

# The Science of Patient Centered Decisions: An ACCORDS Seminar Series

Please **sign in** and be sure to **fill out an evaluation** before you leave.



ACCORDS

ADULT AND CHILD CONSORTIUM FOR HEALTH OUTCOMES  
RESEARCH AND DELIVERY SCIENCE

UNIVERSITY OF COLORADO | CHILDREN'S HOSPITAL COLORADO

- More in this series:

2/7/2019 Ed2N 1206	Shared Decision Making in Practice: ICDs/LVADs	Dan Matlock, MD & Larry Allen, MD
2/26/2018 Ed2N 1202	Shared Decision Making in Practice: Hospice & Palliative Care	Maija Reblin, PhD
3/19/2019 Ed2N 1206	Shared Decision Making in Practice: Colon Cancer & Lung Cancer	Tanner Caverly, PhD

- **Behavioral Science in Health and Health Care: An ACCORDS Seminar Series**

2/20/2019 ED2S 2305	Behavioral Health in Practice: How to Implement Change in the Clinic	Danielle Loeb, MD and Bethany Kwan, PhD, MSPH
3/21/2019 ED2S 2305	Multi-level Model of Change Capacity	Georges Potworoski, PhD
4/24/2018 ED2N 2307	At the Intersection of Policy, Advocacy, and Behavioral Medicine	Jim Sallis, PhD

Recorded seminars can be found on our website <https://goo.gl/1q9nUx>

Request a Planning or Support Consultation with the Education Program

# The Science of Patient Centered Decisions: An ACCORDS Seminar Series

*Shared Decision Making & ICDs/LVADs*



ACCORDS

ADULT AND CHILD CONSORTIUM FOR HEALTH OUTCOMES  
RESEARCH AND DELIVERY SCIENCE

UNIVERSITY OF COLORADO | CHILDREN'S HOSPITAL COLORADO

**Dan Matlock, MD, MPH & Larry Allen, MD, MHS**

Please **sign in** and be sure to **fill out an evaluation** before you leave.

Recorded seminars can be found on our website <https://goo.gl/1q9nUx>

Request a Planning or Support Consultation with the Education Program

Thank you!

# Shared Decision Making and Implantable Defibrillators

Dan Matlock, MD, MPH

Associate Professor of Medicine

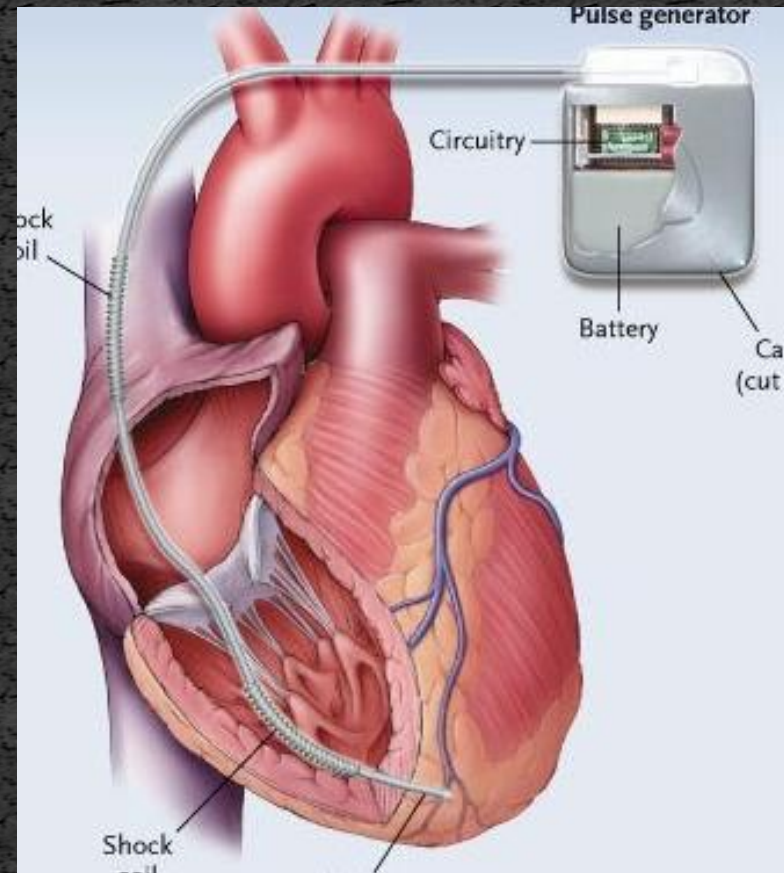
University of Colorado School of Medicine

Implementation Scientist - GRECC

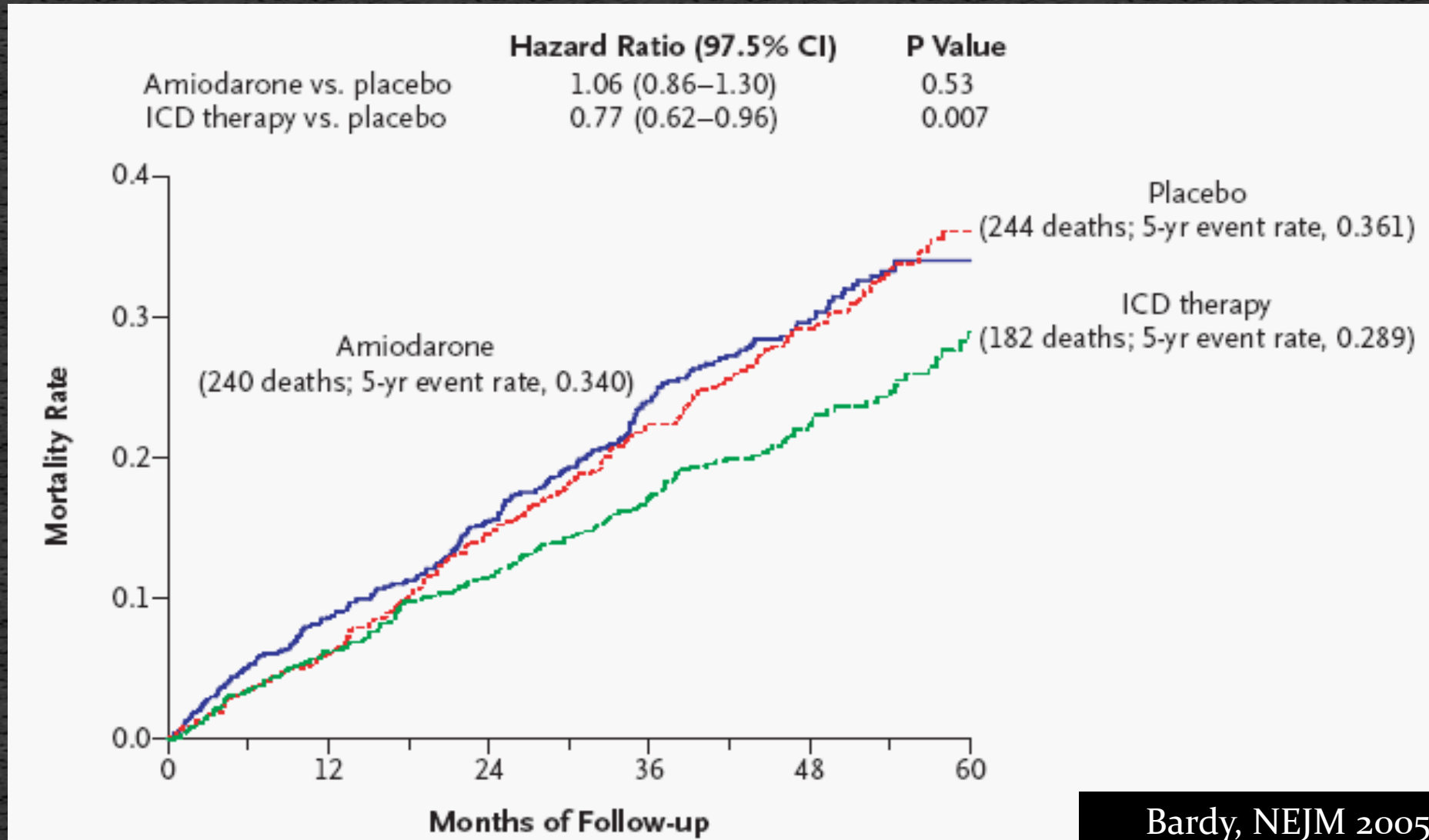


Colorado Program for  
Patient Centered Decisions

# Implantable Defibrillators



# Example: Implantable Defibrillators



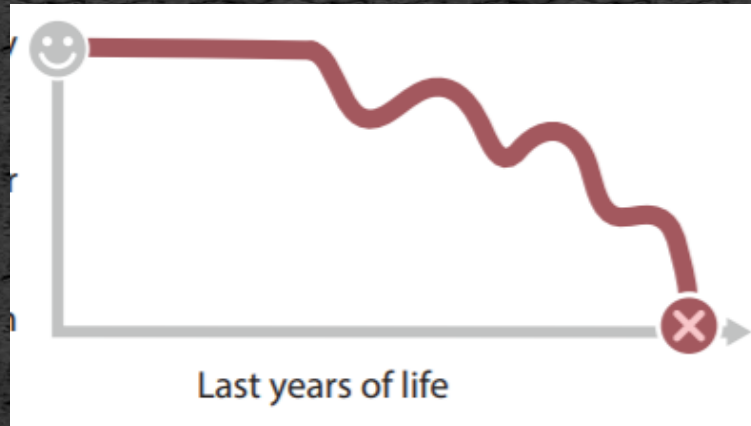
# Potential Harms of ICDs

- Procedural risks (Infection, Bleeding, etc.)

## Additionally:

- Increased HF admissions (Goldenberg I, Circulation. 2006)
- Anxiety/Depression/PTSD (Sears SF, Heart. 2002)
- Inappropriate shocks (Sears SF, Am. J of Card. 2006)
- Device malfunction (Washizuka T, Int. Heart J. 2005)
- Potential suffering at the end-of-life (Goldstein NE, Annals Int. Med. 2004)
- Quality of Life (Noyes K, Medical Care. 2007)

# Type of Death



# Tools: Decision Aids

## International Patient Decision Aid Standards (IPDAS)

1. Provide information about options
2. Present probabilities (unbiased and understandable)
3. Provide methods for clarifying values
4. Structured guidance for deliberation and communication



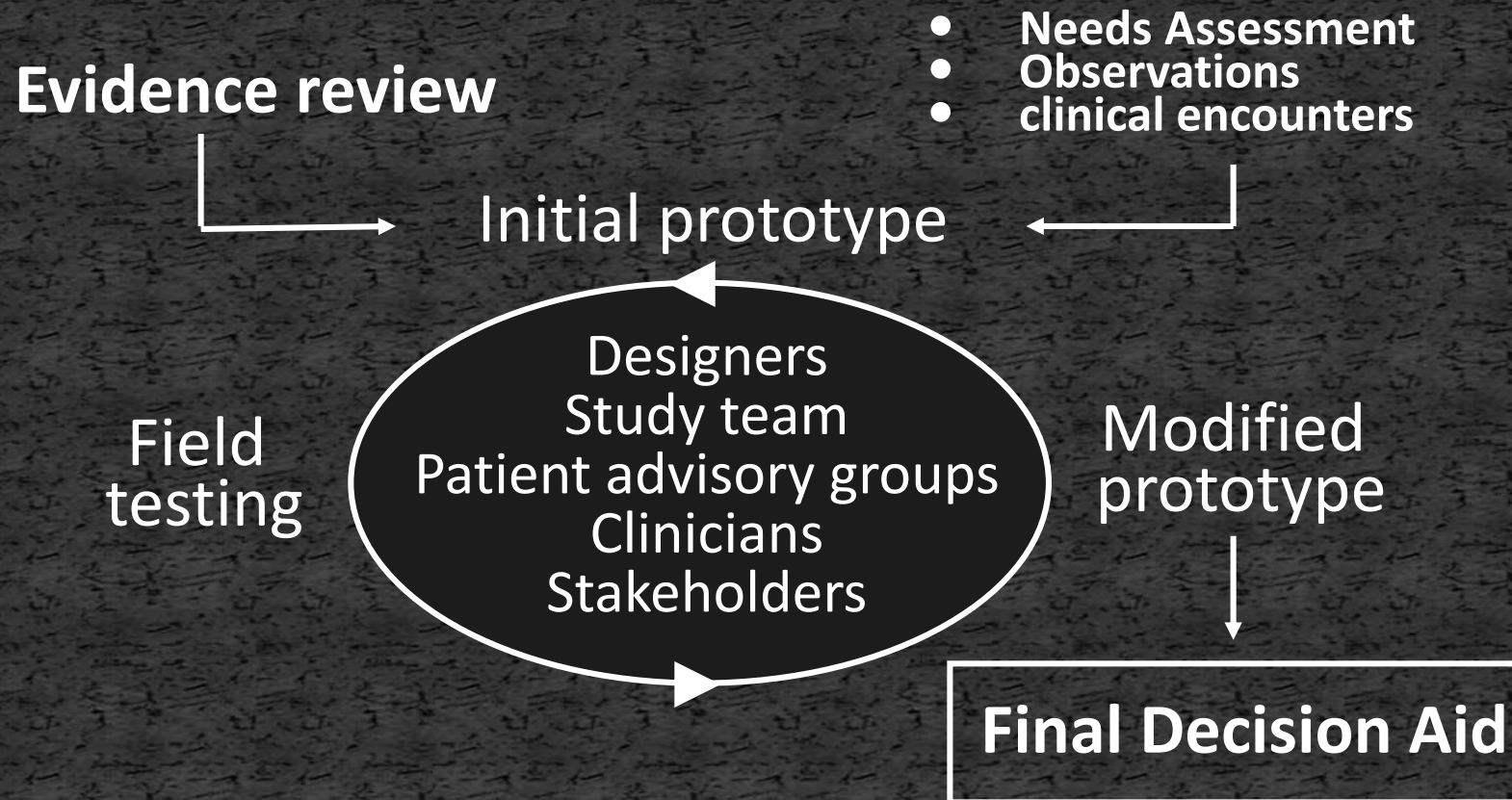
# What is a good decision?

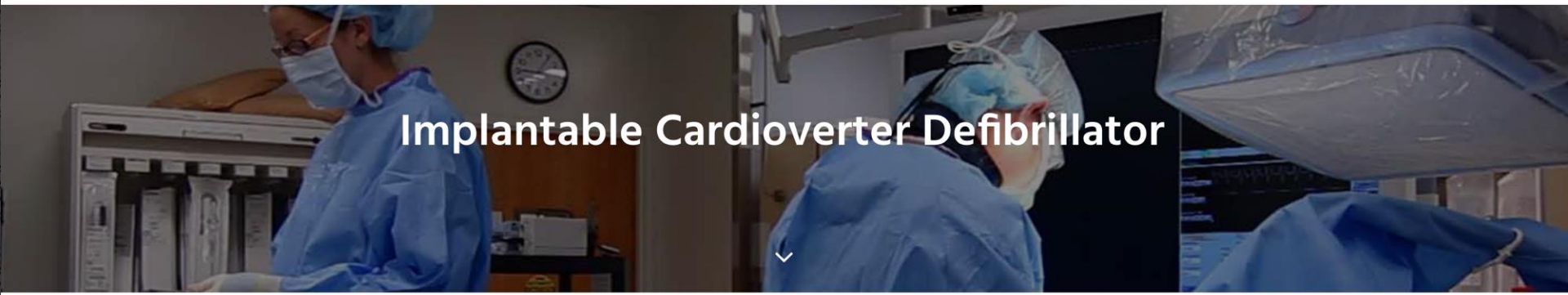
- Cochrane Review of 115 trials of Decision aids
  - Improved knowledge
  - Improved patient/doctor communication
  - Improved patient involvement
  - Improved Satisfaction
  - Improved value/treatment concordance
  - Lowered decision conflict
  - Lowered decision regret
  - Lowered the proportion undecided

# Shared Decision Making

## Design and Testing of Tools for Shared Decision Making

Daniel D. Matlock, MD, MPH; Erica S. Spatz, MD, MHS





# Implantable Cardioverter Defibrillator

- > [IMPLANTABLE CARDIOVERTER DEFIBRILLATOR](#)
- > [BENEFITS AND RISKS](#)
- > [VALUES](#)
- > [NEXT STEPS](#)
- > [LIFE WITH AN ICD](#)

**A decision aid for patients considering ICD therapy for primary prevention.**

[WATCH VIDEO](#)

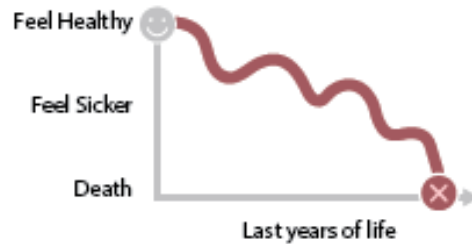
[DOWNLOAD BOOKLET](#)

[DESCARGAR FOLLETO ESPAÑOL](#)

# Decision Aid: Paper Tools

## Path 1

You may choose to get an ICD. You may be feeling like you usually do, then a dangerous heart rhythm could happen. The ICD may help you live longer by treating a dangerous heart rhythm. You will continue to live with heart failure that may get worse over time.



"I'm not ready to die. I have so much I'm trying to stay alive for. Even if it means getting shocked, I'm willing to do anything that can help me live longer."

## Path 2

You may choose to NOT get an ICD. You may be feeling like you usually do and then a dangerous heart rhythm could happen. You may die quickly from the dangerous heart rhythm.



"I've lived a good life. The idea of dying quickly sounds like a painless way to go. I've always said I hope to die in my sleep. Going through surgery and getting shocked is not the kind of thing I want."

With an ICD  
29 die, 71 live

Without an ICD  
36 die, 64 live



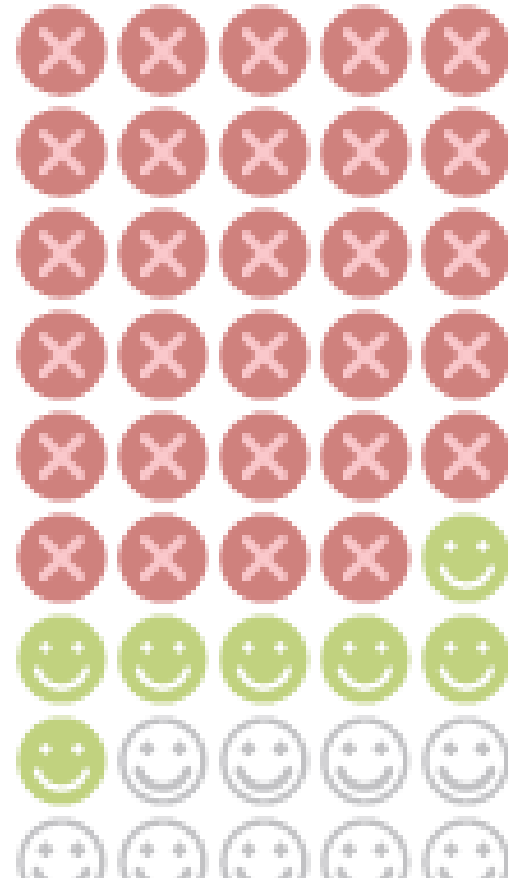
Number of people who live because of the ICD

Number of people who die

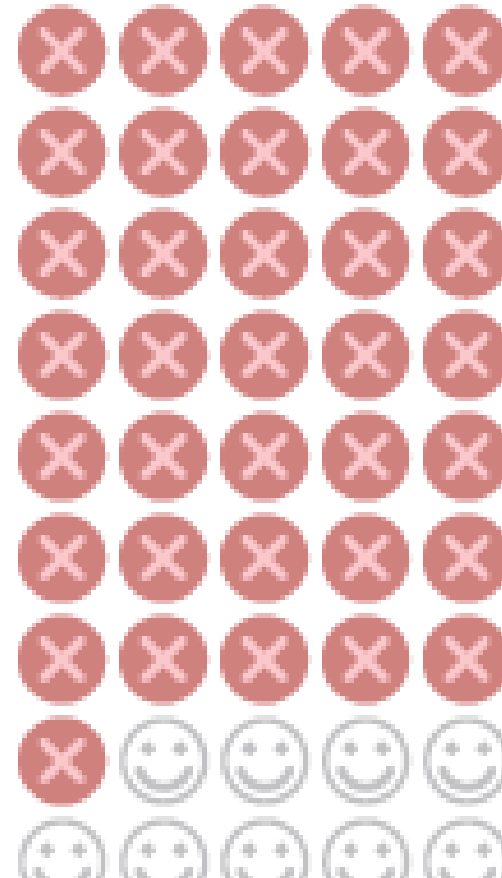
Number of people not affected

## Benefit: Results from a 5-year study

**With an ICD**  
29 die, 71 live



**Without an ICD**  
36 die, 64 live



Death

Last years of life

"I'm not ready to die. I have so much I'm trying to stay alive for. Even if it means getting shocked, I'm willing to do anything that can help me live longer."

Death

Last years of life

"I've lived a good life. The idea of dying quickly sounds like a painless way to go. I've always said I hope to die in my sleep. Going through surgery and getting shocked is not the kind of thing I want."

# Decision Aid Tools: Video



# Pilot Trial



- DAs were feasible within three practice settings
- Utilizing clinic staff facilitated patient identification
- Patients:
  - Felt the DAs were helpful and balanced
  - Would recommend them to other patients
  - Non significant trends in improvements in decision quality (pilot trial)
  - Patients preferred the paper and video (not website)
- Clinicians wanted decision aids related to re-implantation and biventricular pacing



# Implementation is hard!

- Who will deliver the Decision aid?
  - Provider?
  - Staff member
    - empowered to provide DA on behalf of provider
- How will the DA be delivered?
  - Electronically
    - With EHR? Patient portal? Email?
  - In person or mailed
    - Print, DVD?

# Implementation is hard!

- Medical decisions require different depths of deliberation
  - Daily, reversible vs. single, irreversible decisions
- When will the DA be delivered?
  - Timing important for shared decision making
    - Before visit may set up SDM
    - In visit can directly support SDM interactions



**REVIEW**

**Open Access**

## “Many miles to go ...”: a systematic review of the implementation of patient decision support interventions into routine clinical practice

- Clinicians lacked confidence in the content of the DAs
- Many concerns about DAs disrupting established workflows
- Lack of incentives a major barrier

# DECIDE - ICD

The NIH logo consists of the letters "NIH" in a bold, white, sans-serif font, positioned on the left side of a dark gray arrow-shaped graphic that points to the right. The arrow has a red and white border.

National Heart, Lung,  
and Blood Institute

Center for Translation Research and  
Implementation Science

---

# Stepped-Wedge Design

Site	Control Period 5 months	Phase 1 Intervention Roll-Out 5 months	Phase 2 Intervention Roll-Out 5 months	Phase 3 Intervention Roll-Out 5 months	Phase 4 Intervention Roll-Out 5 months	Phase 5 Intervention Roll-Out 5 months	Phase 6 Intervention Roll-Out 5 months	Intervention Continued 5 months
St. Luke's/MAHI		■						
Denver VA			■					
Providence				■				
Baptist					■			
UC Health/ Denver Health						■		
Beth Israel							■	

# Stepped-Wedge Design

- Why not something else?
  - Classic patient-level randomization difficult due to diffusion; intervention is largely program-based
  - Cluster randomization (3 sites DA, 3 sites none)
- Advantages:
  - Still random
  - Phased implementation over time allows study
- Disadvantages:
  - Other changes in ICD care over the intervention period
  - Medicare mandate – a major secular trend!



# Reach

<i>Patient</i>	Reach
	Effectiveness
<i>Provider – Clinic – System</i>	Adoption
	Implementation
	Maintenance

# received intervention

---

# eligible for intervention

Deceptively simple → denominator challenges



# Effectiveness

<i>Patient</i>	Reach
	Effectiveness
<i>Provider – Clinic – System</i>	Adoption
	Implementation
	Maintenance

Primary:

1. Knowledge (IPDAS standard)
2. Value-treatment concordance  
(decision quality)

Secondary:

Decision conflict  
Decision regret  
Control preferences

# Adoption/Implementation

<i>Patient</i>	Reach
	Effectiveness
<i>Provider – Clinic – System</i>	Adoption
	Implementation
	Maintenance

- Interviews with:
  - Clinical and Operational Staff involved with the Defibrillation patient education and decision making process
    - Cardiologists
    - Nurses
    - Administrators

# Maintenance at the clinic level

<i>Patient</i>	Reach
	Effectiveness
<i>Provider – Clinic – System</i>	Adoption
	Implementation
	Maintenance

- What we will measure:
  - Clinics that maintain, adapt, and discontinue use of PtDAs
- How we will measure:
  - Key informant interviews about why

*Measuring maintenance is easy*



*Obtaining maintenance is difficult*

# 2017 AHA/ACC/HRS Guideline for Management of Patients With Ventricular Arrhythmias and the Prevention of Sudden Cardiac Death: Executive Summary

A Report of the American College of Cardiology/American Heart Association Task Force on Clinical Practice Guidelines and the Heart Rhythm Society

*Developed in Collaboration With the Heart Failure Society of America*

## 14. Shared Decision-Making

Recommendations for Shared Decision-Making		
References that support the recommendations are summarized in Online Data Supplement 60.		
COR	LOE	Recommendations
I	B-NR	1. In patients with VA or at increased risk for SCD, clinicians should adopt a shared decision-making approach in which treatment decisions are based not only on the best available evidence, but also on the patients' health goals, preferences, and values (1-5).
I	B-NR	2. Patients considering implantation of a new ICD or replacement of an existing ICD for a low battery should be informed of their individual risk of SCD and nonsudden death from HF or noncardiac conditions and the effectiveness, safety, and potential complications of the ICD in light of their health goals, preferences and values (1-5).

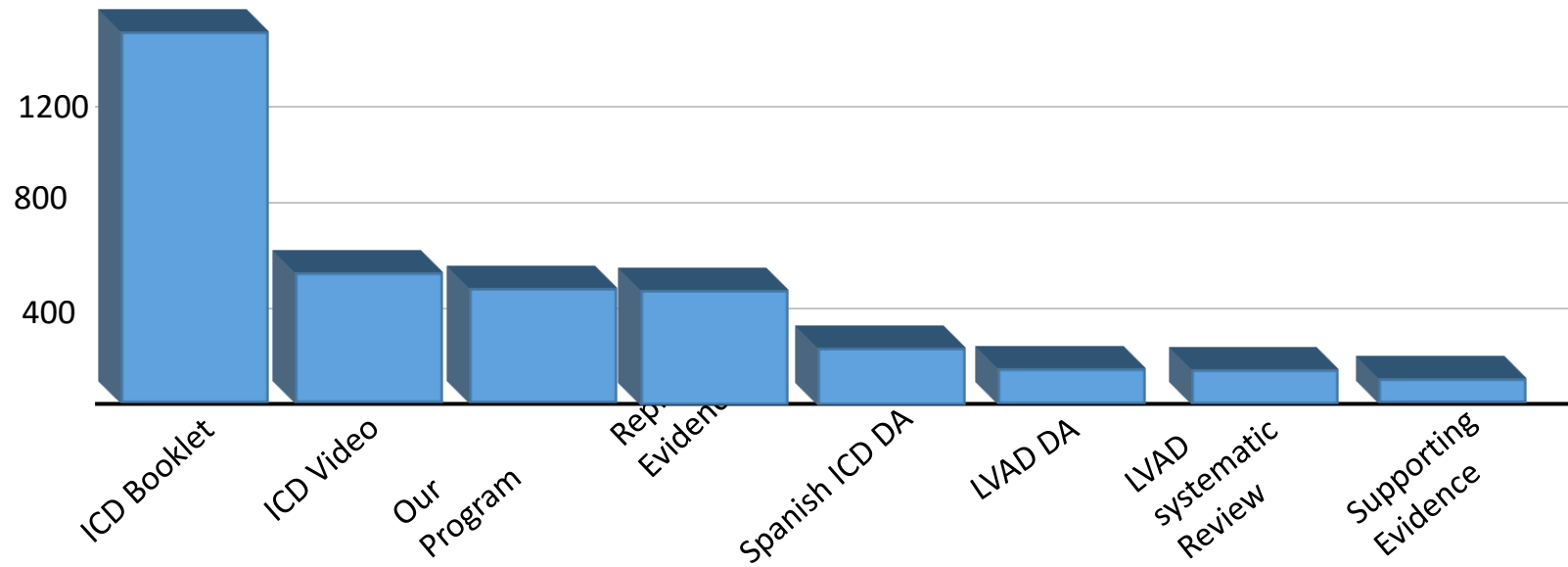
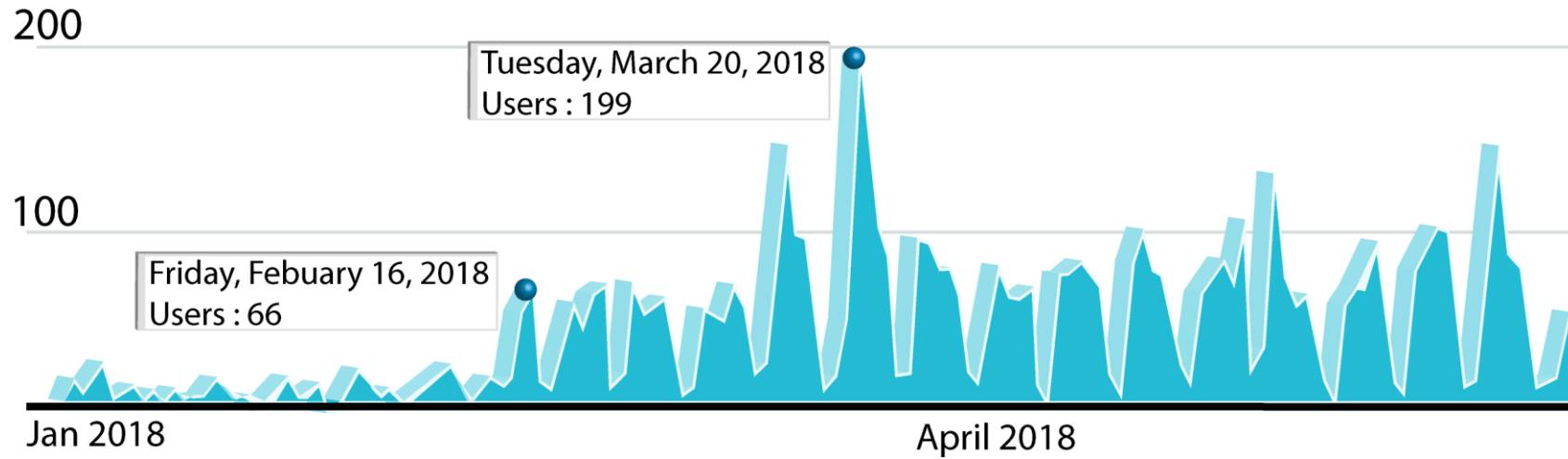


## Decision Memo for Implantable Cardioverter Defibrillators (CAG-00157R4)

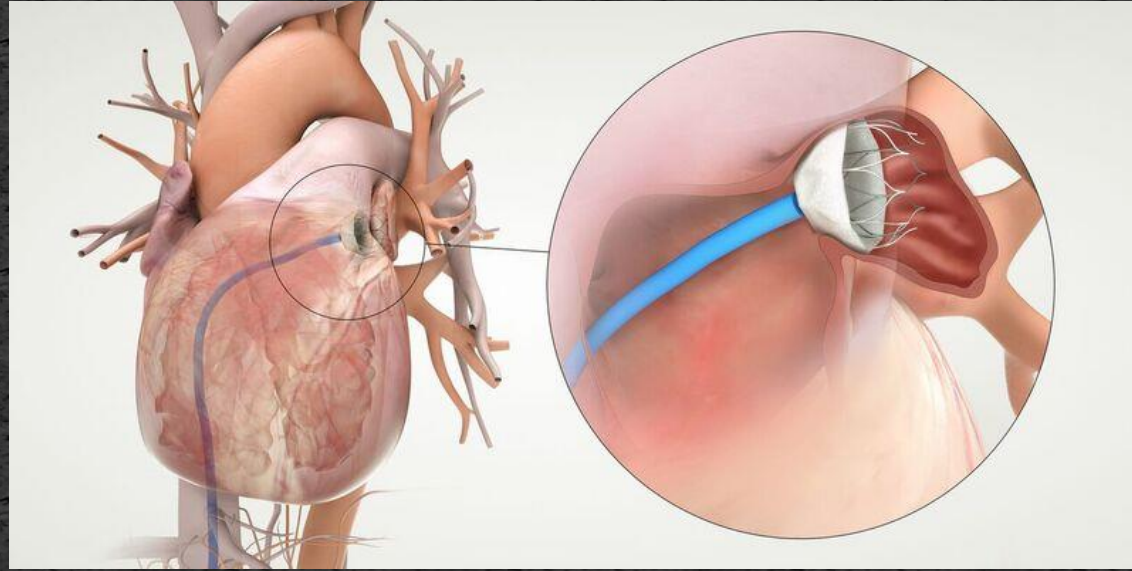
For these patients identified in B4, a formal shared decision making encounter must occur between the patient and a physician (as defined in Section 1861(r)(1)) or qualified non-physician practitioner (meaning a physician assistant, nurse practitioner, or clinical nurse specialist as defined in §1861(aa)(5)) using an evidence-based decision tool on ICDs prior to initial ICD implantation. The shared decision making encounter may occur at a separate visit.

“For these patients identified in B4, a **formal shared decision making** encounter must occur between the patient and a physician (as defined in Section 1861(r)(1)) or qualified non-physician practitioner (meaning a physician assistant, nurse practitioner, or clinical nurse specialist as defined in §1861(aa)(5)) using an **evidence-based decision tool on ICDs prior to initial ICD implantation**. The shared decision making encounter may occur at a separate visit.”

# www.patientdecisionaid.org



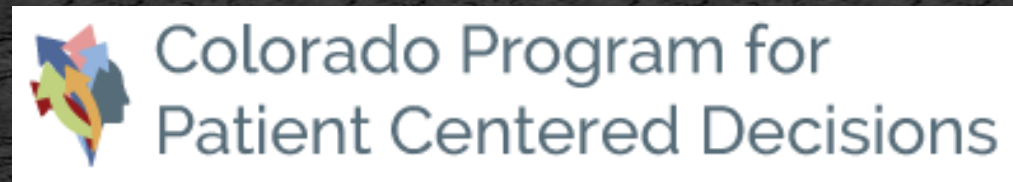
# Medicare



- Requirements for Shared Decision Making
  - Lung Cancer Screening
  - Left Atrial Appendage Closure Devices
  - Implantable Defibrillators

# Thank You

- Bryan Wallace
- Paul Varosy
- Jocelyn Thompson
- Channing Tate
- Colleen McIlvennan
- Fred Masoudi
- Carmen Lewis
- Jean Kutner
- Chris Knoepke
- Russ Glasgow
- Pilar Ingle
- Gracie Finnigan-Fox
- Monica Edwards
- Larry Allen

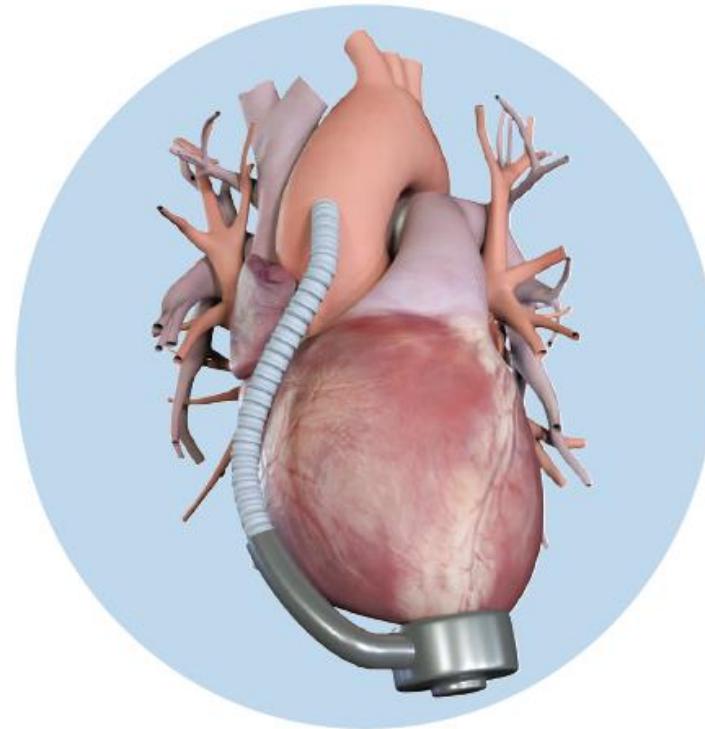


[daniel.matlock@ucdenver.edu](mailto:daniel.matlock@ucdenver.edu)  
[www.patientdecisionaid.org](http://www.patientdecisionaid.org)



# Shared Decision Making For LVAD in End-Stage Heart Failure

Larry A. Allen, MD, MHS  
ACCORDS Conference  
February 2019



School of Medicine

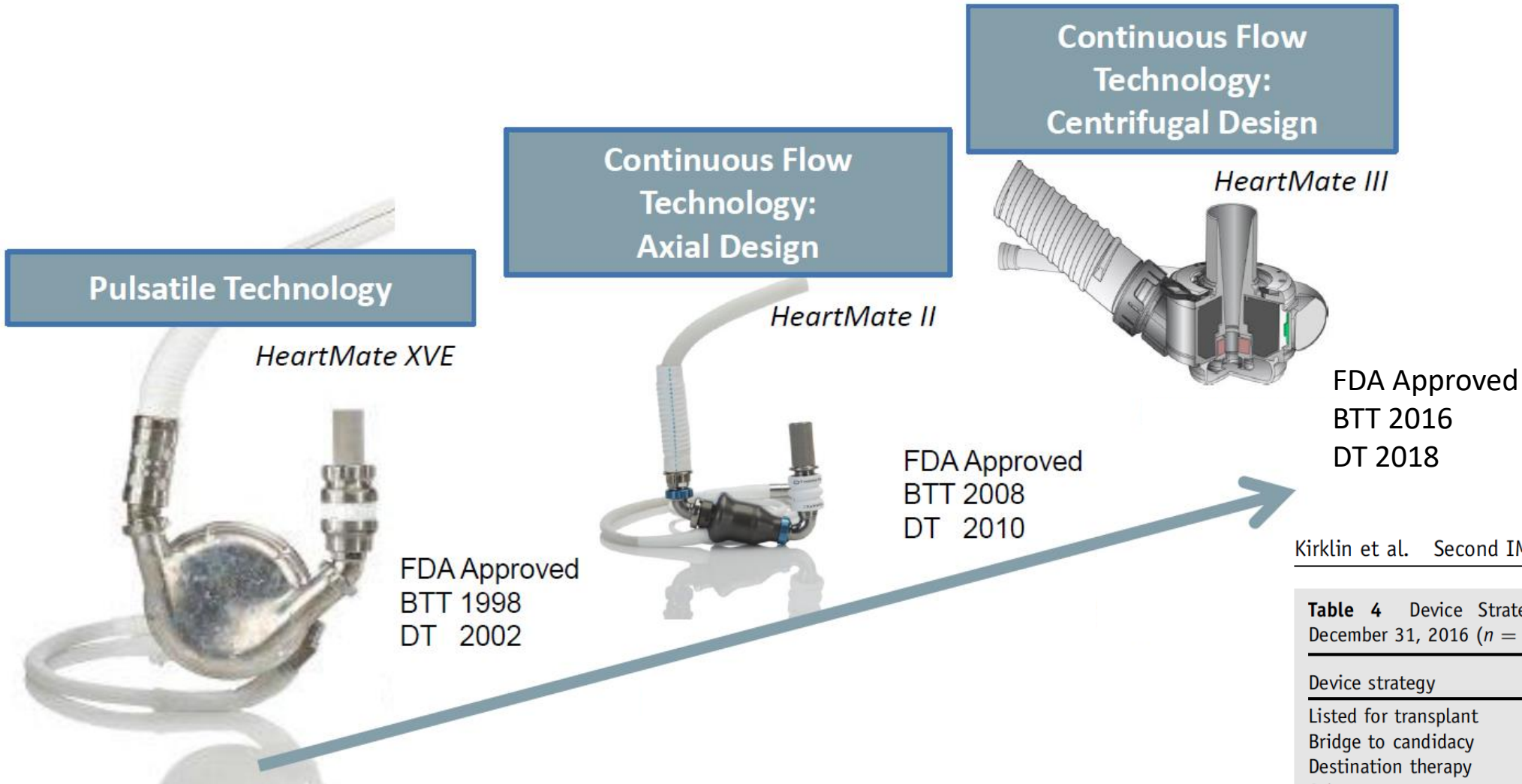
UNIVERSITY OF COLORADO  
ANSCHUTZ MEDICAL CAMPUS



Colorado Program for  
Patient Centered Decisions



# The Artificial Heart is Becoming Mainstream



Kirklín et al. Second IMACS Report

**Table 4** Device Strategy, IMACS, January 1, 2013 to December 31, 2016 ( $n = 14,062$ )

Device strategy	N	%
Listed for transplant	3,984	28%
Bridge to candidacy	4,072	29%
Destination therapy	5,724	41%
Other	282	2%
<b>Total</b>	<b>14,062</b>	<b>100%</b>

IMACS, International Society for Heart and Lung Transplantation Mechanically Assisted Circulatory Support.

# DT LVADs Involve Complex Tradeoffs

***High Risk***  
and Burdens  
and Cost

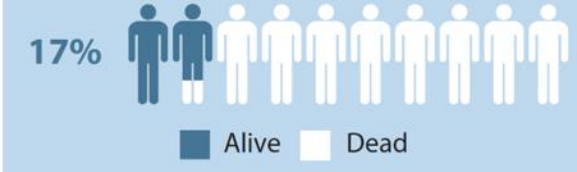
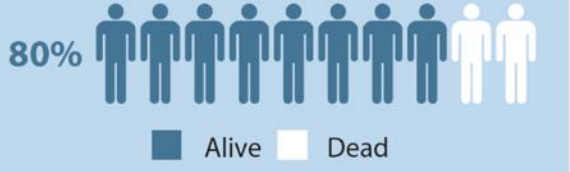
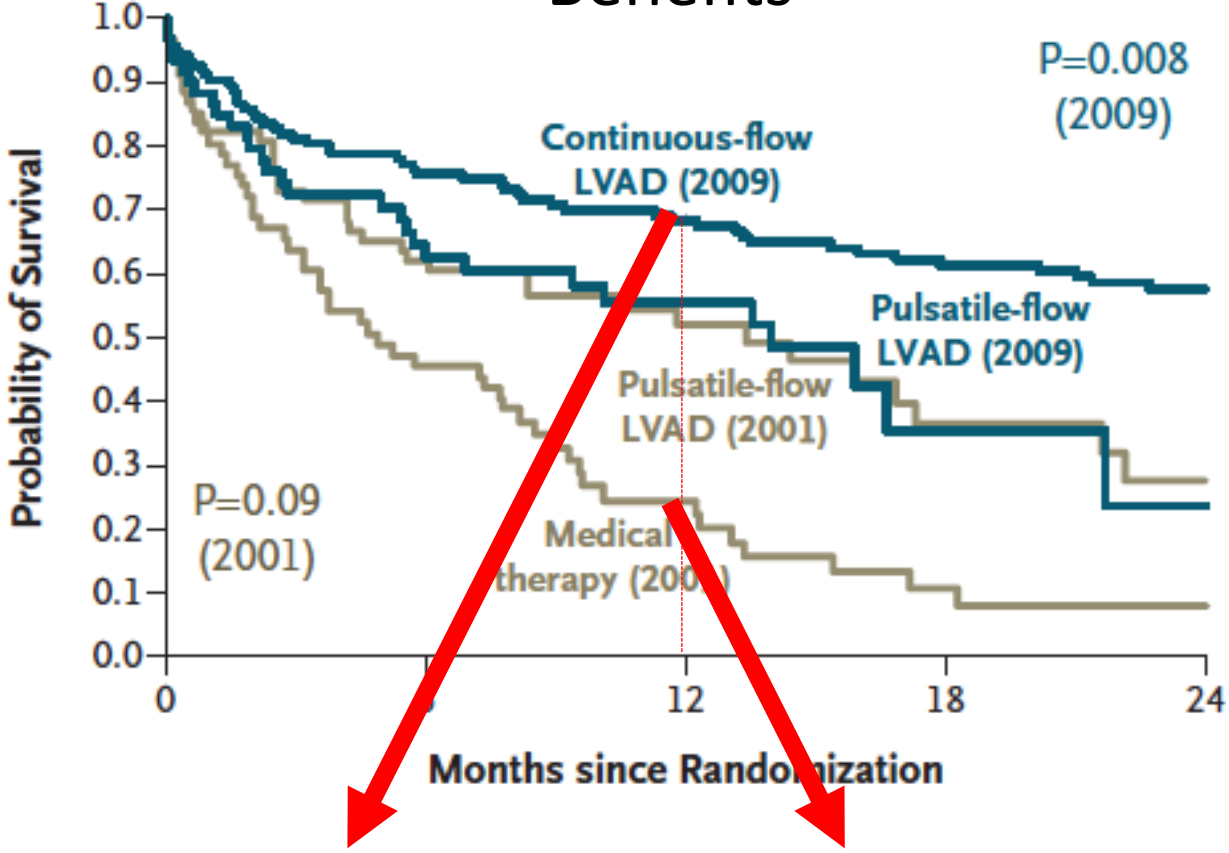
***High Reward***



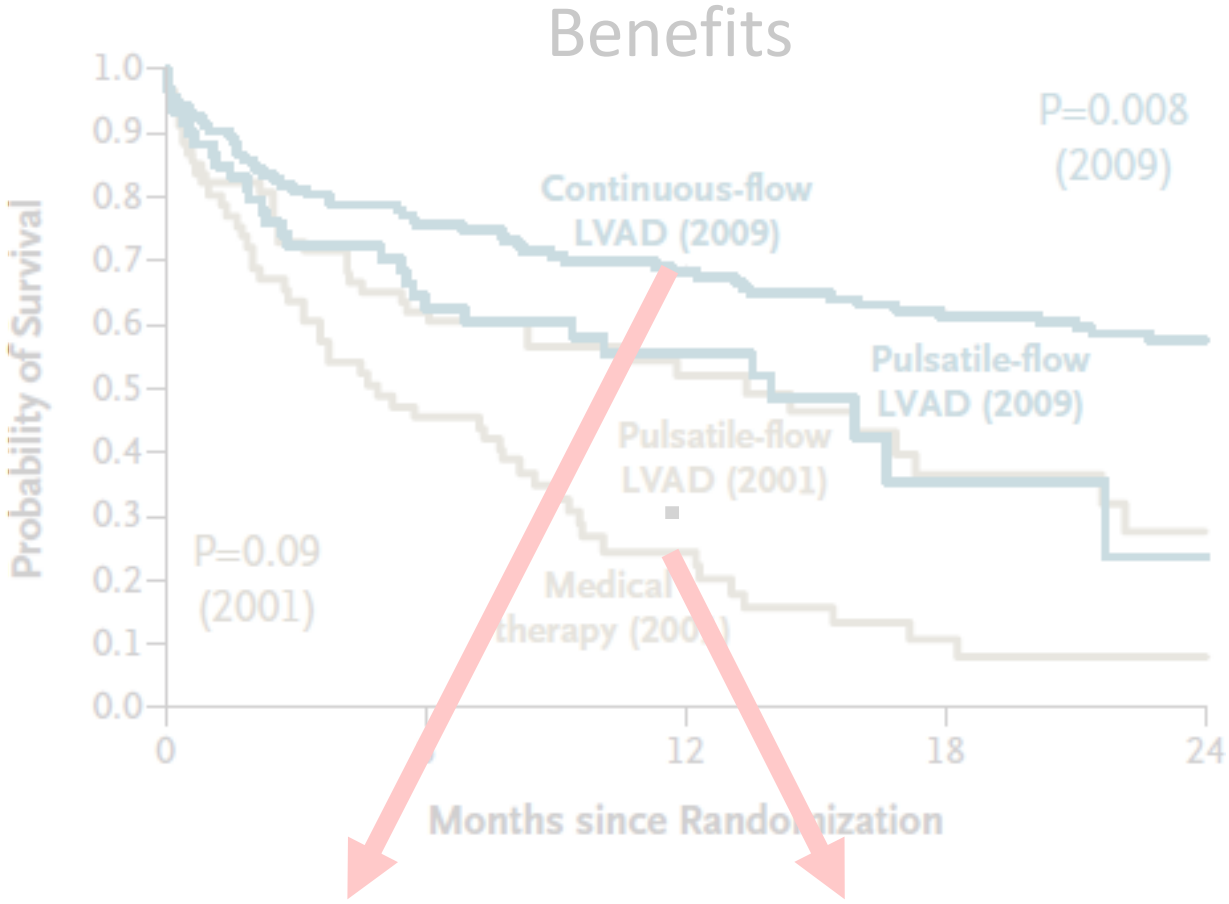
# DT LVADs Involve Complex Tradeoffs

## Benefits

## Risks/Burdens



# DT LVADs Involve Complex Tradeoffs



## Risks/Burdens

1 in 10 have a disabling stroke



2 in 10 have a serious bleed that requires medical attention



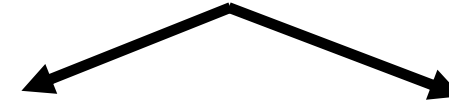
Driveline care,  
power source management

# Quality v. Quantity



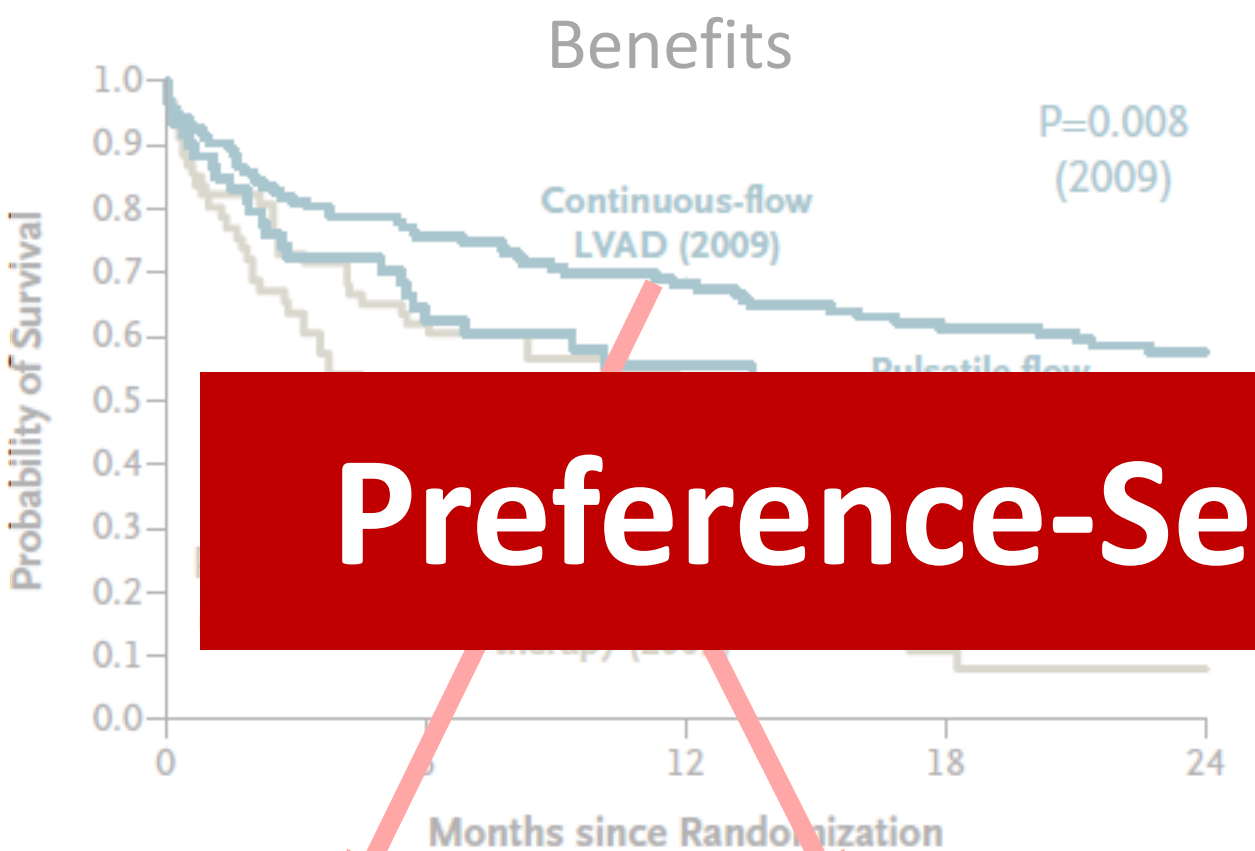
# Aggressive v. Nonaggressive

\$1000 bet



A screenshot of an NPR article page. At the top, the NPR logo and navigation menu are visible. Below that is the 'shots' logo with the text 'HEALTH NEWS FROM NPR'. The article title is 'Perspective: A Heart Device Can Save Lives, But Doctors Need To Explain The Downsides'. It is categorized as 'OPINION TREATMENTS' and dated 'September 30, 2018 · 11:07 AM ET'. The author is 'DR. MATTHEW MOVSESIAN'. The article is attributed to 'FROM 90.9 wbur BOSTON'S #1 NEWS STATION'. At the bottom, there is a partial view of a chest X-ray image with an 'L' marker on the right side.

# DT LVADs Involve Complex Tradeoffs

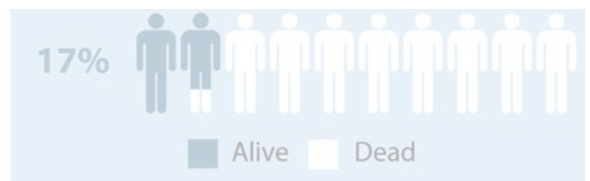


Risks/Burdens

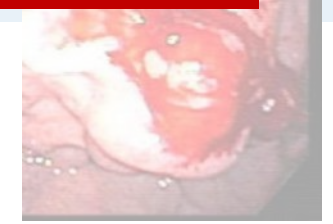
1 in 10 have a disabling stroke

10%

**Preference-Sensitive Decision**



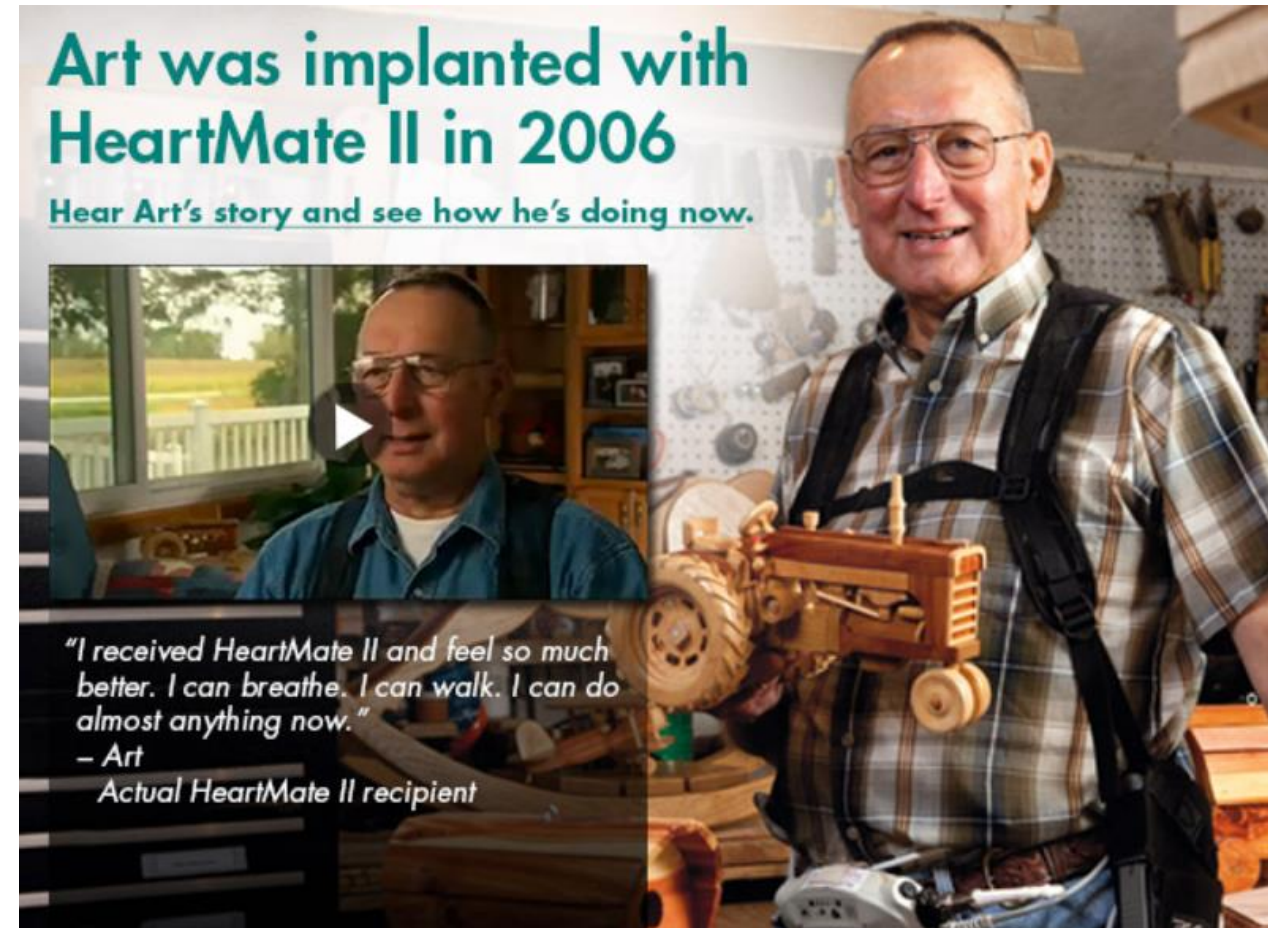
Driveline care,  
power source management



# Informing Patients about LVAD has been Deferred to Marketing

In 2014, identified 77 LVAD educational materials...

- 97% discussed **benefits**
- 53% mentioned any **risks**
- 36% mentioned **lifestyle** considerations
- 1% mentioned **palliative care** or hospice as an option
- 0% met majority International Patient Decision Aid Standards





# Development and Alpha Testing

Iterative changes with patient, caregiver and clinician feedback



Forrestine Patient

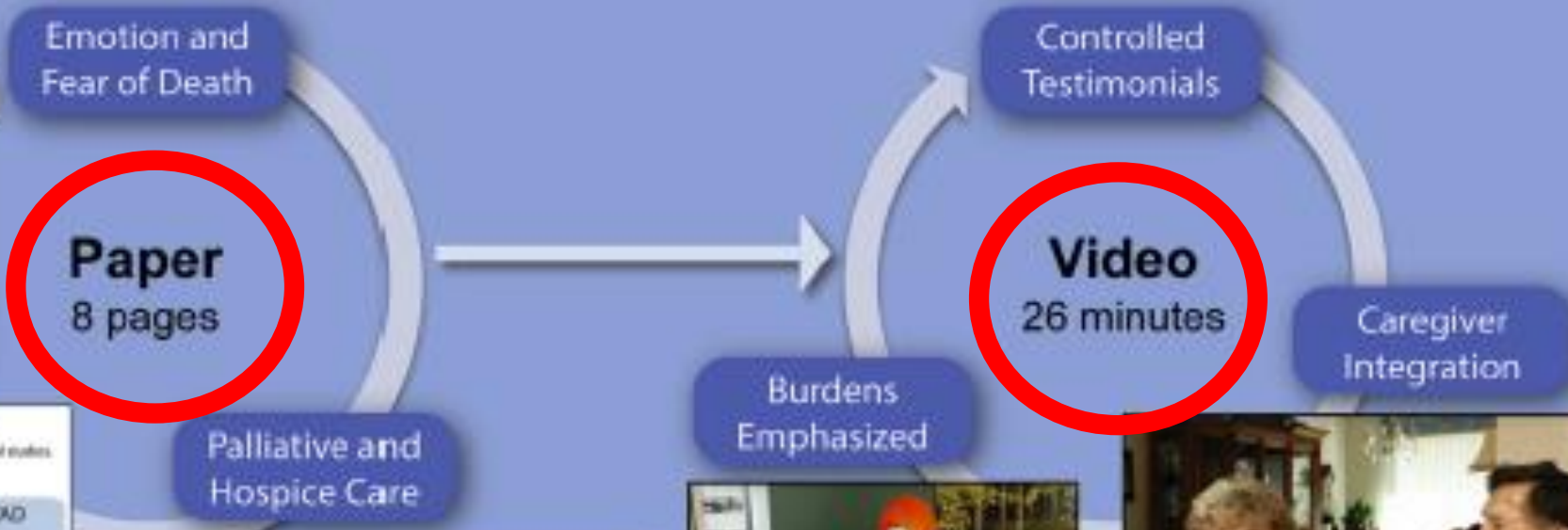


You are being considered for an LVAD. This booklet is designed to help you understand what an LVAD is, and to help you, your family, and your doctors think about what is best for you. Your values and goals are the most important factors in making a decision.

**What are your current feelings about being considered for an LVAD?**

Think about...

- how you want to live the rest of your life
- your hopes and fears
- your biggest questions



With or without an LVAD, there are services available to help with SYMPTOMS and suffering of advanced illness.

**What is palliative care?**

Palliative care is medical care for people with serious illnesses. It helps provide relief from symptoms, pain, and stress. It also provides emotional and spiritual support. The goal of palliative care is to improve quality of life for patients and their caregivers.

**What is hospice?**

Hospice care is given by health professionals for patients near the end of their lives.

**Patient Perspectives:**

Patients who got an LVAD:

"I would do anything for my wife to make her happy. I would do anything for her." - Ruth

"I was willing to do anything for her. I was willing to do anything for her." - Dale



Ruth Wife

Dale Patient

# Whether patient decision aids help real people should be U



← [Return to Awards Map](#)

## A Multicenter Trial of a Shared Decision Support Intervention for Patients and their Caregivers Offered Destination Therapy for End-Stage Heart Failure

**Principal Investigator:**  
Larry A. Allen, MD, MS

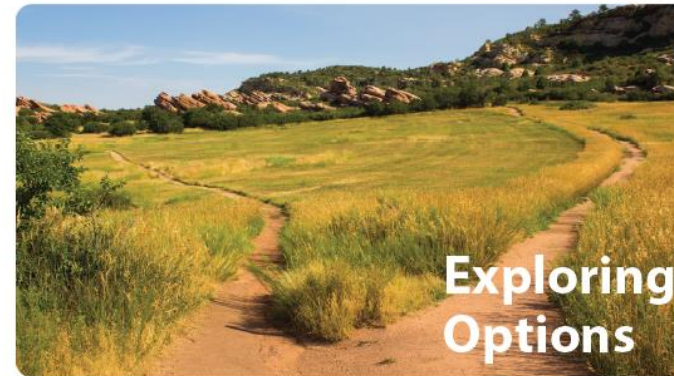
**Organization**

University of Colorado Denver

**Funding Announcement**

Communication and Dissemination Research

A decision aid for  
**Left Ventricular Assist Device (LVAD)**  
A device for patients with advanced heart failure

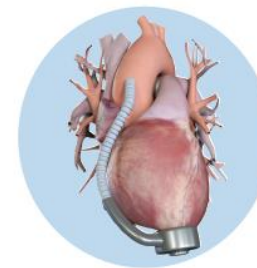


You are being considered for an LVAD. This booklet is designed to help you understand what an LVAD is and to help you, your family, and your doctors think about what is best for you. Your values and goals are the most important factors in making a decision.

### What are your current feelings about being considered for an LVAD?

Think about...

- how you want to live the rest of your life
- your hopes and fears
- your biggest questions




To view a video about this decision or for an online version of this booklet, visit [patientdecisionaid.org](http://patientdecisionaid.org).

# DECIDE-LVAD Trial


Test the effectiveness of a shared decision support intervention for patients considering DT LVAD consisting of:

1. Site-based training
2. Implementation of patient decision aids

A decision aid for  
**Left Ventricular Assist Device (LVAD)**  
for Destination Therapy  
A device for patients with advanced heart failure



**Exploring Options**



You are being considered for an LVAD. This booklet is designed to help you understand what an LVAD is and to help you, your family, and your doctors think about what is best for you. Your values and goals are the most important factors in making a decision.

**What are your current feelings about being considered for an LVAD?**

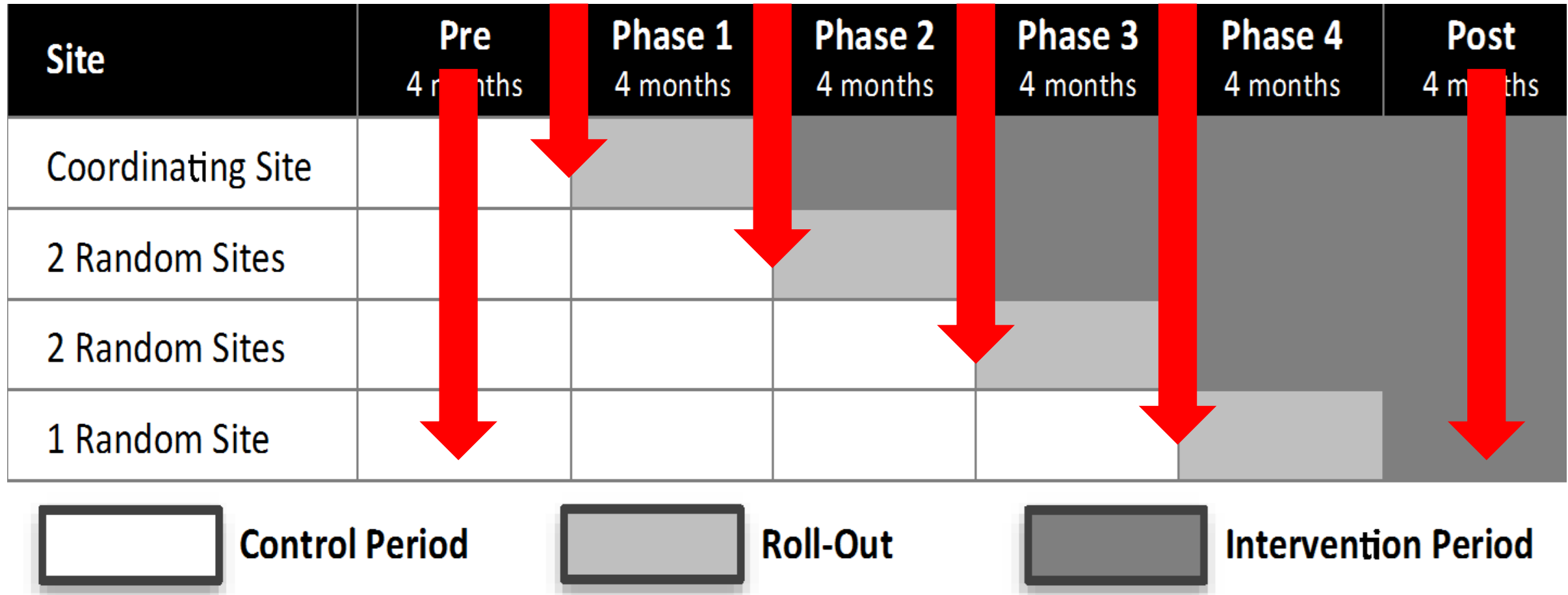
Think about...

- how you want to live the rest of your life
- your hopes and fears
- your biggest questions

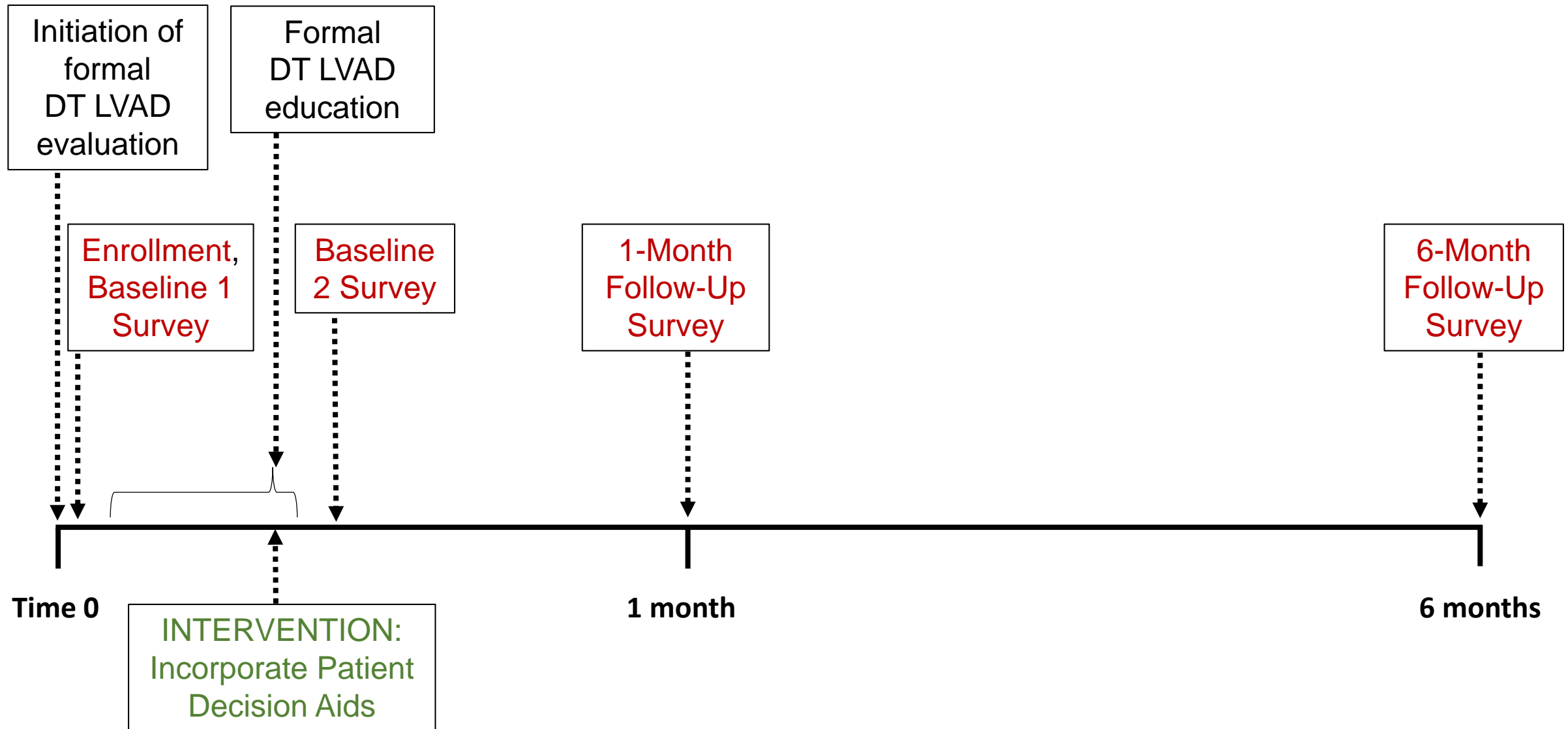
1

# Design: 6-Site, Stepped Wedge Trial

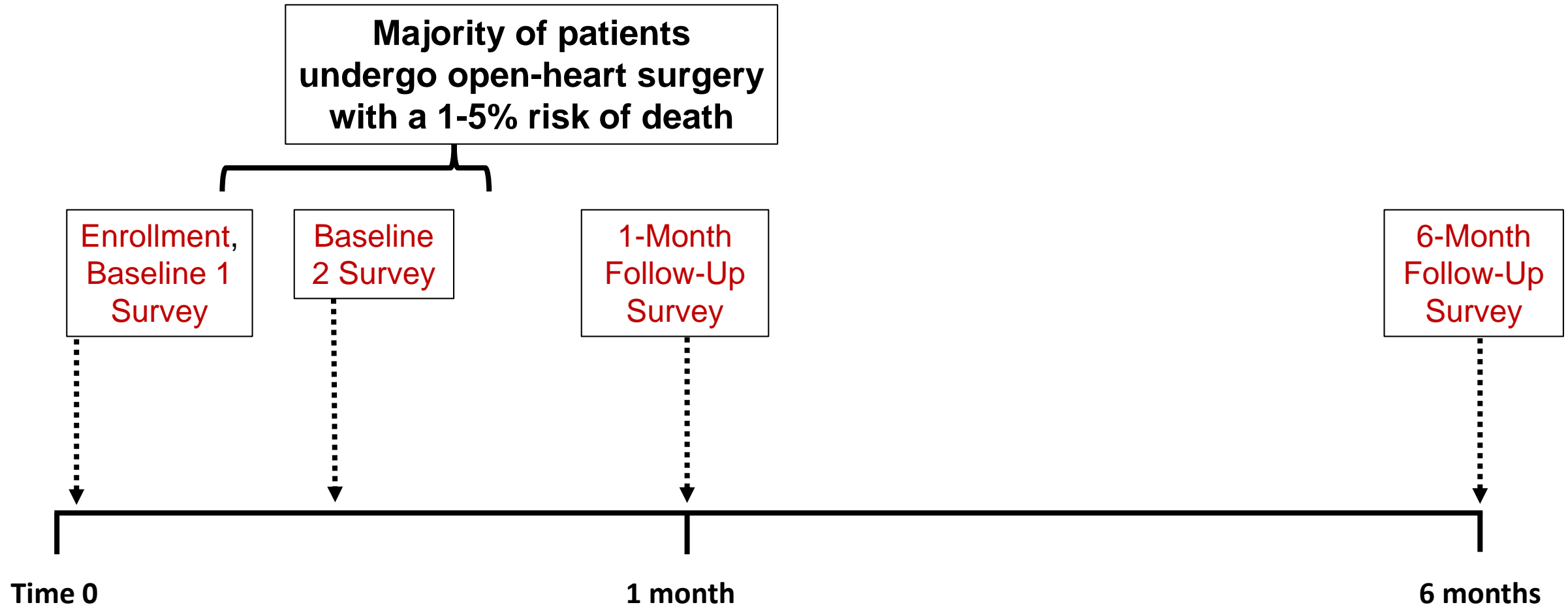
- **Enrollment:** June 2015 – Jan 2017. **Phased rollout of intervention.**



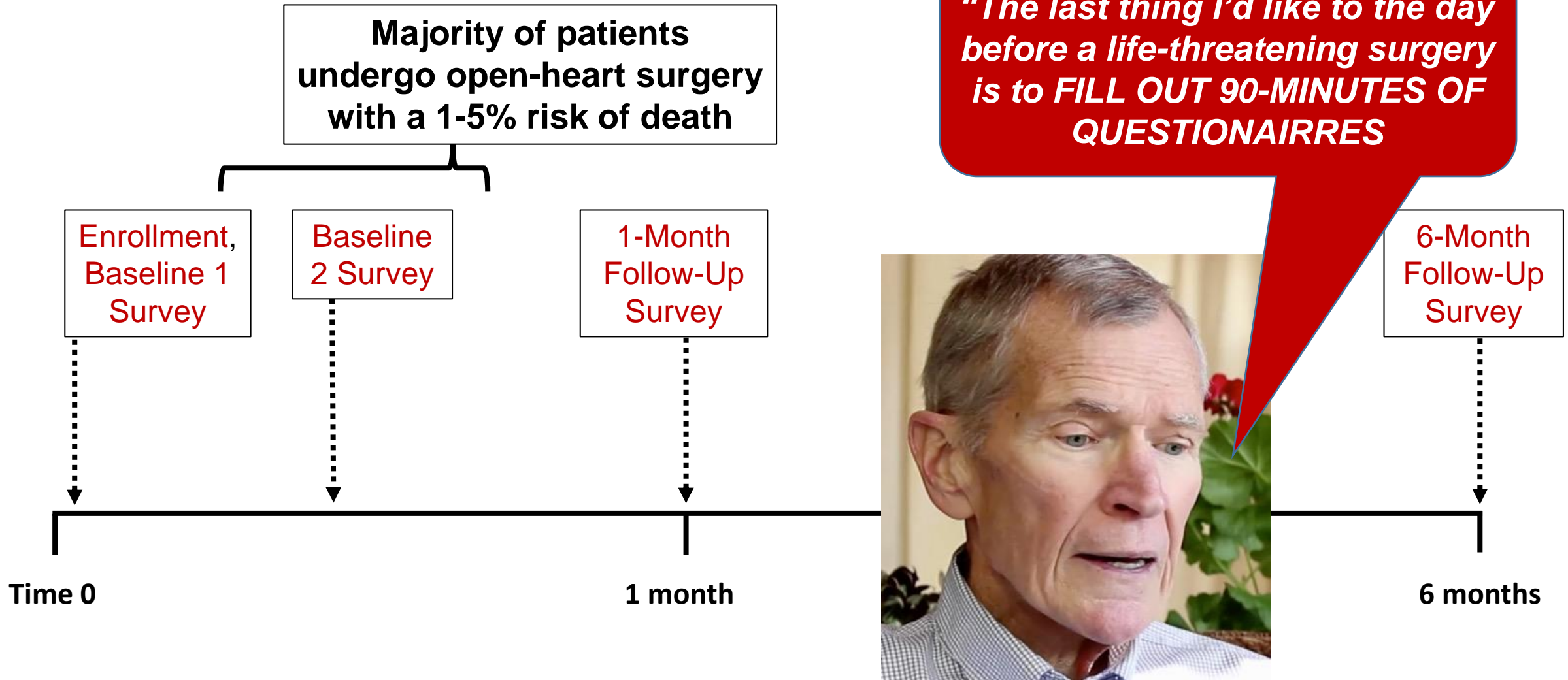
# Patients, Caregivers and Data Collection



# Patients, Caregivers and Data Collection



# Intrusive Research?




# Patient Participants

**248 patients enrolled** (from n=385 eligible; power/planned n=168)

- Enrolled patients more likely to be white non-Hispanic than non-enrolled (75% vs. 64%)

	Control (n=135)	Intervention (n=113)
Age	63.5 (9.7)	63.2 (10.2)
Male	82.2%	86.7%
White	82.7%	82.7%
Son	69.2%	69.2%
On	32.0%	32.0%
Married	72.5%	65.4%
Dialysis	11.9%	12.4%
Enrolled in ICU	21.5%	26.5%
INTERMACS 4-7 ( $p<0.01$ )	18.3%	44.6%



*And, I'm lying on my back in the ICU near death.*



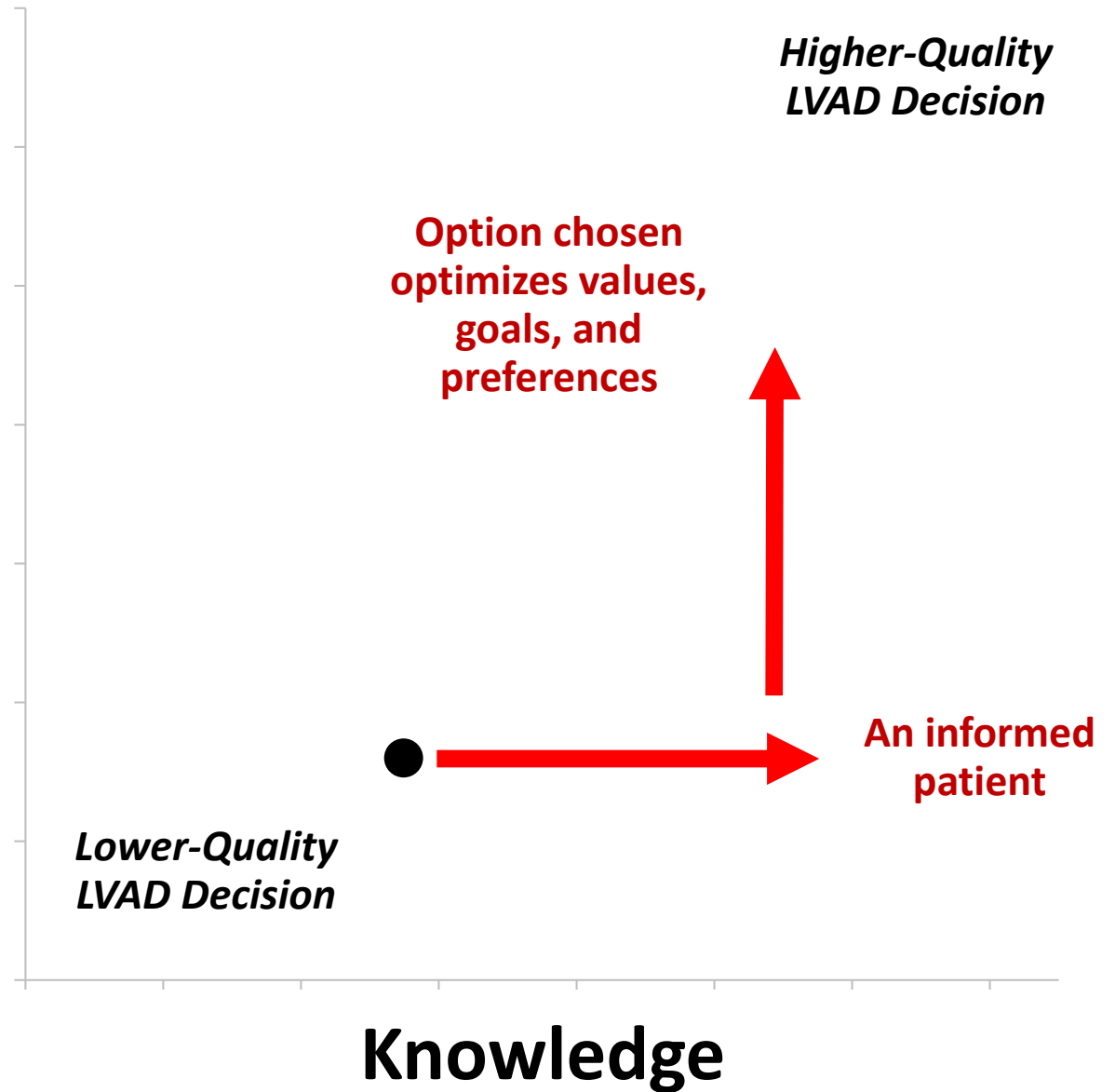
# Intervention Delivery

- Training
  - All sites participated: 31-72 staff per site
- Patient decision aid exposure
  - 88% received pamphlet decision aid
  - 92% received video decision aid
- “Educational materials” felt to be biased in favor of LVAD
  - 54% of control patients
  - 43% of intervention patients ( $p=0.13$ )

# Primary Outcome: DECISION QUALITY

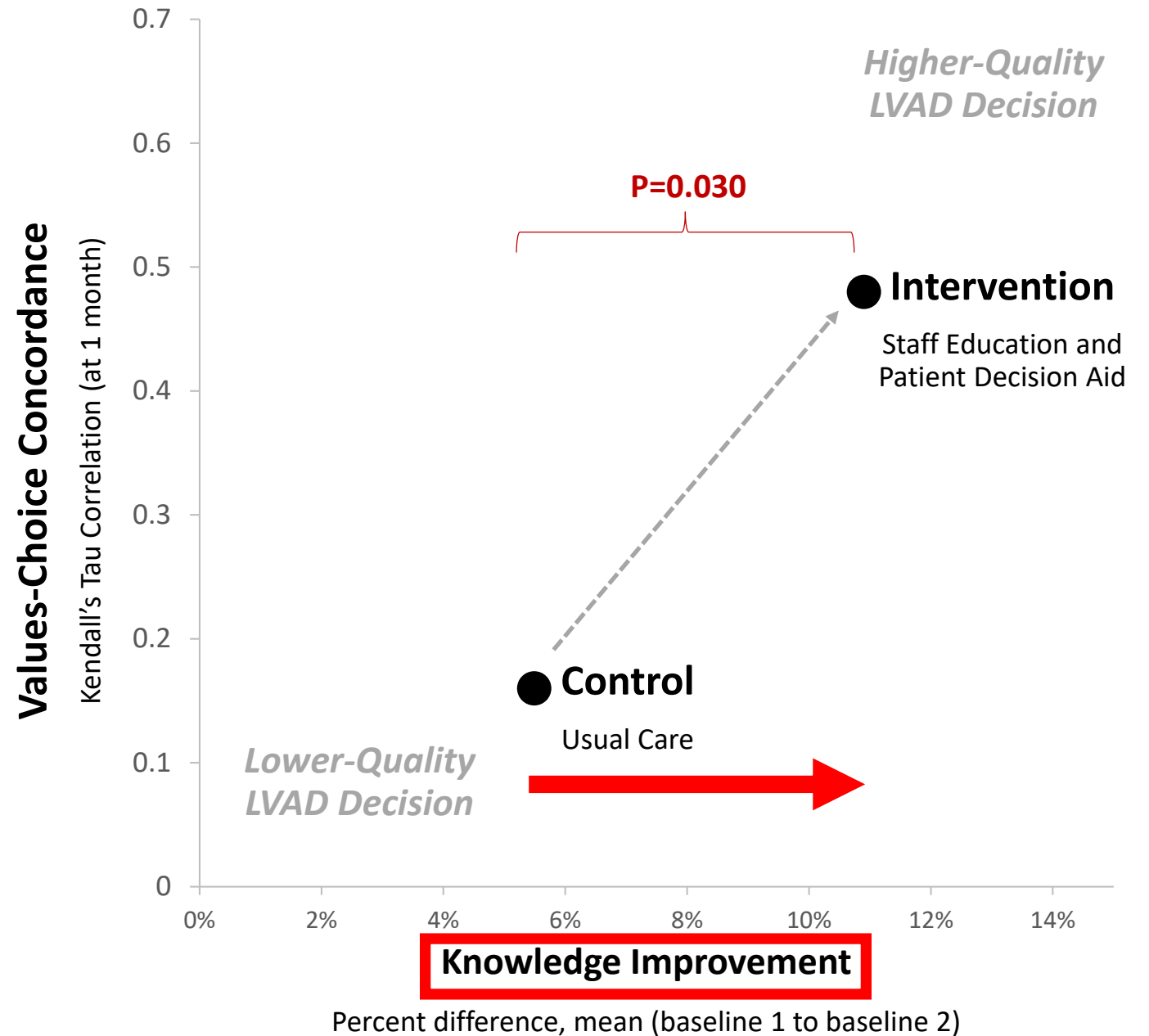
“The extent to which medical decision making reflects the considered preferences of a well-informed patient.”

Values-Choice  
Concordance

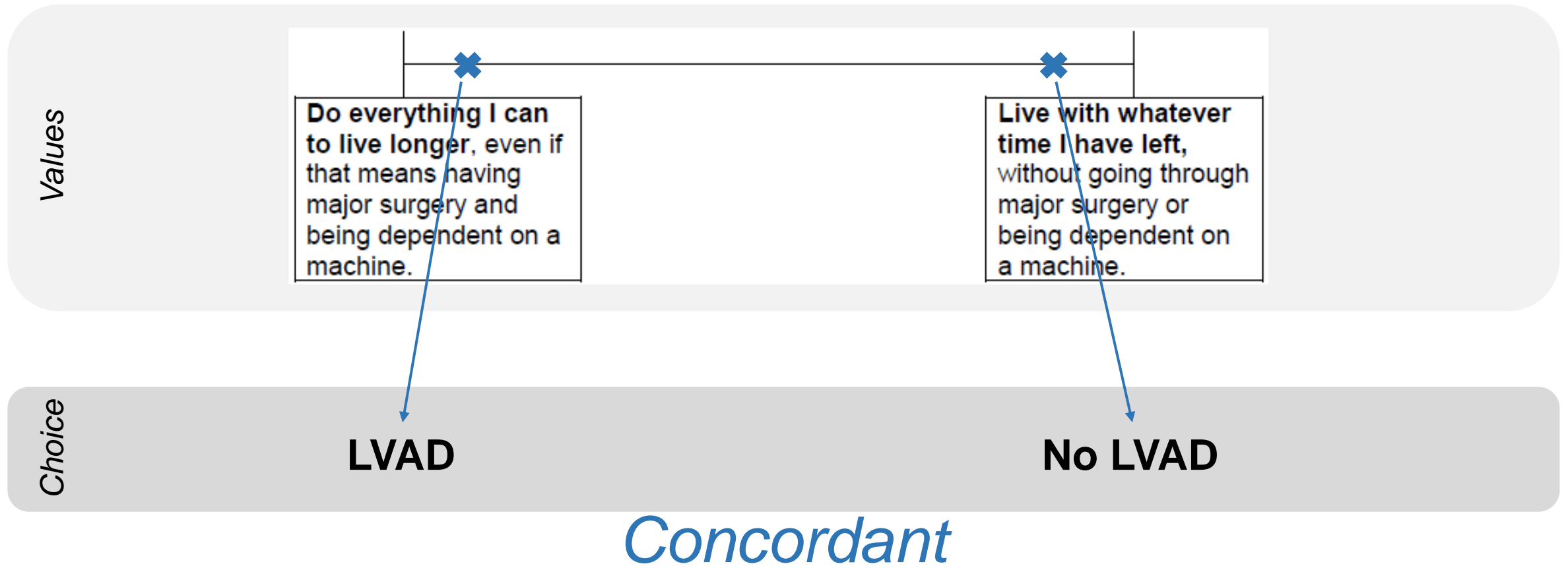


# Knowledge

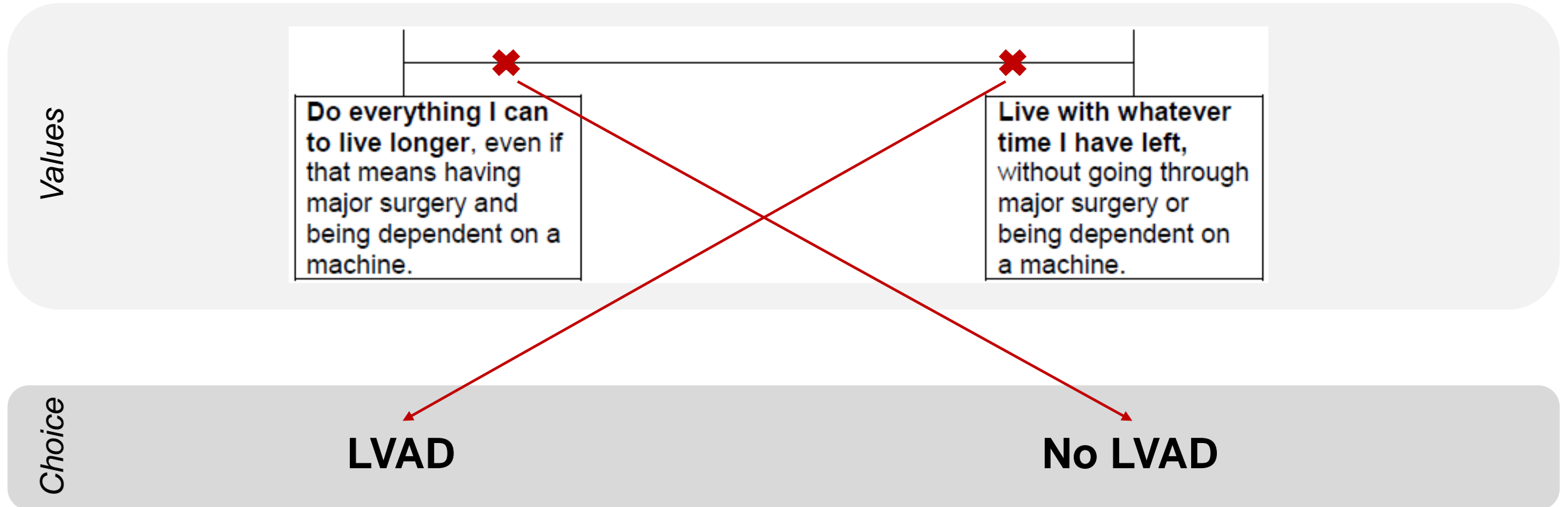
- Control: 59.5%→64.9%
- Intervention: 59.1%→70.0%
- Adjusted difference of difference: **5.5%**



# Values-Choice Concordance



# Values-Choice Concordance

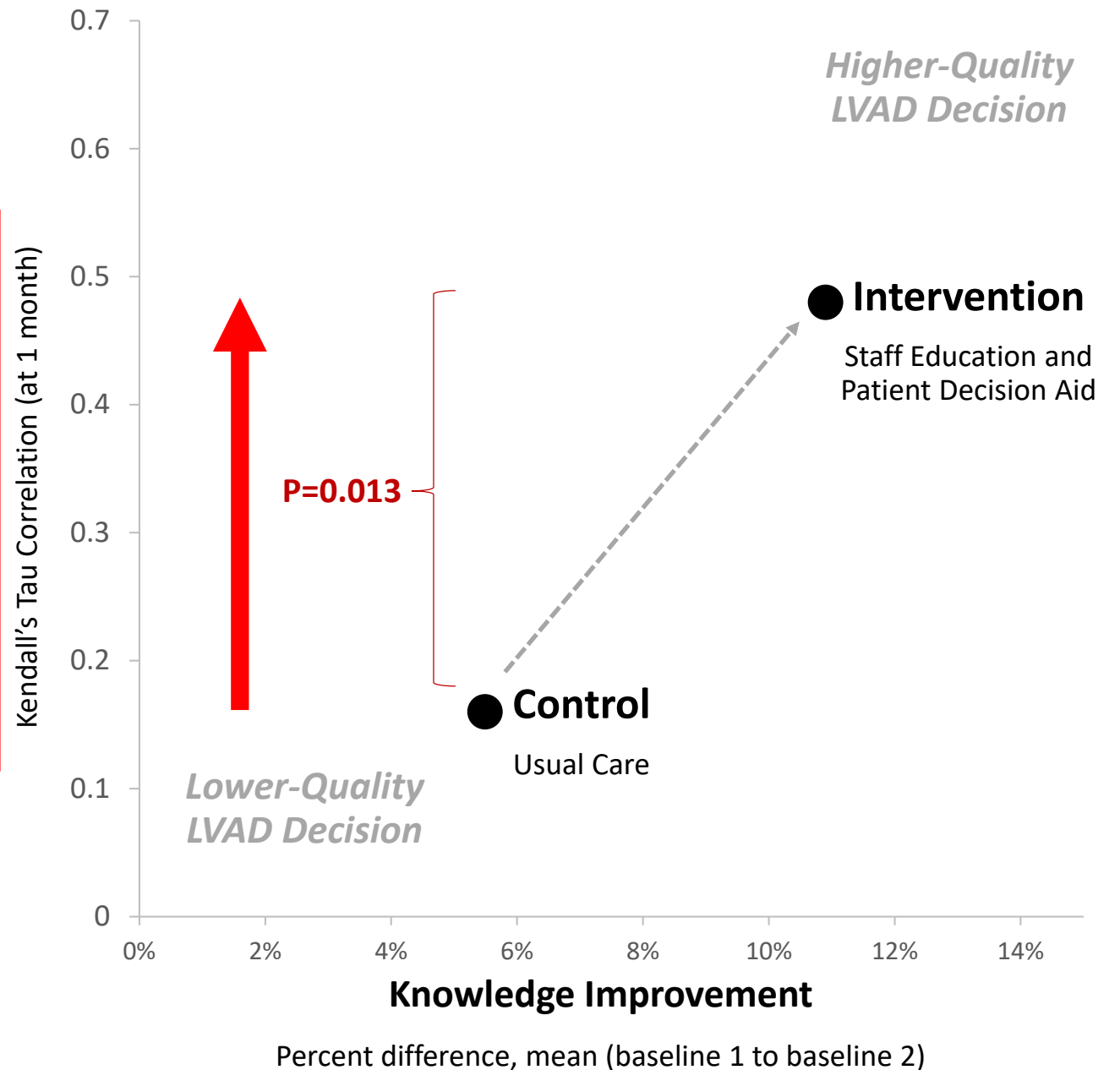


*Discordant*

# Values-Choice Concordance

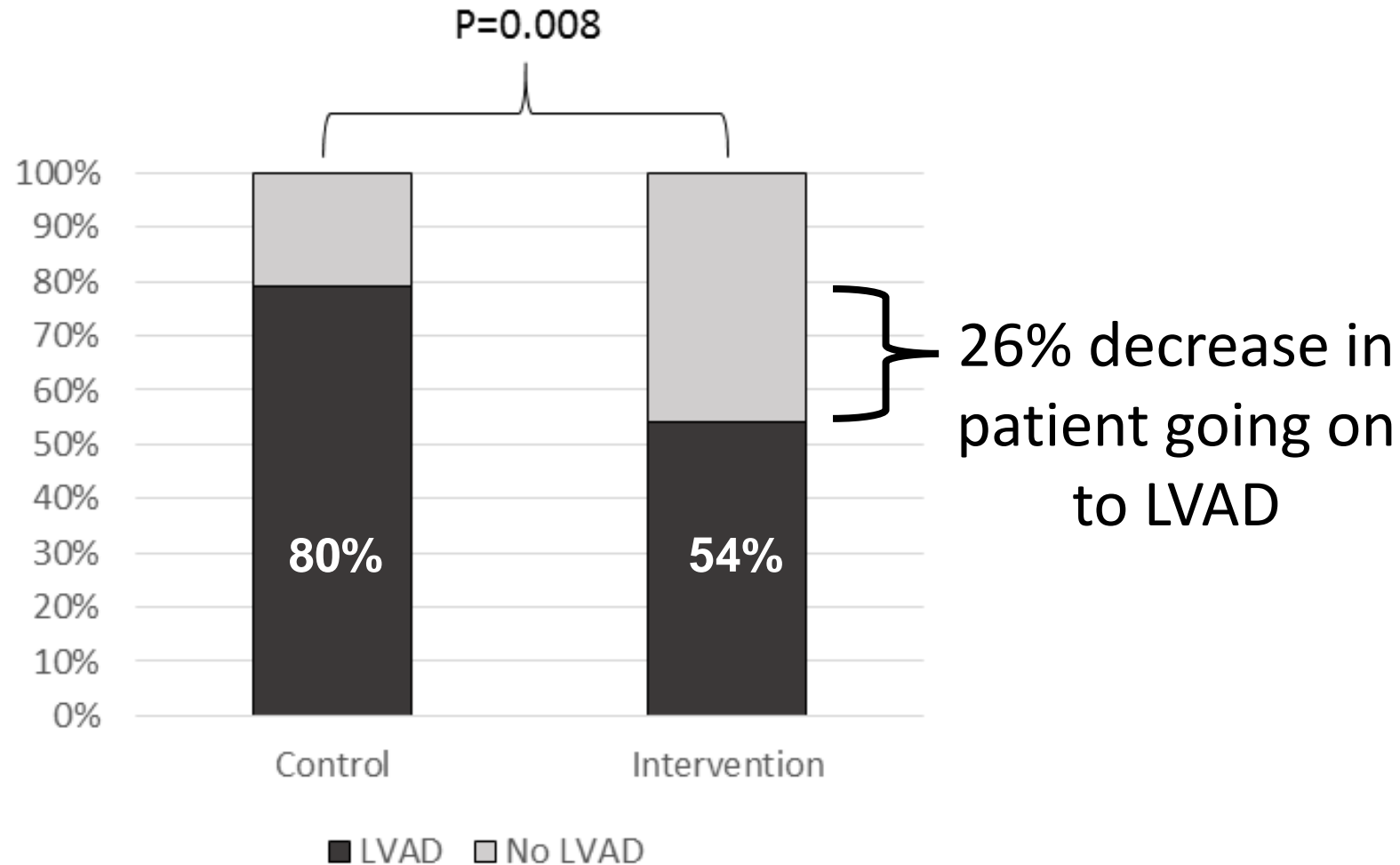
- Control: 0.17 correlation coefficient
- Intervention: 0.48 correlation coefficient
- Adjusted difference of difference: **0.28**

Values-Choice Concordance

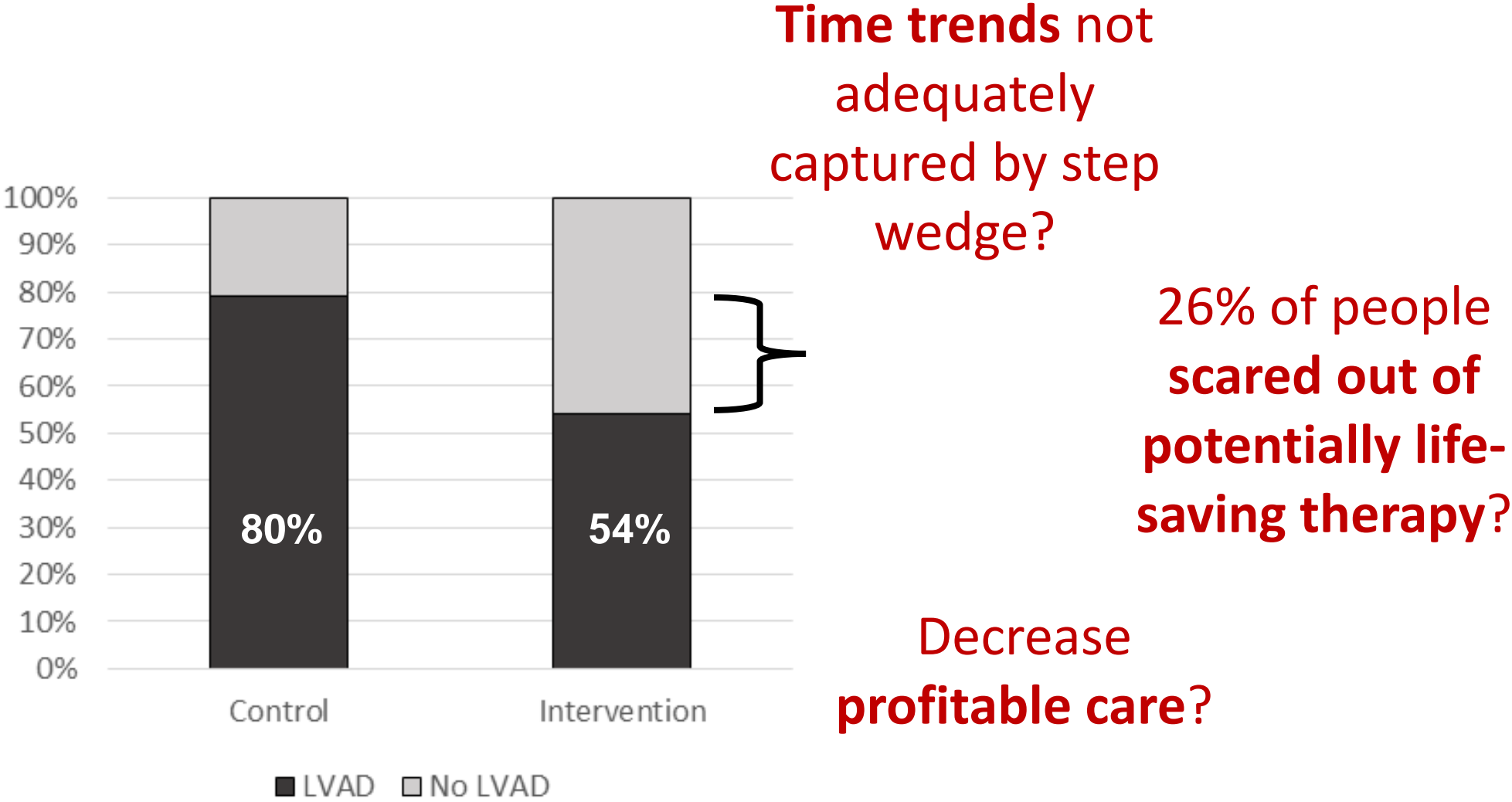


# Secondary Outcomes: 6-month implant

Adjusted for Site and Time Period



# Maybe?





# Caregivers

**182 caregivers enrolled** (from n=217 eligible; power/planned n=168)

- No significant differences between enrolled/non-enrolled and control/intervention

	Control (n=111)	Intervention (n=71)
Age, mean years (SD)	60.2 (11.2)	61.5 (11.5)
Female	82.9%	92.5%
White, non-Hispanic	81.8%	86.4%
Some college or more	66.4%	63.6%
Employed	41.7%	43.9%
Married	86.4%	82.1%
Relationship to patient, spouse	73.9%	79.1%
Caregiver lives with patient	82.9%	83.8%

# Knowledge

## Non-significant

- Control: 64.2%→73.3%
- Intervention: 62.6%→76.4%
- Adjusted difference of difference: **4.8%**



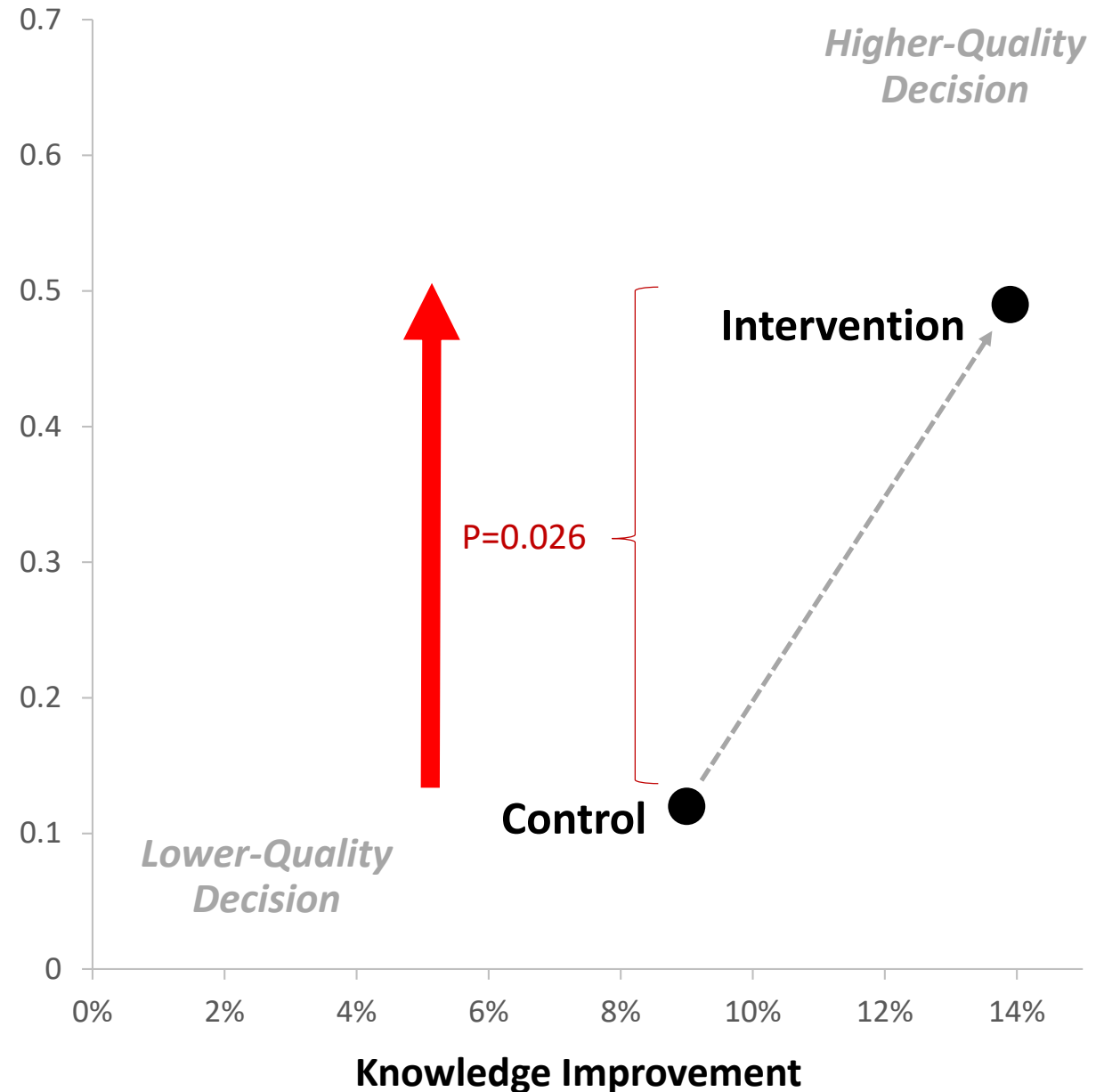
# Values-Choice Concordance

## Significant

- Control: 0.12 correlation coefficient
- Intervention: 0.49 correlation coefficient
- Adjusted difference of difference: **0.36**

Values -Choice Concordance

Kendall's Tau Correlation (at 1 month)



Percent difference, mean (baseline 1 to baseline 2)

# Do You Have the Stomach for Results?

- **Decision Conflict** scores decreased significantly less after viewing decision aids compared to control period materials
  - Baseline 1: control 19.0, intervention 21.4
  - Baseline 2: control **2.6**, intervention **9.3** (p=0.009)
    - Higher score=higher decision conflict

Are we just  
raising people's  
**anxiety?**

# Bereaved Caregivers...



**20% of subjects dead by  
6-month data collection**

# Bereaved Caregivers...

## Original Investigation

## Bereaved Caregiver Perspectives on the End-of-Life Experience of Patients With a Left Ventricular Assist Device

Colleen K. McIlvannan, DNP, ANP; Jacqueline Jones, PhD, RN; Larry A. Allen, MD, MHS; Keith M. Swetz, MD, MA; Carolyn Nowels, MSPH; Daniel D. Matlock, MD, MPH

**IMPORTANCE** For patients and their loved ones, decisions regarding the end of life in the setting of chronic progressive illness are among the most complex in health care. Complicating these decisions are increasingly available, invasive, and potentially life-prolonging technologies such as the left ventricular assist device (LVAD).

**OBJECTIVE** To understand the experience of bereaved caregivers and patients at the end of life who have an LVAD.

**DESIGN, SETTING, AND PARTICIPANTS** Semistructured, in-depth interviews were conducted between September 10 and November 21, 2014, with 8 bereaved caregivers of patients with an LVAD who were recruited from a single institution. Data were analyzed from December 13, 2014, to February 18, 2015, using a mixed inductive and deductive approach.

**MAIN OUTCOMES AND MEASURES** Themes from semistructured interviews.

**RESULTS** The 8 caregivers (6 females) described 3 main themes that coalesced around the experience of confusion in the final weeks with their loved ones: (1) the process of death with an LVAD, (2) the legal and ethically permissible care of patients with an LVAD approaching death, and (3) fragmented integration of palliative and hospice care.

**CONCLUSIONS AND RELEVANCE** Despite increasing use of LVADs in patients with advanced heart failure, bereaved caregivers of patients with an LVAD describe a high level of confusion at the end of life. There remains a need for the health care community to develop clear guidance on the management of patients with an LVAD at the end of life. Future work will focus on the educational process and the ideal timing and reiteration of such information to patients and families.

*JAMA Intern Med.* doi:10.1001/jamainternmed.2015.8528  
Published online March 21, 2016.

← Invited Commentary

+ Supplemental content at  
[jamainternalmedicine.com](http://jamainternalmedicine.com)

**Author Affiliations:** Section of Advanced Heart Failure and Transplantation, Division of Cardiology, University of Colorado School of Medicine, Aurora (McIlvannan, Allen); Colorado Cardiovascular Outcomes Research Consortium, University of Colorado School of Medicine, Aurora (McIlvannan, Allen, Matlock); University of Colorado School of Nursing, Aurora (Jones); Division of General Internal Medicine, University of Colorado School of Medicine, Aurora (Nowels, Matlock); Birmingham/Atlanta Geriatric Research, Education, and Clinical Center, Department of Veterans Affairs, Birmingham VA Medical Center, Birmingham, Alabama (Swetz); Center for Palliative and Supportive Care, University of Alabama at Birmingham (Swetz).

**Corresponding Author:** Colleen K. McIlvannan, DNP, ANP, Section of Advanced Heart Failure and Transplantation, Division of Cardiology, University of Colorado School of Medicine, 12631 E 17th Ave, Mail Code B130, Aurora, CO 80045 ([colleen.mcilvannan@ucdenver.edu](mailto:colleen.mcilvannan@ucdenver.edu)).



# Considerations

## Strengths

- Real-world look through a hybrid effectiveness-implementation design
- Rare upstream capture of patients *considering* for DT LVAD (not just LVAD recipients)


## Concerns

- Stepped-wedge is a quasi-experimental design
- Missing data due to death and withdrawal of patients not implanted

# Next Steps


- Updated decision aids
- PCORI Dissemination and Implementation
  - Disseminate decision aids to all **173 LVAD** programs across the U.S.
  - Targeted implementation strategies based on level of adopters at program

A decision aid for  
**Left Ventricular Assist Device (LVAD)**  
A device for patients with advanced heart failure



**Exploring Options**

You are being considered for an LVAD. This booklet is designed to help you understand what an LVAD is and to help you, your family, and your doctors think about what is best for you. Your values and goals are the most important factors in making a decision.



**What are your current feelings about being considered for an LVAD?**

Think about...

- how you want to live the rest of your life
- your hopes and fears
- your biggest questions

To view a video about this decision or for an online version of this booklet, visit [patientdecisionaid.org](http://patientdecisionaid.org).

1



The screenshot shows the PCORI website homepage. At the top right, there are navigation links: BLOG, NEWSROOM, HELP CENTER, SUBSCRIBE, CAREERS, and CONTACT. Below these is a search bar with a magnifying glass icon and the word "Search". The main navigation bar is dark teal and contains: HOME (house icon), ABOUT US, RESEARCH & RESULTS, ENGAGEMENT, FUNDING OPPORTUNITIES (highlighted in a lighter teal), and MEETINGS & EVENTS. Below the navigation bar is a large green button that says "APPLY NOW". To the right of the button are social media icons for Twitter, Facebook, LinkedIn, and a plus sign. The main content area features the text "PCORI Funding Announcement: Implementation of Effective Shared Decision Making Approaches in Practice Settings" in a large, dark blue font. Below this text, there are two smaller links: "Funding Opportunities" and "What & Who We Fund".



# Thank You! Larry.Allen@ucdenver.edu

- Collaborators:
  - Dan Matlock
  - Colleen McIlvennan
  - Jocelyn Thompson
  - And many more! (It takes a village)
- Patients and Caregivers
- Clinicians and clinical programs

Decision aids available for free at:

<http://patientdecisionaid.org/LVAD/>

Colorado Program for Patient Centered Decisions

HOME OUR PROGRAM DECISION AIDS CONTACT US

Facing a Difficult Medical Decision?

LET'S GET STARTED

- What is a Decision Aid?**  
Decision aids provide information about treatment options for patients to think about and to discuss with their health care providers.
- Implantable Cardioverter-Defibrillator**  
An ICD is a small device that is placed under the skin of the chest. Wires (called "leads") connect the ICD to the heart.
- Left Ventricular Assist Device**  
An LVAD is a mechanical device that helps your heart do its job of pumping blood. The LVAD is attached to your heart during major surgery.
- Colon Cancer Screening**  
Screening is the process of looking for cancer in people who have no symptoms of the disease. Several tests can be used to screen for colorectal cancers.