Clinical Decision Support
Innovation Collaborative

Incorporating Patient Preferences in Patient-Centered Clinical Decision Support

Patient preferences can support a patient’s care experience and healthcare decision making. This resource shows different methods and timepoints in a patient’s care journey when their preferences can be collected and used in patient-centered clinical decision support (PC CDS).

What Is PC CDS?

Making healthcare decisions can be complex. There is often a large amount of information to consider, such as test results, treatment options, risks, and benefits. Sorting through this information and deciding what is most appropriate for a patient’s situation can be challenging.

Clinical decision support (CDS) provides timely information, usually during care, to help inform decisions about a patient’s care.[1] CDS tools provide patients, caregivers, care team members, and others with patient-specific knowledge or information across platforms such as electronic health records (EHRs), patient portals, and mobile applications (apps).

CDS is patient-centered when it significantly incorporates four factors:

1) Using evidence-based research findings that include patient-centered outcomes (**knowledge**),
2) Incorporating information provided directly by and important to patients (**data**),
3) Directly engaging patients and caregivers across a range of settings (**delivery**), and
4) Facilitating patients’, caregivers’, and clinicians’ exchange of information so that they can make mutual care decisions (**use**).

By including patient-centered factors, PC CDS helps patients, caregivers, and care team members make the best decisions and personalize care, considering an individual’s unique circumstances and preferences.

AHRQ Agency for Healthcare Research and Quality

AHRQ Pub. No. 25-0055
June 2025

What Are Patient Preferences?

Patients have different views on how they would like to receive and be involved in their healthcare. These views are also known as patient preferences, which provide the basis for how patients wish to: (1) interact with their clinician, care system, or personal data; (2) choose a particular course of action over others; or (3) prioritize particular aspects or outcomes of healthcare.[2] When patients communicate their preferences, they may be more likely to receive the care that they want and need.[3]

Patient preferences can be grouped into different categories based on what they involve and inform.

Administrative preferences shape how patients interact with the healthcare system. These include a patient's preferred name, the location of the doctor's office a patient would like to visit, whether a patient prefers in-person or virtual appointments, the patient's communication preferences (i.e., whether they prefer notifications via phone, email, or text), or how a patient prefers to view test results.

Routine or preventive care preferences guide routine checkups and preventive care when appropriate, such as screening for certain health conditions.

Treatment preferences inform the type of treatment a patient would like to receive for a condition or disease based on their values and goals.

Why Is It Important To Incorporate Patient Preferences in PC CDS?

Patient preferences may change over time based on a person's health, life circumstances, and personal values. Because of this, it's important to regularly collect and update patient preference information to inform decision making over time**.** How often this happens can depend on a person's health situation.

When doctors, nurses, and other care team members have access to patient preference information, they can better understand a patient's unique needs, desires, and goals. Discussing patient preferences during healthcare decision making can improve patient satisfaction and encourage acceptance of care plans. Ultimately, care that aligns with patient preferences may lead to better health.[4,5]

PC CDS tools can help collect patient preference data and apply this information for clinical care, making sure healthcare decisions are more personalized and meaningful (i.e., aligning with what matters most to the patient).

How Can Patient Preference Data Be Collected?

Patients may be asked to provide their preferences at different times using a variety of tools. Preference data can be collected at three main timepoints: before a clinical visit (i.e., outside of a clinical setting); during a clinical visit (i.e., during check-in, in the waiting room, or with a care team member), and after a clinical visit (i.e., outside of a clinical setting).[6]

Patient preference data can be collected by patient-facing mobile apps, email or paper surveys, text messaging, tablets, kiosks, or face-to-face discussions. The timing and way preferences are collected may depend on the kind of preference information **(Exhibit 1)** needed to help with a specific healthcare decision.

Exhibit 1. Timing for Collecting Patient Preferences by Type

Administrative preferences are typically collected when a patient first establishes care with a clinician, whether or not it is tied to a visit. Once under a clinician’s care, these preferences are periodically updated to align with a patient’s evolving needs and guide interactions across the healthcare system.

Routine or preventive care preferences are often collected during regular appointments, such as wellness visits or annual check-ups, when patients need specific preventive care such as screenings.

Treatment preferences are usually gathered in the context of decision making, such as treatment planning, ensuring that the chosen treatment fits the patient's values and goals.

Sharing and Using Patient Preference Data for PC CDS: Three Example Patient Journeys

Below, we provide three examples to show how preferences might be collected for PC CDS depending on the type of healthcare decision. Each diagram shows two rows, one for the patient or caregiver steps and another row for the PC CDS technology. The steps are shown across three timepoints–before, during, and after a healthcare visit. Each box shows the different actions the patient, caregiver, clinician, and/or PC CDS technology may take during the collection of patient preferences.

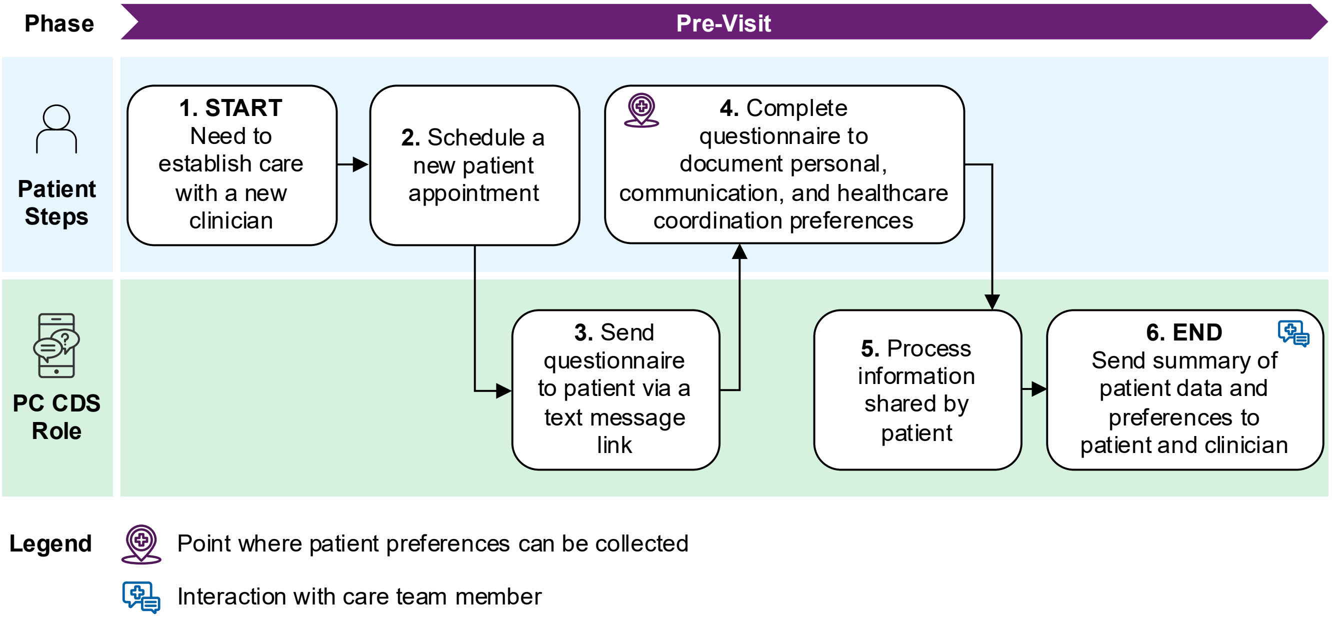
Note: These are just examples to help explain how patient preference collection and use for PC CDS could work. They are not meant to suggest that care should be done this way or that this is how it currently happens in all settings.

Care Scenario 1: Sharing Administrative Preferences Before a Clinical Visit for a Personalized Care Experience

Honoring preferences such as preferred name, language, and type of communication allows for personalization and builds trust between a patient and their clinician.[2]

Exhibit 2 shows how **administrative preferences** may be collected and used before a clinical visit. In this scenario, a patient is setting up care with a new doctor. A goal for the patient's first visit with the doctor is to record and use the patient's administrative preferences (e.g., preferred name, language, and communication method) to help make the care experience more comfortable and personalized. The patient schedules a new patient visit using their portal or calling the doctor's office. Then they receive a text message with a link to a short form to fill out before the visit. Using a PC CDS tool in their patient portal, the patient provides information about themselves before the appointment, including their administrative preferences. The PC CDS tool then sends a summary of the patient's data and preferences to their clinician.

Exhibit 2. Sharing Administrative Preferences Before a Clinical Visit for a Personalized Care Experience

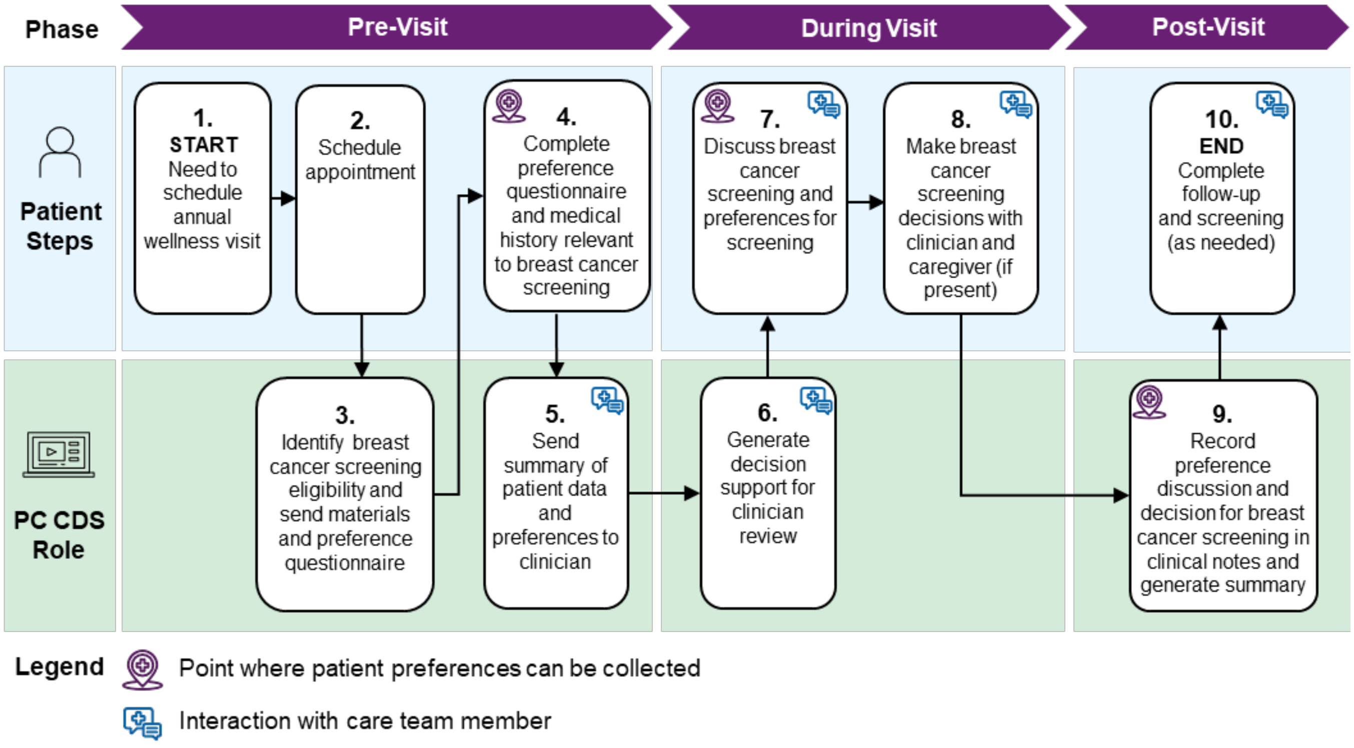


Care Scenario 2: Sharing Patient Preferences Related to Routine or Preventive Care To Make an Informed Decision About Regular Mammograms

Before regular mammograms (x-ray examination of the breast) for breast cancer screening are initiated, a patient may prefer to discuss the risks and benefits of the procedure.[7]

Exhibit 3 illustrates how **preventive care preferences** may be collected and used to inform decision making about screening for breast cancer. A patient's goal for their upcoming annual wellness visit is to make an informed choice about breast cancer screening that considers their preferences. The patient schedules an annual wellness visit with their doctor, and upon recently turning 40 years old, receives informational materials about screening for breast cancer in their patient portal. After reading these materials, they provide their preferences about breast cancer screening using the PC CDS tool in their patient portal. The PC CDS tool then shares a summary of their data and preferences and generates decision support guidance for their doctor to review. During the visit, the patient and their doctor discuss the patient's preferences and risk factors like family history to help make a decision about screening for breast cancer. After the visit, the doctor records the preference discussion and decisions related to breast cancer screening in the appointment notes.

Exhibit 3. Sharing Preferences Related to Routine or Preventive Care To Make an Informed Decision About Regular Mammograms

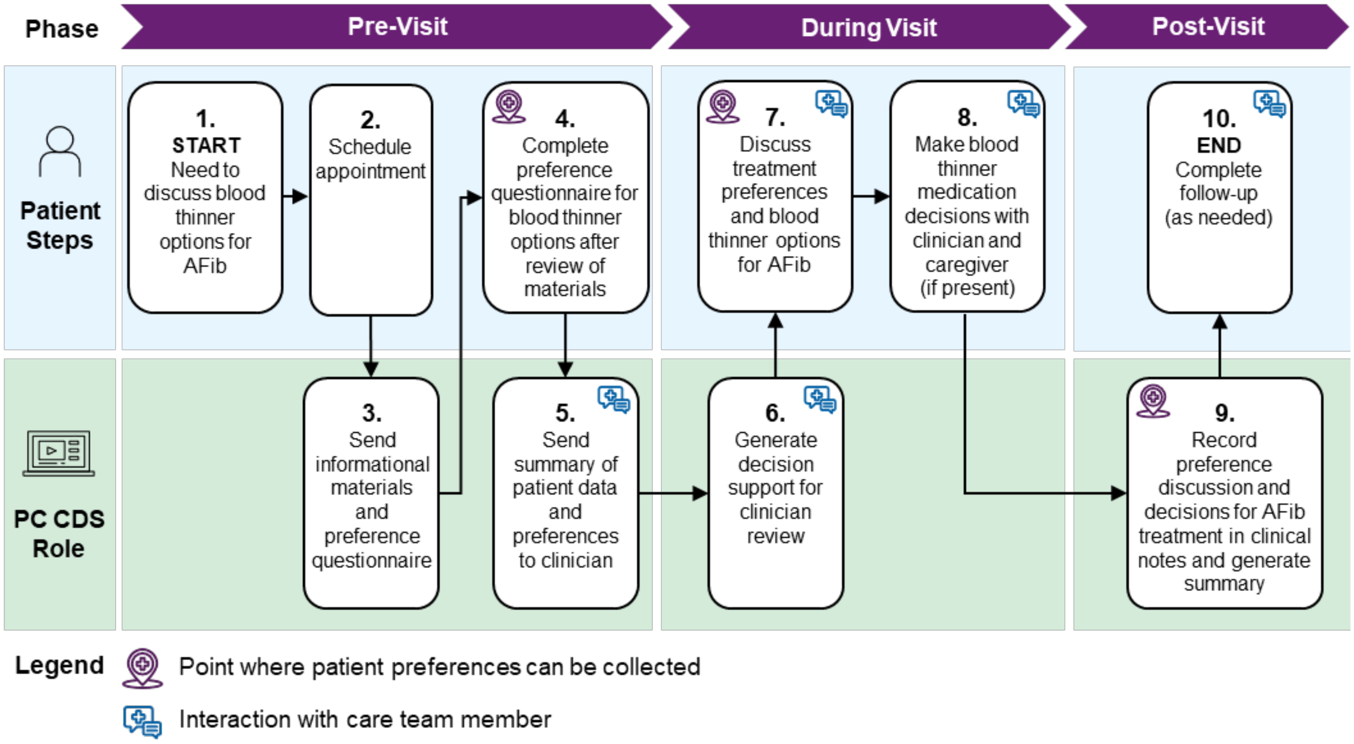


Care Scenario 3: Sharing Patient Preferences Related to Treatment Planning To Make an Informed Choice About Blood Thinner Medication

There are several anticoagulation therapy options—also known as blood thinners—which help to reduce the risk of stroke for patients with atrial fibrillation (AFib). Discussing patient preferences can help patients and care teams select the option that fits best. For example, some patients may prefer taking the medication once a day, while others may want to prioritize avoiding side effects when taking with food or other medicine. Minimizing the need for frequent blood tests can also be a deciding factor. Additionally, many patients might prefer more affordable options with lower out-of-pocket costs when selecting medication.[8]

Exhibit 4 shows how a patient's **treatment preferences** can affect the choice of blood thinners. A patient with AFib schedules a visit with their doctor. A goal of the care visit is for the patient to make an informed choice on a particular blood thinner that considers their preferences. Before the visit, the patient reads informational materials about blood thinner options. The patient provides information about their clinical conditions and preferences for using blood thinner medications (e.g., preference for once daily medication or comfort with injections) in their patient portal. The PC CDS tool then shares a summary of this information and generates decision support for their doctor to review. During the visit, the patient and their doctor discuss their treatment preferences related to taking blood thinners to find the best option for the patient. After the visit, the doctor records the preference discussion, which includes the blood thinner decision and any changes to their treatment preferences in the appointment notes.

Exhibit 4. Sharing Patient Preferences Related to Treatment Planning To Make an Informed Choice About Blood Thinner Medication



Conclusion

Patient preferences can help care team members understand a patient’s unique needs and goals that should be considered when making healthcare decisions. While PC CDS may not be able to address or incorporate all preferences, patients should be encouraged to share key preferences with their care team to help improve the care they receive and their healthcare experience. PC CDS that uses relevant patient preferences helps tailor clinical care and keep the patient at the center of health-related decision making.

PREPARED BY

Avantika Shah, M.P.H., Sagarika Das, M.P.H., Lindsay Abdulhay, M.P.H., Jessica Ancker, Ph.D., M.P.H., FACMI, Angela Dobes, M.P.H., Priyanka J. Desai, Ph.D., M.S.P.H., CDSiC Trust and Patient-Centeredness Workgroup, and Prashila M. Dullabh, M.D., FAMIA

WORKGROUP CONTRIBUTORS

Fawaz Al Ammary, M.D., Ph.D., FAST, Stephanie L. Ballard, Pharm.D., BCPS, Kevon-Mark Jackman, Dr.P.H., M.P.H., Sarah Krug, M.S., Ny'Nika McFadden, Ph.D., Kistein Monkhouse, M.P.A., Elizabeth Oehrlein, Ph.D., M.S., John Valenta, Ph.D., Nicole Werner, Ph.D., M.S.

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 topic highlight serves as a concise, visual resource summarizing and refining findings from the CDSiC's patient preferences-focused products, emphasizing key touchpoints for capturing and integrating patient preferences into care decisions to enhance the design and implementation of PC CDS tools and workflows.

FUNDING STATEMENT

This project was funded under contract number 75Q80120D00018 from the Agency for Healthcare Research and Quality (AHRQ), U.S. Department of Health and Human Services (HHS). The opinions expressed in this document are those of the authors and do not reflect the official position of AHRQ or HHS.

PUBLIC DOMAIN NOTICE

SUGGESTED CITATION

Shah A, Das S, Abdulhay L, Ancker J, Dobes A, Desai PJ, CDSiC Trust and Patient Centeredness Workgroup, and Dullabh PM. Incorporating Patient Preferences in Patient-Centered Clinical Decision Support. Prepared under Contract No. 75Q80120D00018. AHRQ Publication No. 25-0055. Rockville, MD: Agency for Healthcare Research and Quality; June 2025.

References

[1] Clinical Decision Support. Content last reviewed September 2023. Agency for Healthcare Research and Quality, Rockville, MD. Available at: https://www.ahrq.gov/cpi/about/otherwebsites/clinical-decision-support/index.html.

[2] Kuperman G, Nanji K, Cope EL, Dullabh PM, Desai PJ, Catlett M, Weinberg S, Hoyt S, and the CDSiC Outcomes and Objectives Workgroup. Outcomes and Objectives Workgroup: Taxonomy of Patient Preferences. Prepared under Contract No. 75Q80120D00018. AHRQ Publication No. 23-0038-EF. Rockville, MD: Agency for Healthcare Research and Quality; May 2023.

[3] Ruland CM. Improving patient outcomes by including patient preferences in nursing care. Proc AMIA Symp. 1998:448-52. PMID: 9929259; PMCID: PMC2232124.

[4] Baker A. Crossing the quality chasm: a new health system for the 21st century. *BMJ*. 2001;323(7322):1192. doi:10.1136/bmj.323.7322.1192.

[5] Scarlet S, Jonhson-Mann CN, Hoffman MR, Horn C, Shipper III, ES. Respect for whose autonomy? Communicating with patients regarding trainee involvement. American College of Surgeons. August 1, 2018. Accessed April 24, 2024. https://www.facs.org/for-medical-professionals/news-publications/news-and-articles/bulletin/2018/08/respect-for-whose-autonomy-communicating-with-patients-regarding-trainee-involvement/.

[6] Dullabh P, Ancker J, Peterson C, Abdulhay L, Shah A, Dobes A, Desai P, and the CDSiC Trust and Patient-Centeredness Workgroup: Capturing Patient Preferences for Patient-Centered Clinical Decision Support Within Patient Lifeflows and Clinical Workflows. Prepared under Contract No. 75Q80120D00018. AHRQ Publication No. 24-0062-5. Rockville, MD: Agency for Healthcare Research and Quality; August 2024.

[7] Screening for Lung Cancer with Low Dose Computed Tomography (LDCT). Centers for Medicare and Medicaid Services. 100-3, 210.14. 10 Feb 2022. Available at: https://www.cms.gov/medicare-coverage-database/view/ncd.aspx?ncdid=364&ncdver=2.

[8] Wilke T, Bauer S, Mueller S, Kohlmann T, Bauersachs R. Patient Preferences for Oral Anticoagulation Therapy in Atrial Fibrillation: A Systematic Literature Review. Patient. 2017 Feb;10(1):17-37. doi: 10.1007/s40271-016-0185-9. PMID: 27461276; PMCID: PMC5250672.