



Enabling Efficient Clinician Workflows, **Shared Decision Making**, and More Satisfied Patients

Welcome to HealthDecision®, a software platform of decision support tools that enables clinicians and patients *together* to explore the benefits and harms of medical options, when the “best” option is not clear. We believe the best decisions combine the patient’s preferences with the clinician’s expertise.

It’s About Conversation, Not Just Information

This collaborative process between a clinician and patient to arrive at a healthcare decision together is known as Shared Decision Making (SDM). SDM is being added to many healthcare guidelines and is increasingly being required for reimbursement of procedures. While many other SDM efforts narrowly focus on printed and online patient education aids, HealthDecision believes that the true value of SDM lies within the conversation between a clinician and patient.

Healthcare decisions can be incredibly challenging: for patients, the medical terminology may be difficult to understand, the math of risk can be complicated, and the implications of available options may be hard to fully comprehend.

HealthDecision provides clinicians with decision support, combining patient-specific medical data with the latest medical guidelines and

calculators to personalize a patient’s risk analyses. Visual presentation of outcomes, cited as a favorite feature of the tools by clinicians and patients alike, is educational, easy-to-understand, and facilitates the discussion of the benefits and harms to arrive at mutual agreement on a treatment plan.

HealthDecision Builds Trust

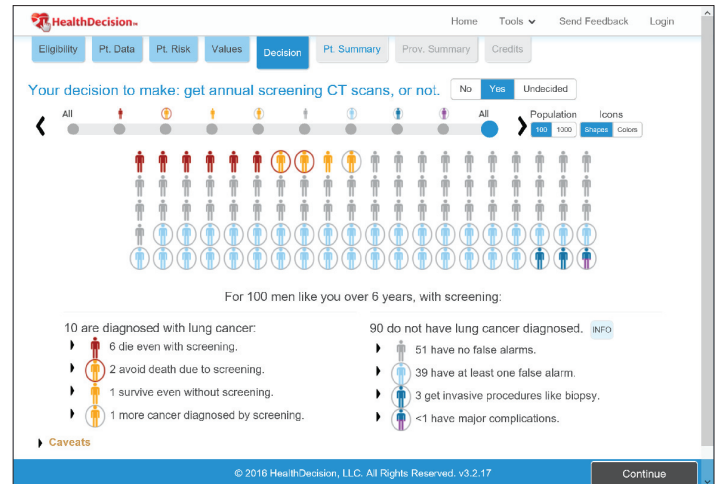
- Tools are developed by clinicians who deeply understand the subject matter.
- Integration of the medical literature incorporates the latest guidelines, risk scores, and analyses.
- Decades of clinical experience distill the key steps to guide patients through the decision-making process.
- Research-proven, best practice risk communication visuals¹ display both the positive and negative outcomes of a particular decision on a single graphic for ease of comparison. These visual icon arrays aid patients in understanding the complexities of different decisions.
- These tools can be integrated into an existing EHR workflow and already have been used for over 6 years, reaching a rate of more than 22,000 patients a year.



“HealthDecision helps me put shared decision making at the forefront of my counseling.”

– Sarina Schrager, MD, UW Health⁵

▲ Accessed within the EHR system, HealthDecision automatically pulls in patient data. Here, the Lung Cancer Screening tool calculates the patient's pack years of smoking.



▲ HealthDecision provides a framework to guide conversations about healthcare options, then calculates and depicts the patient's personalized risks. Surveyed clinicians listed this risk visualization as one of their favorite features within the HealthDecision platform.

Tools That Make a Difference

The HealthDecision platform currently offers the following decision-making tools:

Cardiovascular Risk: Demonstrates benefits and harms of statin medications and the effects of smoking cessation.

The Cardiovascular Risk tool calculates a patient's ASCVD risk for heart disease and stroke in the next 10 years using the 2013 ACC/AHA guidelines. Looks at effects of different statin medications, smoking cessation, or both on cardiovascular event and side effect rates.

Atrial Fibrillation: Demonstrates benefits and harms of anticoagulant medications impacting stroke and bleeding.

The Atrial Fibrillation tool considers risk-specific guideline recommendations from the U.S. ACC/AHA guideline about anticoagulation. Calculates the CHA₂DS₂-VASc and HAS-BLED scores to estimate stroke and bleeding risks at 1, 5, and 10 years and shows the impact of anticoagulants on those risks.

Lung Cancer Screening: Demonstrates benefits and harms of chest CT scans for patients who smoke/have smoked.

The Lung Cancer Screening tool, which takes into consideration age, number of years spent smoking, and current health, and automatically calculates pack-years, determines if the patient is eligible for CT screening. HealthDecision aids clinicians with the SDM conversation and documentation, which is required for CT screening reimbursement from the Centers for Medicare and Medicaid Services (CMS)⁹.

Breast Cancer Screening: Demonstrates benefits and harms of mammogram screening.

The Breast Cancer Screening tool uses the BCSC Risk Calculator to determine the patient's chance of developing breast cancer in the next 10 years and the mortality reduction from annual and biennial screening. Graphical displays simplify explanations of overdiagnosis, false alarms, and mortality reduction.

Ongoing Development

New features and new tools are always in development, and HealthDecision currently is working on osteoporosis, prostate cancer, and diabetes decision-making tools.

The Company has a proven methodology for building clinically robust SDM tools. If you or your institution have a "homegrown" tool you are interested in disseminating within the HealthDecision platform, or if you have a need or idea for a new tool, please contact us at info@healthdecision.com.

HealthDecision Advantages

HealthDecision tools offer advantages across the healthcare spectrum, including administration and research, although the clinician-patient relationship remains at the center of care.

Clinical Advantages

- **Engages Patient, Leading to Higher Satisfaction**

Surveys have consistently indicated that patients want more engagement with their healthcare providers.² In studies at UW Health, 83% of clinicians using HealthDecision tools believed the tools increased or greatly increased patient satisfaction scores (the rest were neutral).⁵ These scores included metrics of clinician communication and patients' likelihood to recommend the clinician to others.³

- **Improves Clinician's Workflow by Being Integrated into the EHR**

Once installed, HealthDecision is easily accessible within an existing EHR system. The tools distill the key steps in the decision-making process, enabling clinicians to focus thoughtful discussion on helping patients weigh the pros and cons of their medical options.

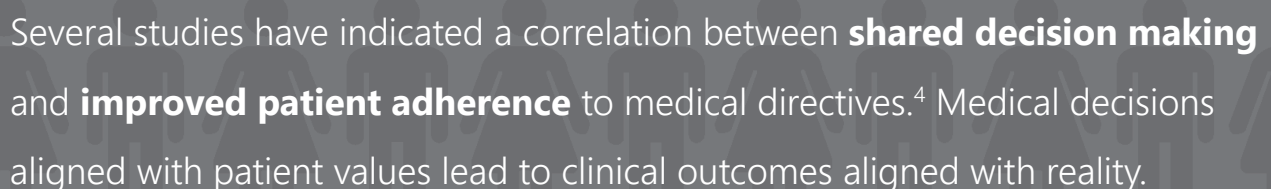
- **Performs Complex Risk Calculations and Presents Latest Guidelines**

HealthDecision provides decision support for clinicians, applying the most current medical guidelines to screen for eligibility and automatically pulling in patient data to perform complex risk calculations—thus allowing the clinician to concentrate on the conversation.

HealthDecision's team includes medical champions specific for each tool, who actively evaluate new literature and its possible impact for patients. Extensive documentation and referencing within each tool enable clinicians to connect to the guidelines applied as well as to the underlying literature.

- **Documents Patient Choices and Shared Decision Making**

HealthDecision tools effectively present benefits and harms associated with healthcare options, capture patient decisions, and build a summary. Clinicians can paste this information into the patient note, documenting the nuances of the shared decision-making conversation, as well as print the summary and additional patient education materials directly from within HealthDecision.



Several studies have indicated a correlation between **shared decision making** and **improved patient adherence** to medical directives.⁴ Medical decisions aligned with patient values lead to clinical outcomes aligned with reality.

... Across the Healthcare Spectrum

Patient-specific Advantages

- Automatically incorporating patient data from the EHR, HealthDecision tools create a personalized benefit/harm assessment for each patient.
- Results of calculations and guidelines are displayed in real time that the patient can then discuss with the clinician.
- HealthDecision graphics are visually engaging and intuitive. Patients are better educated on possible outcomes through HealthDecision's icon arrays, bringing visual clarity to the complexity of the benefits and harms of a given medical choice.
- A summary document as well as patient education materials are available to clarify what was discussed in the visit and help transmit this information to family and friends if needed.
- HealthDecision tools present medical benefits and harms objectively—rather than as the clinician's subjective opinion, giving patients an increased sense of trust.

"The visual presentation of risks and benefits really helps [the patients] feel like they are owning their health care decisions."

–Alexis Eastman, MD, UW Health

Administration-specific Advantages

- Higher patient satisfaction correlates with higher clinician satisfaction and reduced clinician burnout. Usage data indicates consistent clinician usage after the initial 5-6 encounters with the tools.
- HealthDecision's personalized risk analysis and documented SDM aligns patient expectations with realistic outcomes and lowers the risk of legal issues. Washington became the first state to enact legislation establishing increased legal protection to physicians using SDM tools.
- HealthDecision tools facilitate reimbursement. The tools capture measurable SDM, which is requested by multiple local and national institutions (eg, Medicare) and in some cases required for reimbursement (eg, WATCHMAN™ device implantation for atrial fibrillation or CT scans for lung cancer screening).
- HealthDecision's interface and data selection are HIPAA compliant.

Research-specific Advantages

The integrated design of the HealthDecision workflow creates a powerful research tool. Multiple institutions are already using HealthDecision to study population health issues and clinician-patient communications.

- The tools collect encrypted, HIPAA-compliant, patient-specific data, including risk scores and results of the decision chosen.
- HealthDecision can track the workflow through a tool and help institutions better understand how decisions are being made, with detail that is impossible to capture using paper-based or video-based educational materials.
- HealthDecision can coordinate the flow of encrypted clinical data to an IRB-approved research team. The research team would coordinate with the clinical EHR group to re-identify clinicians and patients, thus allowing connection of survey or interview data to the clinical SDM encounter.

Healthy Data Points

HealthDecision partners with specialists deeply immersed in the respective health-care domains to create tools that meet patients' – and clinicians' – needs. We take SDM, and the benefits it provides, seriously to deliver measurable results.⁵

Patient Satisfaction

83%

Of clinicians reported increased patient satisfaction after using HealthDecision during a visit; the remainder were neutral.



Time Savings

Of clinicians using HealthDecision at least 5 or more times, a **majority** reported a small time savings using the tools.

Better Communication

98%

Of clinicians believed HealthDecision aided them in educating patients about the benefits and harms of available medical options.



Clinician Satisfaction Too

Serving over 22,000 patients a year, UW Health physicians reported **greater satisfaction** after using HealthDecision.

Best Practices

HealthDecision tools meet the standards set forth by the **International Patient Decision Aid Standards** (IPDAS), a set of over 90 best practices for development and functionality of patient decision aids. These standards were developed to determine if a decision aid is a reliable source of health information that can be of benefit in patient decision making.

HealthDecision also has been listed on the Ottawa Hospital Research Institute's recommended **A to Z Inventory of Decision Aids**.¹⁴

"HealthDecision is a great conversation organizer and concludes with excellent resources/handouts that I print for patients nearly every time I use it."

–UW Health Clinician⁵

IT Connections

HealthDecision is compliant with the new FHIR protocols used by Epic, Cerner and others as part of meaningful use stage 3 program. This compliance allows ongoing improvements to tool functionality.

"I love that it's synced with the EHR, and my patient's info automatically blows in. I use it regularly for patients that are "on the fence" about starting a statin, because I think it lays out the risks and benefits well. (I love the graphic with the number of people that are saved from having an event versus the number of people who have a statin SE.) The handouts are nice too."

–UW Health Clinician⁵

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What Began as One Physician's Vision...



Jon Keevil, MD, FACC
Founder of HealthDecision, Inc.

What began as Dr. Jon Keevil's vision for a better way to educate his own patients grew into HealthDecision.

Early in his cardiology career, Jon Keevil, MD, FACC, and founder of HealthDecision Support Inc., recognized the need to give his patients better explanations and understanding of their health condition, choices, and risks. Dr. Keevil's clinical focus was preventive cardiology, which has a long history of sophisticated algorithms for cholesterol management.

"It was in my fellowship training that I began actively studying the complexity of the standards and guidelines for managing cholesterol and cardiac risk," said Dr. Keevil. "There are many complex nuances to cardiovascular risk scores that are used in the decision process, so determining an accurate risk analysis isn't straightforward."^{7,8,9,10,11,12,13}

"With my training in computer science and medicine, I was always thinking about ways to automate the guidelines and risk analysis, which would then allow me to **focus on the patient instead of the process.**"

In 2000 Dr. Keevil joined the University of Wisconsin (UW) Hospital and UW Medical School faculty as a cardiologist and director of the second-year medical school cardiology course, respectively. With HealthDecision tool adoption increasing, Jon left UW Hospital in June 2016 to focus on the Company. He retains his academic appointment as a clinical adjunct associate professor in the UW Department of Medicine.

For More Information

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