Clinical Decision Support Innovation Collaborative

How Patient-Centered Clinical Decision Support Can Strengthen Shared Decision Making

This resource describes shared decision making, patient-centered clinical decision support (PC CDS), and how these two concepts can work together to help clinicians deliver patient-centered care.

Who is this resource for? **Patients and caregivers** (family members and other caregivers) can learn how digital health tools can help in making decisions with a clinician. **Clinicians** (physicians, nurses, specialists, other care team members) can see how tools support data collection, communication, and information exchange for shared decision making. **CDS developers** can better understand what PC CDS functionality is important for shared decision making.

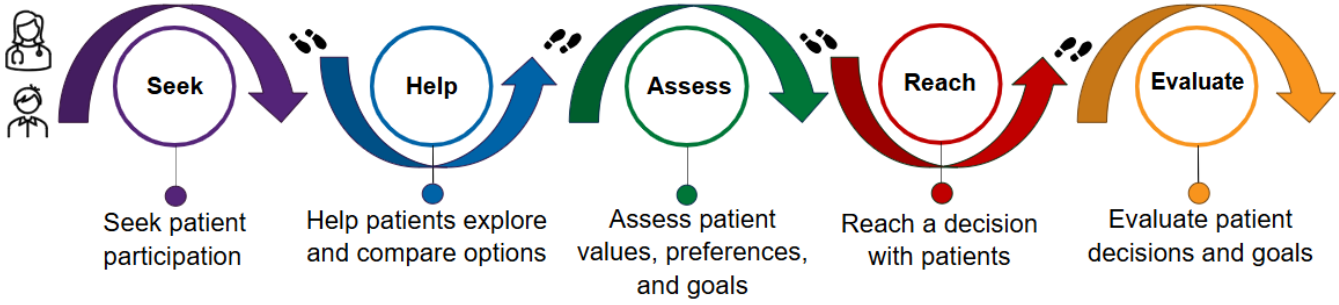
What Is Shared Decision Making?

Shared decision making is a collaborative process among patients, caregivers, and clinicians. In shared decision making, patients are asked about their preferences,[1] values, and goals that are relevant for significant medical decisions, like choosing treatments or tests.[2] These individual factors are considered along with clinical guidance to make the best decision for the patient, which includes taking no action.[3] Shared decision making is an ongoing process that may occur during or between medical visits.

What Is the SHARE Approach?

The SHARE Approach outlines five shared decision making steps (Exhibit 1). It describes how patients, caregivers, and clinicians can explore the benefits, harms, and risks of different options while considering what matters most to patients (i.e., preferences, values, goals).[4]

Exhibit 1. SHARE Approach Steps



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What Is Patient-Centered Clinical Decision Support?

PC CDS is a spectrum of patient-facing and clinician-facing digital tools (mobile applications [apps], patient portals, clinician dashboard displays) designed to help patients, caregivers, and care teams make health-related decisions. PC CDS significantly incorporates four patient-centered factors.[5]

- ***Knowledge*** – PC CDS draws from evidence-based research findings, including patient-centered outcomes research (PCOR) and comparative effectiveness research (CER).
- ***Data*** – PC CDS incorporates patient preferences, patient-reported outcomes, other patient-generated health data, and data about each patient, including demographics and health-related social needs.
- ***Delivery*** – PC CDS directly engages patients or caregivers via apps, patient portals, text messaging, and in different settings.
- ***Use**** – PC CDS facilitates patient-clinician conversations that explore and compare benefits, harms, and risks to make sure mutually acceptable decisions are made.

**"Use" refers to the shared decision making process and is assumed in each step below.*

How Can PC CDS Support Shared Decision Making?

Below, we outline how PC CDS tools can support each step of the SHARE Approach using the PC CDS factors *knowledge*, *data*, and *delivery*. Here, "patient" or "patient-facing" refers to both patients and caregivers.

Clinician tells patient a decision needs to be made, or patient decides to seek care.

Clinician supports their patient by establishing a partnership that fosters trust.

Knowledge: Reminders or recommendations can make sure patients or clinicians initiate a shared decision making conversation based on patient-centered research.

Data: Tools collect patient health history, demographics, health needs, and decision making preferences (e.g., whom to involve, preferred ways to make decisions, communicate, or seek care) to indicate when patients need to make a health-related decision.

Delivery: Patient- or clinician-facing tools can tell patients and clinicians that a decision should be made and help establish a patient-clinician partnership. Patient-facing tools can prompt patients to seek care or consult their care team and prepare them for shared decision making.

Clinician presents options to patient, before, during, or virtually between visits.

Clinician and patient discuss the benefits, harms, and risks of each option.

Knowledge: Tools can share information on patient-centered options that are backed by research.

Data: Tools can use data about each patient to personalize the risks, benefits, and potential harms of options.

Delivery: Clinician-facing tools can help clinicians present an appropriate range of options to patients. Patient- and clinician-facing tools can help patients and clinicians talk through options and the research findings supporting those options.

Patient is asked what matters most to them in thinking about their options.

Patient and clinician consider preferences, values, and goals when weighing options.

Knowledge: If clinically appropriate, tools can signal when patients should provide care-relevant preferences, values, and goals and when clinicians should review them.

Data: Tools can collect and present patient values; care and quality-of-life preferences; and goals to help clinicians and patients consider the tradeoffs of various options in the context of patient needs.

Delivery: Patient-facing tools can ask patients about relevant preferences, values, and goals. Clinician-facing tools can send patient information to clinicians to guide decisions.

Clinician asks patient which option they prefer (including no action) and whether they need additional information or wish to consult others before deciding.

Patient makes their care decision with their clinician.

Knowledge: Tools can support decision making by providing patients and clinicians with recommendations supported by research findings.

Data: Tools can help patients and clinicians reach a decision that is guided by patient-provided data, including values; care or treatment preferences; and goals related to a decision.

Delivery: Tools that are both patient- and clinician-facing can facilitate the patient-clinician partnership needed to reach a health-related decision.

Clinician and patient set a plan to review a goal in the future.

They monitor progress towards clinical and personal goals and work together to manage barriers to carrying out a decision. They reconsider other options, if the preferred option no longer works, needs to be updated, or if patient goals change.

Knowledge: If new patient-centered research that is relevant to a decision becomes available, tools can suggest that patients and clinicians revisit a decision or goal.

Data: Tools can collect patient data needed to monitor progress towards clinical or personal goals. Data can help identify necessary changes if a patient regrets a decision or updates their goals or if new healthcare resources (e.g., tests, equipment) that are more in line with a patient's preferences become available.

Delivery: After an initial decision, patient- or clinician-facing tools can help patients and clinicians decide whether other options should be considered. Patient- and clinician-facing tools can support an iterative shared decision making process between everyone involved.

A PC CDS Example: CDS for Chronic Pain Management

The AHRQ-funded project **CDS for Chronic Pain Management** is one example of how PC CDS can support shared decision making.[6,7]

The project created two tools to support shared decision making for patients with chronic pain: 1) *MyPain*, a patient-facing patient portal app that collects data from patients and sends them relevant treatment information, and 2) *PainManager*, a clinician-facing app in the electronic health record (EHR) that presents patients' *MyPain* and EHR data in a visual dashboard and develops and sends recommendations and reminders to clinicians based on patient data.

These PC CDS tools can help facilitate the five steps of the SHARE Approach.

1. **Seek patient participation.** Patients submit data in the *MyPain* app (e.g., pain symptoms, decision making and treatment preferences, medical history) so that the shared decision making process begins with consideration of patients' needs. *PainManager* sends clinicians reminders to review the patient-provided data in the EHR. It also lets clinicians know that a decision needs to be made and helps them prepare for a shared decision making conversation.
2. **Help patients explore and compare treatment options.** *MyPain* sends educational materials to patients customized for their symptoms and options. This helps patients prepare to talk to their clinician. Using data submitted by patients to *MyPain* and existing evidence-based clinical guidelines, *PainManager* sends personalized pain treatment options to clinicians. These recommendations help clinicians guide a conversation about a patient's options.
3. **Assess patient values and preferences.** *MyPain* asks patients to enter their decision making and treatment preferences before an appointment. To help clinicians offer appropriate options, *PainManager* shares the preferences and other patient-provided information with the clinician in an EHR dashboard.
4. **Reach a decision.** By providing pre-visit educational materials, *MyPain* gives patients the information they will need to reach a decision during their clinical visit. *PainManager* delivers reminders to clinicians during a visit to review the *MyPain* data to help with shared decision making. For patients taking an opioid, *PainManager* also helps clinicians calculate safe and appropriate changes to medication doses using evidence-based opioid prescribing guidelines.
5. **Evaluate a decision.** Clinicians record the shared decision making session and treatment decision in *PainManager*. *PainManager* then saves this information in the EHR. Clinicians can access this information in the future to support ongoing shared decision making and determine whether they need to reconsider a decision or goal with the patient.

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ABOUT THE CDSiC

The Clinical Decision Support Innovation Collaborative (CDSiC) aims to advance the design, development, dissemination, implementation, use, measurement, and evaluation of evidence-based, shareable, interoperable, and publicly available patient-centered clinical decision support (PC CDS) to improve health outcomes of all patients by creating a proving ground of innovation. This resource describes how shared decision making and PC CDS can work together to help clinicians deliver patient-centered care.

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