. It could be argued that these vulnerable patients are precisely those who would benefit from engaging in shared decision making. Further, in the interests of avoiding bias and inequity when adopting shared decision making, that is, improving outcomes only for those with more education who can easily understand the process, shared decision making should be recommended for all patients, with adaptations made to suit individuals' abilities and interests. In terms of clinical situations representing a barrier to shared decision making, the case of joint replacement surgery was noted to decrease in incidence with decision aids. Certain clinical situations and procedures lend themselves more to the shared decision making process while others lend themselves to less shared decision making at the discretion of the clinician.

What does shared decision making look like?

Elwyn et al [9] have proposed that the proper execution of

shared decision depends on tasks that confer agency, the capacity of individuals to act independently and to make their own free choices. Agency is conferred to patients by clinicians providing information and supporting the decision-making process. The task of providing information is designed to ensure that patients are not making decisions with insufficient information about key issues, that is avoidable ignorance. Supporting the decision-making process involves deliberation regarding their options. Specifically, Elwyn et al [9] ensure that all responsibility for decision making is not transferred to patients. The effective implementation of shared decision making has been described as a three-step model that is easy to recall, practical, and can act as a guide to skill development [9]. This model is based on introducing choice (choice talk), describing options (option talk), and helping patients explore preferences and make decisions through decision talk (figure 1).

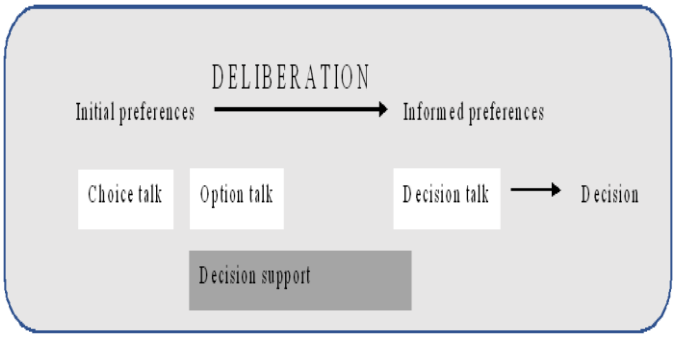

Figure 1: The effective implementation of shared decision making as adapted from Elwyn et al [9].

Initial preferences represent an awareness of options based on existing knowledge about the patient's diagnosis. The initial preferences ultimately lead to informed preferences that represent the patient's personal preferences according to an understanding of the benefits and harms of treatment options. The deliberation process represents patients becoming aware of choice, understanding their options, and having the time and support to consider what matters most to them. Deliberation permits the conversion of initial preferences to informed preferences. Choice talk, initiated by either the patient or clinician, represents awareness that a choice exists such that shared decision making should take place. Option talk is the discussion whereby patients are informed about treatment options in greater detail. Decision support occurs in two forms. The first is the discussion between the patient and the clinician. The second might be more extensive and is used by patients before or after the clinical encounter and might involve the Internet. Decision talk occurs when patients are informed and discuss what matters most to them. A decision regarding treatment follows.

Are the touted benefits of shared decision making occurring?

A 2011 Cochrane Collaborative review of 86 studies showed that as compared to patients who received usual care, those who engaged in shared decision making through decision aids had increased knowledge, more accurate risk perceptions, reduced internal conflict about decisions, and a greater likelihood of receiving care aligned with their values [10]. Moreover, fewer patients were undecided or passive in the decision-making process, changes that are beneficial for patients' adherence to therapies. Studies also illustrate the potential for wider adoption of shared decision making to reduce costs. Consistently, as many as 20% of patients who participate in shared decision making choose less invasive surgical options and more conservative treatment than do patients who do not use decision aids [10]. As pointed out by Lee and Emanuel [10], in 2008, the Lewin Group estimated that implementing shared decision making for just 11 procedures would yield more than $9 billion in savings nationally over 10 years. In addition, these authors referenced a 2012 study by Group Health in Washington State that demonstrated providing decision aids to patients eligible for hip and knee replacements substantially reducing both surgery rates and costs, with up to 38% fewer surgeries and savings of 12 to 21% over 6 months.

Glass et al [11] examined the relationship between shared decision making and satisfaction with the patient's decision (SWD). Their study was based on a secondary analysis of data from a larger survey study that was conducted to validate the Shared Decision Making Questionnaire-9 (SDM-Q-9) in a United States sample. The SDM-Q-9 is a 9-item self-report measure that assesses patient perceptions of the extent to which SDM occurred in a patient-provider appointment. Of 10,987 eligible patients, 4,389 patients were randomly selected to receive initial study invitation, 1,067 patients responded and were sent the survey link via email, with 488 patient surveys received. The items are rated on a 0 to 5 scale with 0 indicating completely disagree and 5 indicating completely agree. The average SDM-Q-9 score showed that the mean of the sample was above the midpoint of the scale in their perceptions of the extent to which shared decision making was present in their index health care consultation. The authors concluded that they documented a hypothesized relationship between SDM and SWD.

What does shared decision making of the future look like?

Shared decision making is a concept that has existed in the practice of contemporary medicine and surgery for decades and involves, at the very least, a patient and physician [12]. In the surgical arena, erroneous assumptions about patient's goals often drive prolonged life-saving interventions for patients who experience postoperative complications. As such, the preoperative shared decision making process should include decisions regarding life-sustaining therapeutic interventions in the intensive care unit while aligning care with patient values and preferences [13]. Death might not be considered an unacceptable outcome by patients such that high-intensity treatment may not align with the goals of all patients. In addition, many of the prognostication, communication, and patient management skills required for the palliative care of surgical patients may not exist as capabilities of the average surgeon. Moreover, in the acute care setting surgeons encounter insufficient time, poor prognostic accuracy, and lack of confidence in skill in delicate patient-centered communication techniques [13]. As such, the future of shared decision making of surgical patients may

ideally involve a second surgeon with training and expertise in palliative care that will afford a surgeon-to-surgeon consultation with a colleague who specializes in communication and navigating end-of-life issues in surgery. In fact, Ernst et al [14] found that preoperative palliative care consultations dictated by the results of a system-wide frailty screening program resulted in significant reductions in surgical mortality. This study highlighted the fact that appropriate triggers include not only the nature of the surgical problem and the proposed surgical procedure, but also the patient's medical comorbidities, including cognitive and functional deficits and decline. Additionally, the patient's concern for quality of life rather than quantity of life was divulged. Whether in the preoperative and perioperative setting, the surgeon to surgeon consultative model overcomes many barriers and offers profound benefits for patients, families and surgeons alike and therefore represents a model of shared decision making for the future. The presence of a second surgeon in the inpatient setting, as opposed to the hurried exit of the primary surgical team that all too often accompanies the course of postoperative complications occasionally resulting in termination of life support, permits families to better understand paradigm shifts in patient treatment objectives without feeling abandoned by the surgical team [13].

Discussion

Shared decision making represents an altruistic approach to patient care. This process eliminates the dogmatism and unilateral decision making by providers and recognizes and respects the self-determination of patients. This process is consistent with high emotional intelligence by providers and agency on the part of patients. In short, it represents the right thing to do. Reported strengths of SDM include patient education and informed decision making. When an invasive procedure is being planned for a patient, an informed consent procedure that outlines the nature of the procedure and its risks and benefits, must be discussed with patients in the preoperative setting. Informed consent is the sequelae of the SDM process that further educates the patient and family members while also protecting the provider from a medicolegal perspective. The informed consent procedure serves to answer questions by patients, provides an assessment of patients' understanding of the procedure and its potential side effects, while also ensuring that expectations by patients are realistic in terms of the procedure's efficacy. As a definitive explanation of the health care pathway or procedure agreed upon with the patient and family members, the informed consent procedure occurs only after the formal SDM process has taken place.

The benefit of decreased health costs associated with shared decision making seems to be conflicted in terms of its beneficial status, and might represent a weakness of the SDM process. For example, the international literature suggests that health care costs savings associated with shared decision making are realized through patients not undergoing procedures. This is a counter intuitive advantage of the shared decision making process that seemingly exists as a prelude to the performance of medical tests and procedures. Cost savings are realized through SDM, primarily through patients not receiving tests or perceived required care. Indeed, they are participating in the decision-making process related to their diagnosis, yet they are not receiving care for their diagnosis. As such, this understanding suggests a weakness of the SDM process as patients are not receiving health care, an anticipated outcome of contemporary health care in the United States. Stated differently, the shared decision making process could empower patients to refuse the recommendations of their clinicians.

Ideally, the process of SDM occurs between the clinician and the patient, a process in which the patient is optimally empowered to act autonomously through information provided by the clinician, and in deliberation with the clinician. Certainly, the SDM process transcends the paternalistic process, the doctor knows best [15]. Historically, an element of the SDM process was seen in the informed consent process, discussed previously in this paper, was one in which the responsibility of decision-making was transferred to patients by informing them about procedural specifics. With this transfer, the patient's autonomy and control are increased, as are the stress and anxiety associated with their informed consent. A strength of the SDM process, therefore, is its middle-ground nature, whereby a more collaborative and bi-directional decision making process occurs. To elaborate further, the process may be multi-directional as family members become involved in the SDM process, as well. In fact, van Nistelrooij et al [15] point out that the patient and the clinician are not individuals, but those whose identity is entangled with others. The decisions of patients may appear as inseparable from their lives with others, reflective of their expressing their identity in the relationships they have. The involvement of family members in the SDM process further strengthens this process. Specifically, the patient may be incapable or unwilling to express his or her autonomy, but prefers to involve others in the decision-making process. In such cases, others are not viewed as threats to one's individual rights but rather as indispensable support for asserting one's rights, another strength of the SDM process [15].

Conclusion

Shared decision making is a preferred method of contemporary health care and therefore represents best practices. This process produces agency in the health care consumer known as the patient. An evaluation of the process, while seemingly straight-forward, reveals the complexities of shared decision making in terms of its perceived time commitment, impediments to implementation, and a poor understanding by clinicians and patients of its value. In the final analysis, shared decision making is inherently collaborative, altruistic, and beneficial to patient care.

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