At its core, shared decision making (SDM) is grounded in the belief that patients have a fundamental right to understand all the medical options available to them, along with the risks and benefits associated with those options. It further implies that patients have a right to participate fully with their providers in the process of discussing these options and in making medical decisions about their care. In today’s resource-constrained and cost-conscious world—where transparency and patient engagement are increasingly at the forefront of value and cost conversations—SDM represents an important activity that health plan sponsors in particular hope providers and patients can rally around. SDM has the potential to drive timely and appropriate care; help patients become more active in their own care and recovery; and reduce unwarranted (costly) interventions.
In high-cost treatment areas such as oncology, orthopedics, and maternity, patients who possess enhanced knowledge of the options and risks of medical interventions, and who then actively participate in their treatment decisions, can be an especially crucial component in efforts to improve care and promote cost-effectiveness.

The landscape of SDM is evolving as research expands beyond the basics of decision making and patient engagement. SDM’s potential for impacting broader health care quality and value will necessitate its clear articulation across the health care spectrum in order to promote alignment for all stakeholders involved.

This Issue Brief reviews the trajectory of SDM research, identifies important factors to consider as SDM efforts expand, and highlights two examples of innovative research and implementation efforts that are tackling these more comprehensive questions head-on.

Research on Shared Decision Making
A recent systematic review of 86 randomized control trials showed that decision aids increased active participation in patient/provider interaction; improved knowledge and perception of treatment outcomes; reduced decisional conflict, uncertainty, and/or indecision; and helped patients reach decisions that were aligned with their purported values. Current research has focused on the potential for SDM to help control health care costs by reducing unwarranted variation in medical procedures that cannot be explained solely by clinical factors or patient preference. Such research looks beyond patient-centered outcomes toward analyzing the ways in which SDM impacts utilization rates, health outcomes, and cost effectiveness across therapeutic areas.

Most recently, a large-scale observational study of a hospital system in Washington State captured attention with findings showing a 26% and 38% reduction in hip and knee replacements (respectively) and a 12–21% reduction in costs over six months for these preference-sensitive procedures following implementation of SDM resources. These findings support a hypothesis that a more informed patient population, active in the decision-making process, may lead to a reduction in costs by decreasing demands for unnecessary interventions/surgery.

Factors to Consider: BCHT’s Perspective on SDM
On its face, cost reduction brought about by decreased demands for unnecessary interventions/surgery is good news for the health care system at large. However, if the primary message is that SDM simply leads patients to seek fewer interventions—in contrast to providers who may be incentivized to advocate for such interventions in the absence of such “informed” patients—then we have to acknowledge that we are potentially pitting one stakeholder (patients) against another (providers) in a zero-sum game.

In order to avoid this faulty “winners and losers” perception and highlight the potential for broader system-wide impact and cost containment, it will be important to spell out the benefits and challenges of SDM for all stakeholders involved. Thus, providers, patients, and payers must each confront the assumptions and realities around how such decisions get made—including the weight that clinical evidence, physician preference, patient preference, cost, and payment structures carry into and influence decisions around preference-sensitive procedures.
The broader impact and promise of SDM can be best framed as an issue of appropriateness:

► Patients with thorough, clear information about their condition; options for treatment; risks/benefits of that treatment; post-procedure expectations; and overall financial costs are better positioned to enter into a more germane and efficient dialogue with their providers.

► Providers are then in a position to tailor their clinical consideration, explanations, and recommendations to their patients’ informed preferences and questions, thus streamlining the decision-making process. This will require having direct conversations with patients about clinical evidence, medical preferences, as well as costs. SDM resources targeted to patients have the potential to drive a clinical encounter that more efficiently leads to appropriate treatment.

► Health plans can then invest in payment structures and benefit designs that do not simply incentivize a reduction in high-cost procedures. Instead, they can create benefit designs that reflect a commitment to providing thorough information and communication resources to support optimal patient/provider clinical encounters that result in the most appropriate medical care.

This process ensures that patients and providers are not simply involved in joint health care decisions, but that—thanks to an enhanced level of knowledge, engagement, and participation—clinical encounters result in more appropriate treatment decisions. For some service lines, this will indeed mean directly confronting the provider role in over-utilization of non-medically indicated procedures. However, the potential for cost-containment through SDM derives not from imposing punitive measures onto providers, but through the commitment to invest in resources aimed directly at the patient/consumer and allowing the enhanced patient/provider encounter to drive appropriate treatment.

How do we then insure that shared decision making is fostered through such an incentive structure? Some preliminary answers are explored in the recent white paper, “Redesigning Insurance Benefits and Consumer Cost-Sharing for High-Cost Surgical Services.” BCHT Co-Directors Dr. James Robinson and Kimberly MacPherson articulate the importance of creating —through benefit design—patient incentives to consider appropriateness when discussing care treatment options with their providers.

Specific suggestions for promoting the access and use of SDM interventions include the “carrot” approach of waived office visit copayment and coinsurance. This has the advantage of using the general principles of value-based insurance design (VBID), by ensuring that “consumer cost-sharing requirements should not inadvertently discourage use of services that have been proven to be especially effective either in improving health or in reducing costs.”
Innovative SDM Research Initiatives: Orthopedics and Maternity Care

As we continue to research, champion, and optimize shared decision making in health care, emphasis must be given to the specific facilitators and barriers to its successful implementation within therapeutic areas with preference-sensitive treatments. The most prevalent of this class are orthopedics, maternity care, cardiology, oncology, end-of-life care, and a variety of chronic care conditions.

The following two research/implementation endeavors are asking research questions with deeper and broader scope and implementing initiatives that reach out across the health care spectrum to foster alignment among patients, providers, and payers.

**SDM Research Study: Orthopedics**

Implementing shared decision making through decision support interventions (DESIs) has been shown to enhance decision quality because patients who are fully informed about their condition, procedure, and recovery can participate fully in making decisions with their surgeon that are medically appropriate and concordant with their values and preferences. However, barriers exist to successful implementation of SDM, especially for specialists paid primarily on a fee-for-service basis for Medicare beneficiaries. Having the support staff, information technology, and financial capabilities to optimally integrate these programs can be a challenge. Employers and purchasers are encouraged by the prospect of reduction in unnecessary surgery (and thus reduction in costs), but may be wary of any possibility of increased utilization (and costs). Health plans may offer DESIs as an adjunct to clinical care, but without clear endorsement by physicians themselves, patients are less likely to utilize resources that come solely from a health plan.

With this complex picture of multi-stakeholder incentives and drivers in mind, researchers at UCSF and Stanford are currently conducting a prospective, randomized, controlled research study of shared decision making in orthopedics, focusing on TJA of the hip and knee. Rates for total joint arthroplasty (TJA) vary widely regionally throughout the U.S., with some variation attributed to patient characteristics (age, gender, ethnicity), but also impacted by patients’ understanding of risks/benefits, severity of disease, willingness to undergo surgery, and the role of their physicians in decision making. Differences in physician practice patterns, along with the density of specialists in a given geographic region, have also been shown to impact utilization rates.

While the researchers are assessing the impact of shared decision making intervention across key stakeholders—patients, surgeons, and
purchasers—they are also drilling down to assess interest, willingness to pay, and the facilitators and barriers to adoption of decision support tools across these stakeholder groups. As such, this study builds on existing work by not only evaluating the effectiveness of decision support on patients, but by also illuminating logistical, ideological, and financial considerations that come into play across all stakeholder groups. In doing so, a more comprehensive picture will emerge that shows what elements must be in play to ensure successful implementation of SDM tools and what obstacles must be overcome to ensure optimal alignment and successful integration for patients, providers, and payers.

**SDM Implementation Initiative: Maternity Care**

Maternity care is an area with glaring instances of unwarranted variation in care (e.g., cesarean-section rates, induction rates) often with demonstrable incongruence between clinical evidence and practice. In addition, with care of childbearing women and newborns far exceeding expenditures for any other hospital condition, and with just over 40% of maternal hospital stays billed to Medicaid and 52% billed to private insurers, cost-effectiveness and alignment between patients, providers, and payers would have significant cost implications and impact for stakeholders across the system. The evidence is clear about the increased risks and poorer health outcomes resulting from the rise of cesarean deliveries, elective labor induction, and scheduled cesarean deliveries before 39 weeks, resulting in a paradox of a dramatic increase in procedures and costs with no improvement in health outcomes.

As part of a broad-based, multi-stakeholder reform effort, Childbirth Connection and the Informed Medical Decisions Foundation have recently launched a partnership centered on a large-scale SDM initiative targeting women and other stakeholders across the health care system by a) developing quality, evidence-based decision support tools for childbearing women; b) working directly with hospitals and health systems, as well as state Medicaid programs and other payers, employers, and consumer groups to ensure effective distribution; and c) working with policy makers to promote accountability systems to incentivize SDM programs in maternity care.

This initiative also breaks new ground by producing and evaluating SDM sources for women with low literacy and numeracy, thereby ensuring optimal accessibility and usability across the broad spectrum of maternity services.

The primary goal of this initiative is to improve knowledge of the benefits and risks of maternity care options and to increase consumer and provider engagement in a shared decision making process. As such, it will explore appropriateness around the utilization of common interventions and procedures, as well as the availability and utilization of underused interventions with proven outcomes, which often come at far less cost (e.g., non-pharmacologic pain management techniques and continuous labor support). SDM in maternity care is a tool and catalyst that promotes more appropriate high-quality care by providing thorough, evidence-based information and options that women can access and use throughout pregnancy, labor, and delivery.

**Conclusion**

Research findings have independently shown the impact shared decision making can have on decision quality, utilization rates, health outcomes, and cost-effectiveness. Framing SDM as a zero-sum
game between patients and providers can stifle efforts to successful implementation and a sustainable influence. The initiatives outlined above will further connect the dots from existing research findings and provide robust insights that demonstrate how to develop highly effective SDM systems with impact across the health care system: from patients/consumers to health outcomes, and from more efficient care delivery to overall cost-effectiveness.

References

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The BERKELEY CENTER FOR HEALTH TECHNOLOGY (BCHT) contains both research and educational components. The Center conducts research into existing and improved criteria for coverage, consumer cost-sharing, and other dimensions of management for biomedical innovations. The educational component provides academic programs for UC Berkeley graduate students and professional development for health care organizations whose senior staff would benefit from deeper understanding of the innovation, coverage, and reimbursement environment.

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