Collaboration and Shared Decision-Making Between Patients and Clinicians in Preventive Health Care Decisions and US Preventive Services Task Force Recommendations

The US Preventive Services Task Force (USPSTF) works to improve the health of people nationwide by making evidence-based recommendations for preventive services. Patient-centered care is a core value in US health care. Shared decision-making (SDM), in which patients and clinicians make health decisions together, ensures patients’ rights to be informed and involved in preventive care decisions and that these decisions are patient-centered. SDM has a role across the spectrum of USPSTF recommendations. For A or B recommendations (judged by the USPSTF to have high or moderate certainty of a moderate or substantial net benefit at the population level), SDM allows individual patients to decide whether to accept such services based on their personal values and preferences. For C recommendations (indicating at least moderate certainty of a small net benefit at the population level), SDM is critical for individual patients to decide whether the net benefit for them is worthwhile. For D recommendations (reflecting at least moderate certainty of a zero or negative net benefit) or I statements (low certainty of net benefit), clinicians should be prepared to discuss these services if patients ask. More evidence is needed to determine if, in addition to promoting patient-centeredness, SDM reduces inequities in preventive care, as well as to define new strategies to find time for discussion of preventive services in primary care.

In this article, the primary beneficiaries of USPSTF recommendations are referred to as “patients,” as most preventive interventions are delivered in the context of a patient-clinician relationship. However, the USPSTF recognizes that in the future, an increasing number of preventive services may be delivered outside of a longitudinal patient-clinician relationship.

Informed and Involved Patients as a Core Value and Ethical Imperative in Health Care

The USPSTF values and affirms that patients have the right to be informed and participate in their health care decisions. This right is a core value in US health care, especially for decisions about prevention, for which interventions are delivered to people not seeking care for the target condition. SDM, as an approach to making decisions when there is more than one reasonable option, is an evolution of the traditional ethical imperative of informed consent that should be judged by its ability to lead to more informed and involved patients. Patients being informed and involved is the goal (a core value), and SDM is a means to that goal.

SDM should not be judged on whether it produces better health outcomes. Rather, it is the ethical right of patients to be provided with information and to make decisions collaboratively with their clinician.

Shared Decision-Making

In 1982, the President’s Commission for the Study of Ethical Problems in Medicine and Biomedical and Behavioral Research issued...
a report that described the desired evolution of informed consent and coined the term “shared decision-making.” The report stated, “The ethical foundation of informed consent can be traced to the promotion of 2 values: personal well-being and self-determination. To ensure that these values are respected and enhanced, the Commission finds that patients... must have all relevant information regarding their condition and alternative treatments, including possible benefits, risks, costs, other consequences, and significant uncertainties. Ethically valid consent is a process of shared decision making based upon mutual respect and participation, not a ritual to be equated with reciting the contents of a form...”

In 1993, Quill and Suchman described the SDM process: “The clinician shares information about the illness and treatment options. The patient contributes her expertise about her own goals, attitudes towards risk, and the value she places on various outcomes. Then, combining their perspectives, they can negotiate a solution that is uniquely suited for this patient.”

The 2001 National Academy of Medicine Crossing the Quality Chasm report proposed informed and involved patients as a core value in the health care system. The report stated, “Patients should be given the necessary information and the opportunity to exercise the degree of control they choose over health care decisions that affect them. The health system should be able to accommodate differences in patient preferences and encourage shared decision making.” SDM as an evolution of informed consent has been subsequently endorsed by modern legal scholars.

The bidirectional exchange of information, including information shared by the patient about their values and preferences, is what separates SDM from unidirectional patient education. When clinicians try to guess what patients value, they can be wrong. Mulley et al have termed this form of diagnostic error a “preference misdiagnosis,” which can lead to an intervention that an informed patient would not want.

### Patient Decision Aids to Facilitate SDM

According to the International Patient Decision Aids Standards (IPDAS) Collaboration, “Patient decision aids are tools designed to help people participate in decision making about health care options. They provide information on the options and help patients clarify and communicate the personal value they associate with different features of the options.” Thus, patient decision aids (PDAs) are meant to support SDM by providing patients with information about their condition and management options and helping them clarify their values. While SDM can occur without decision aids, use of these tools makes patients’ values and preferences more transparent. The IPDAS Collaboration has developed standards for PDAs that have served as a basis for certification programs. PDAs (usually lacking a values clarification component, a feature of PDAs that help patients clarify and communicate their personal values related to the decision) may also be used to facilitate SDM discussions. The USPSTF has produced 2 conversation guides to help clinicians and patients discuss HIV preexposure prophylaxis (PrEP) and medications to prevent breast cancer; others are planned.

Numerous randomized trials have examined the outcomes of SDM supported by PDAs compared with usual care. Cochrane Collaboration systematic reviews and meta-analyses have summarized the results of trials of PDAs for people making decisions about screening or treatment. The most recent Cochrane review included 105 trials involving 30,034 participants and addressed 50 health decisions. Decision aids were significantly associated with increased participants’ knowledge (mean difference, 13.3 on a scale of 0-100 [95% CI, 11.3-15.2]) in 52 studies that included 13,316 participants, based on evidence rated as high quality; and were associated with an increased proportion of participants who were more active in decision-making, with a relative risk of 1.28 (95% CI, 1.05-1.55) across 15 studies that included 30,099 participants. In addition, the review concluded that PDAs were significantly associated with improved accuracy of participants’ perceptions of their risks and the congruency between their informed values and choices, decreased decisional conflict (ie, feeling uninformed), reduced indecision about personal values, and a reduced proportion undecided about treatment. In 10 trials that involved 12,068 participants, the median consultation length was 2.6 minutes longer (7.5% increase) with a PDA vs usual care (median consultation time, 24 minutes with PDA vs 21 minutes with usual care).

Measures of the quality of preference-sensitive decisions that focus on whether patients are informed and involved have been developed and are being increasingly deployed in studies of PDAs. One approach combines measures of “gist” knowledge of key facts and a 4-item Shared Decision Making Process Scale that has been extensively validated.

### Generalizability of SDM

Concerns have been raised that SDM is not practical for all patients, given the broad diversity of the US population and the challenges of lower health literacy and numeracy. In a systematic review, use of PDAs in what the authors defined broadly as “socially disadvantaged” populations had a salutary effect on patient knowledge similar to that in the Cochrane review. Eleven trials with 36,191 participants showed an improvement in mean knowledge scores with PDAs (mean difference, 13.9 on a scale of 0-100 [95% CI, 9.0-18.8]). The meta-analysis also showed significant improvements in patient-clinician communication, reduced decisional conflict, and fewer participants remaining undecided. However, only 3 trials reported patient participation in care, with 2 showing significant improvements and 1 not. The reporting was not sufficiently detailed to permit a pooled analysis. A cohort study of 3001 patients participating in SDM with PDAs in 6 US primary care practices found similar positive reactions and improvements in knowledge across the spectrum of age, sex, and educational level, but the study included too few Black, Indigenous, and Latinx individuals to enable making separate conclusions for these populations.

Many authors have suggested that SDM may be useful for reducing health inequities. In one pair of studies, the same PDA addressing major joint replacement resulted in a substantial decrease in knee arthroplasty in a largely White, well-educated patient
population (n = 7727) in a Washington State prepaid health plan,30 but a significant increase in knee arthroplasty among Black patients (n = 336) in Philadelphia-area clinics, a population with historically low arthroplasty rates.31 However, in general, empirical evidence that SDM supported by pDAs can advance health care equity is lacking, and more evidence is needed to address barriers and facilitators for Black, Indigenous, and Latinx people. Some barriers that have been identified include lack of information, lack of access, SDM communication, and mistrust.32

### Implementing SDM for Different USPSTF Grades

The USPSTF assesses the evidence of benefits and harms of preventive services, based on an analytic framework and key questions addressed by a systematic review performed by an AHRQ-funded Evidence-based Practice Center. Ultimately, the USPSTF categorizes the net benefit of the preventive service for a particular population as substantial, moderate, small, zero, or negative. The USPSTF also categorizes the certainty of the estimated net benefit, based on the evidence quality, as high, moderate, or low. The assessments of net benefit and certainty translate into letter grades for recommendations of A, B, C, or D.33 If certainty is low, an “Insufficient Evidence” statement (I statement) is issued. Table 1 provides an example of each type of recommendation from the USPSTF portfolio, including the population addressed and the exact wording. These examples could help facilitate discussion of the role of SDM for each type of recommendation.

### A and B Recommendations

An A recommendation reflects a USPSTF assessment of high certainty of a substantial net benefit, while a B recommendation reflects moderate or high certainty of at least a moderate benefit (Table 1). Some patients will have values and preferences, including their perception of the magnitude of their risk of a condition (such as HIV infection or breast cancer), or the benefits they may gain, that make these preventive services less of a priority for them. Clinicians should generally recommend these services, with a discussion of the rationale, but should understand that some patients will choose not to receive them. For example, increasing evidence suggests that decisions about HIV PrEP34 and medications to reduce breast cancer risk35 are preference sensitive.

The A recommendation for HIV PrEP and the B recommendation for medications to reduce breast cancer risk (Table 1) start with the phrase, “The USPSTF recommends that clinicians offer...”, wording that has sometimes created confusion. Recommendation letter grades apply to the preventive services themselves, and not just to the act of offering them. USPSTF evidence reviews address the benefits and harms of services as delivered, not as offered. Going forward, for clarity the USPSTF recommendation statements will use the terminology of recommending A and B services, but clinicians should discuss and decide with patients about whether to provide these services.

Clinical judgment is important in deciding whether and how SDM is necessary for a particular A or B recommendation. For example, the USPSTF gives an A recommendation to screening for hypertension in adults with office blood pressure measurement and obtaining blood pressure measurements outside of the office for diagnostic confirmation. Office blood pressure measurement is so widely accepted that SDM is not required unless the blood pressure is elevated, when SDM about the importance of out-of-office confirmation should ensue. Similarly, the USPSTF gives a B recommendation to behavioral counseling for sexually active adolescents and adults who are at increased risk for sexually transmitted infections.

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**Table 1. Examples of Task Force Recommendations Across the Spectrum of Letter Grades**

<table>
<thead>
<tr>
<th>Preventive service topic</th>
<th>Population</th>
<th>Letter grade</th>
<th>Recommendation</th>
</tr>
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<tbody>
<tr>
<td>Prevention of HIV infection: preexposure prophylaxis</td>
<td>Persons at high risk of HIV acquisition</td>
<td>A</td>
<td>The USPSTF recommends that clinicians offer PrEP with effective antiretroviral therapy to persons who are at high risk of HIV acquisition.</td>
</tr>
<tr>
<td>Breast cancer: medication use to reduce risk</td>
<td>Women at increased risk for breast cancer aged 35 y or older</td>
<td>B</td>
<td>The USPSTF recommends that clinicians offer to prescribe risk-reducing medications, such as tamoxifen, raloxifene, or aromatase inhibitors, to women who are at increased risk for breast cancer and at low risk for adverse medication effects.</td>
</tr>
<tr>
<td>Prostate cancer: screening</td>
<td>Males aged 55-69 y</td>
<td>C</td>
<td>For males aged 55 to 69 y, the decision to undergo periodic PSA-based screening for prostate cancer should be an individual one. Before deciding whether to be screened, males should have an opportunity to discuss the potential benefits and harms of screening with their clinician and to incorporate their values and preferences in the decision. Screening offers a small potential benefit of reducing the chance of death from prostate cancer in some males. However, many males will experience potential harms of screening, including false-positive results that require additional testing and possible prostate biopsy; overdiagnosis and overtreatment; and treatment complications, such as incontinence and erectile dysfunction. In determining whether this service is appropriate in individual cases, patients and clinicians should consider the balance of benefits and harms based on family history, race and ethnicity, comorbid medical conditions, patient values about the benefits and harms of screening and treatment-specific outcomes, and other health needs. Clinicians should not screen males who do not express a preference for screening.</td>
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**Abbreviations**: ECG, electrocardiography; PrEP, preexposure prophylaxis; PSA, prostate-specific antigen; USPSTF, US Preventive Services Task Force.

*Details about all USPSTF recommendations that appear in this table (and throughout the article) can be found at [https://www.uspreventiveservicestaskforce.org/uspsftopic_search_results?topic_status=P](https://www.uspreventiveservicestaskforce.org/uspsftopic_search_results?topic_status=P) and at [https://jamanetwork.com/collections/44068/united-states-preventive-services-task-force](https://jamanetwork.com/collections/44068/united-states-preventive-services-task-force)*
For this recommendation, SDM would be incorporated into the discussion about changing behavior, after ascertaining the level of risk.

**C Recommendations**
The USPSTF issues a C recommendation for a preventive service when there is moderate or substantial certainty of a small net benefit. The C recommendation for prostate cancer screening with the prostate-specific antigen (PSA) test illustrates the prototypical role for SDM for a service judged to have a small net benefit. Patient values and preferences, as well as patient characteristics that can raise the risk of prostate cancer, such as being a Black individual or having a family history of prostate cancer, have a role in determining whether the net benefit for an individual male, rather than the population of males, may be positive or negative. Thus, the recommendation emphasizes the importance of SDM for arriving at a high-quality decision about PSA screening with an individual male. The recommendation suggests that PSA screening should be raised by clinicians and routinely discussed with males aged 55 to 69 years. Discussing PSA screening selectively with males who ask about it may lead to health inequities, as better educated, more assertive patients would be more likely to ask, leaving other patients uninformed about the PSA option.

The USPSTF also has produced an infographic illustrating the outcomes of PSA screening to facilitate discussion.36 This infographic is a forerunner of the conversation guides mentioned earlier.

Eder et al37 recently audited 6 USPSTF C recommendations against a previously developed framework that outlined 7 elements of SDM. They found the USPSTF routinely provided information about the patient’s role, the nature of the decision, the benefits and harms, the uncertainties, and the importance of patient preferences, although less often on the alternatives (such as no screening) or determining the patient’s understanding. However, the PSA screening recommendation included all 7 elements.

Not all C recommendations require SDM. For example, the USPSTF recommends that clinicians selectively offer counseling about minimizing UV radiation exposure to adults older than 24 years with fair skin types. In this case, a clinician would simply discuss UV protection, rather than engaging patients in a decision about whether to discuss it.

<table>
<thead>
<tr>
<th>Letter grade</th>
<th>SDM approach</th>
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<tbody>
<tr>
<td>A</td>
<td>Present the preventive service as a recommendation, given high certainty of a substantial net benefit. Briefly discuss how the patient fits the population for which the recommendation is intended and the options (such as direct visualization test vs stool tests for colorectal cancer screening) as well as pros and cons. Assess patient preferences; it is likely that most patients would agree to the service. If there is hesitation, assess understanding and discuss concerns.</td>
</tr>
<tr>
<td>B</td>
<td>Present the preventive service as a recommendation. Given the lower certainty and/or smaller net benefit than an A recommendation, there is more room for patient preferences to influence the decision. As with A recommendations, discuss the options and the pros and cons and assess preferences. Most patients would accept the service. Again, if there is hesitation, assess understanding and discuss concerns.</td>
</tr>
<tr>
<td>C</td>
<td>C recommendation means moderate or high certainty of a small net benefit and has the most room for patient preferences to influence the decision. Often, conversations about these services, such as PSA screening, will take longer than for A and B recommendations. Once again, present the patient’s eligibility for the service, the options, and the pros and cons. Assess preferences, and check understanding. Some patients, once informed, will choose the service, others will not.</td>
</tr>
<tr>
<td>D</td>
<td>No need to discuss the service unless asked.</td>
</tr>
<tr>
<td>I</td>
<td>Be prepared to discuss the service if asked.</td>
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**D Recommendations**
Preventive services with a D recommendation are judged to have at least moderate certainty of a zero or negative net benefit. Clinicians should not offer these services but should be prepared to discuss these services if patients ask about them. For example, the USPSTF does not recommend discussing or providing ovarian cancer screening to average-risk women without symptoms (Table 1). Clinicians should, however, be prepared to discuss, if women ask, the reasons that screening in women without symptoms is not recommended.

**I Statements**
I statements result when there is insufficient evidence for the USPSTF to make a recommendation for or against a preventive service. An I statement is not the same as a D recommendation. The USPSTF does not recommend for or against services with an I statement. For example, the USPSTF does not recommend for or against screening for atrial fibrillation with electrocardiography (Table 1). However, clinicians should be prepared to discuss the lack of evidence if an asymptomatic patient asks for a screening electrocardiogram.

**Finding Time for Prevention**
In primary care practice, busy clinicians must provide care for patients with acute symptoms, concerns, or illness and chronic conditions, as well as discuss and deliver preventive services. Analyses of the time required to deliver USPSTF A and B recommendations suggest that more than minimal discussion is unrealistic, assuming a single clinician is responsible for implementing the recommendations in a panel of 2500 patients.38 Some clinicians may be concerned that SDM, particularly when patients are eligible for multiple recommendations, will take too much time. However, these conversations can often be brief (Table 2). Clinicians should not eliminate reasonable options to save time (such as offering only colonoscopy for colorectal cancer screening) or assume they know patients’ preferences without asking, risking a preference misdiagnosis. Although clinical trials have shown that an SDM approach requires...
just a few extra minutes, every minute is precious in primary care. To ensure adequate time to help patients make good decisions about preventive services, clinicians can reprioritize time spent within traditional visits or develop approaches for how to address prevention outside of in-person, face-to-face visits.

Some clinicians schedule patients for prevention-focused visits, often annually. Discussing evidence-based prevention at those visits may be the best use of this time. Preparing patients by sending them pDAs prior to visits could potentially increase efficiency, as can electronic health record reminders for overdue services. When a patient is eligible for multiple preventive services, discussing the most important ones first, and saving additional discussions for a future visit, may be a good strategy. Documentation of the discussions can help clinicians remember what has already been discussed. Some evidence from 2008 suggests that such documentation, particularly if a pDA is used, may provide medical-legal protection, for instance, in the event a dispute arises about whether the discussion occurred. Recent changes in coding and billing for Evaluation and Management services require billing based on time or complexity of medical decision making, a change that supports preventive services discussions.

Thinking outside the constraints of face-to-face visits, discussions about preventive services also could be conducted using proactive outreach, working from population-based registries to contact patients eligible for services. This approach may help address inequities in the delivery of preventive services. Other members of the health care team may be trained to help patients make decisions about preventive care. For example, in a study by Moin et al, a single visit with a pharmacist using a pDA about diabetes prevention for 351 people with prediabetes increased the uptake of lifestyle modification and led to greater weight loss than usual care. In addition, in many health systems, decision aids can be provided through electronic medical record portals.

**Conclusions**

The USPSTF values and affirms that patients have the right to be informed and participate in their preventive care decisions. This core value is an ethical imperative. SDM is an approach that leads to patients being more informed and involved in their health care decisions. SDM has different roles across the spectrum of USPSTF recommendations. Going forward, USPSTF recommendation statements will focus on the delivery of the preventive service. However, clinicians should offer preventive services, and patients can make an informed decision to accept or decline them.

**REFERENCES**


9. Lee CN, Hultman CS, Sepucha K. Do patients and providers agree about the most important facts and goals for breast reconstruction decisions? Ann Plast Surg. 2010;64(5):563-566. doi:10.1097/SAP.0b013e3181c0279


