VIEWPOINT

SURGICAL OUTCOMES CLUB

Shared Decision-Making in the Surgical Sciences

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Shared decision-making (SDM) is an essential component of patient-centered health care. It is a process in which patients and clinicians work together to make decisions and select tests, treatments, and care plans based on the best evidence that balances risks and expected outcomes with patient preferences and values. Shared decision-making is especially relevant in the surgical sciences, where clinicians often must meet patients and decide on the optimal surgical option in a short amount of time. We highlight actionable strategies for surgeon-scientists interested in both the practice and study of SDM.

Identifying the Point of Maximum Impact

Shared decision-making occurs over several steps: (1) choice talk (informing patients that reasonable options exist) progresses to (2) option talk (providing detailed information about options) and ends with (3) decision talk (helping patients explore preferences and deciding).[1] Qualitative work is useful in informing the selection of the most appropriate implementation point of SDM. An illustration of this application is in the management of obesity in veterans. Despite the prevalence of obesity (40% of US adults meet criteria and nearly 20% meet criteria for severe obesity) and its association with multiple comorbidities and decreased quality of life, evidence-based obesity treatments are underused by veterans.[2] Development of a conceptual model is critical to grounding the science. For this population, the Obesity-Related Behavioral Intervention Trials model[3] developed by the National Institutes of Health was found to be a useful framework for the development of behavioral treatments for chronic obesity. A qualitative study of patient, practitioner, and work system elements that influence treatment choices made by veterans with severe obesity identified 8 themes in patient-level barriers. Some of these themes can be targeted for intervention, such as poor coordination of care, provision of referral, or assessment of perioperative readiness.[4] Future SDM interventions will focus on increasing obesity treatment participation for veterans based on where the greatest impact can be achieved.

Outcomes to Inform Choice

One barrier to SDM is a dearth of information about the downstream effects of clinical decisions. In cancer management, outcomes can be evaluated by survival, costs of care, cost-effectiveness, and quality of life. Microsimulations can model these outcomes at the population level and allow for clinical complexity incorporating biological heterogeneity, patient preferences, long-term outcomes, and multiple data sources.

An example of this approach is microsimulation modeling in thyroid cancer. As evidenced by flat death rates despite increasing incidence rates, thyroid cancer is increasingly overdiagnosed, and there is a need for better risk stratification.[5] The opportunity for SDM revolves around optimizing strategies for surveillance. To inform these decisions, the impact of different active surveillance protocols (impact of loss to follow-up; long-term assessment of the physical, psychological, and financial impact on survivors; and assessment of adherence and implementation) must be observed. The development of a natural history model to examine the US population-level effects of implementing changes in the American Thyroid Association's guidelines (originally based on observation of 1200 patients in Japan) showed that the new guidelines would be effective and cancer-related deaths would be offset by reductions in surgical deaths.[6] An optimal strategy would be sensitive to patient preferences; however, current generic instruments to measure patient-reported outcomes are not responsive to the concerns of patients with thyroid cancer.[7] Future directions include development of a thyroid-specific instrument to inform data on SDM in this space, as an instrument that performs well in the patient population is key to properly informing these conversations.

Decision Aids in Shared Decision-Making

Shared decision-making is best used in preference-sensitive decisions in which there is equivocal evidence-based guidance about which option is superior. Shared decision-making is crucial in optimizing the decision-making process in this setting. The Ottawa decision support framework is one of the most widely used conceptual frameworks for decision support development. The framework asserts that interventions that address patient's decisional needs improve decisional outcomes, the quality of the decision, and the decision-making process.[8]

A prime area for decision aid development for SDM is in the treatment of pediatric hypospadias, a condition in which a preference-sensitive decision has to be made and in which decisional regret is common.[9] The problem of decisional regret in hypospadias care has been addressed by the development of an SDM tool for parents of patients with hypospadias that was designed to support values-based informed decision-making. This work has culminated in the development of the Hypospadias Hub,[10] an interactive web page that is user-friendly, customizable, and applicable for multiple learning styles. This parent-centered tool demonstrates key elements of a decision aid: (1) explicit statement about the decision to be made, (2) information about the conditions and options, (3) exercises to clarify values, and (4) video testimoni-

als (not a required element). A 2-site pilot at Indiana University and the University of North Carolina demonstrated decreased decisional conflict, a high degree of involvement in decision-making, and increased decision-relevant knowledge about hypospadias in the parents.[10] Future work will continue to focus on the quality of the SDM consultation. This work illustrates how to integrate the range of outcomes from SDM: process measures (quality of the SDM) vs outcome measures (patient knowledge) vs clinical outcomes (receipt of intervention).

Conclusions

Effective SDM can facilitate communication between patients and surgeons that, in turn, can maximize satisfaction with choice and minimize decision regret. Surgeons are often given a limited time to build trust with their patients and can greatly benefit from techniques to improve SDM. Well-designed tools, such as decision aids, can catalyze efficient conversation and lead to more effective SDM. The ability of surgeons to be engaged in SDM will be facilitated by both further education and research.

ARTICLE INFORMATION

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