Does Shared Decision Making Affect People's Preference, Intent, and Adherence Regarding Colorectal Cancer Screening?

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Conflict of Interest

- ☐ NONE

Shared Decision Making (SDM): Effect on Patient Sociocognitive Factors and Health Behavior

- ☐ Importance of SDM in clinical care and increasingly in health care policy
- ☐ SDM improves patients' overall satisfaction and their confidence in decisions that have been taken.
- ☐ However, the extent to which it might also positively affect patient-relevant, disease-related endpoints is a matter of debate (Shay/Lafata 2015).

Colorectal Cancer Screening (CRCS): Choice of Tests

- ☐ Recommended for all average-risk United States adults aged 50 to 75 years
- ☐ Several CRCS options are available, including stool blood test, flexible sigmoidoscopy, and colonoscopy.
- ☐ No strong evidence exists that favors one CRCS test over another in average-risk patients
- ☐ Organizations recommend that CRCS should be based on *patient preference* in order to optimize the CRCS rate.   [USPSTF]

Patient Preference: Which CRCS Test?

☐ Patient preference depends on demographic, social, and behavioral factors, and relates to test characteristics of efficacy, sensitivity, cost, complexity, and possible harm.

Our Study

- **DATES**: Decision Aid to Technologically Enhance Shared Decision Making (R01CA152413)
  - Goal: Provide detailed understanding of how an interactive decision aid will impact the patient's decision making process, including SDM, and ultimately, CRCS adherence
  - 4 (+1.5) years: 4/1/2011-9/30/2016
    - Year 1: Preparation
    - Years 2 and 3 (4): Implementation
    - Year 4 (5): Evaluation
      - It keeps going…

Design

- 2-armed randomized controlled trial (RCT)
  - 585 patients total (original goal: 600)
  - Intervention Arm (n=284): ColoDATES Web, an interactive web-based decision aid
  - Control Arm (n=286): Non-interactive web-based decision aid
- Setting: 12 community and 3 academic family medicine or internal medicine practices in southeast Michigan (56 physicians)
- Patients: Adults aged 50 to 75 years
  - Not current on CRCS
  - Scheduled for a check-up or chronic care visit with their clinician

Analysis Plan

- Logistic regression and change score analyses were performed on patient survey, audio-record, and chart audit data.
- SDM was measured by OPTION-12, a validated instrument that measured physician performance of SDM during the patient-physician encounter.
- Main outcomes
  - Change in patient preference and intent as measured by patient survey immediately before and after the encounter
  - CRCS adherence determined by medical record documentation of CRCS 6 months after the visit
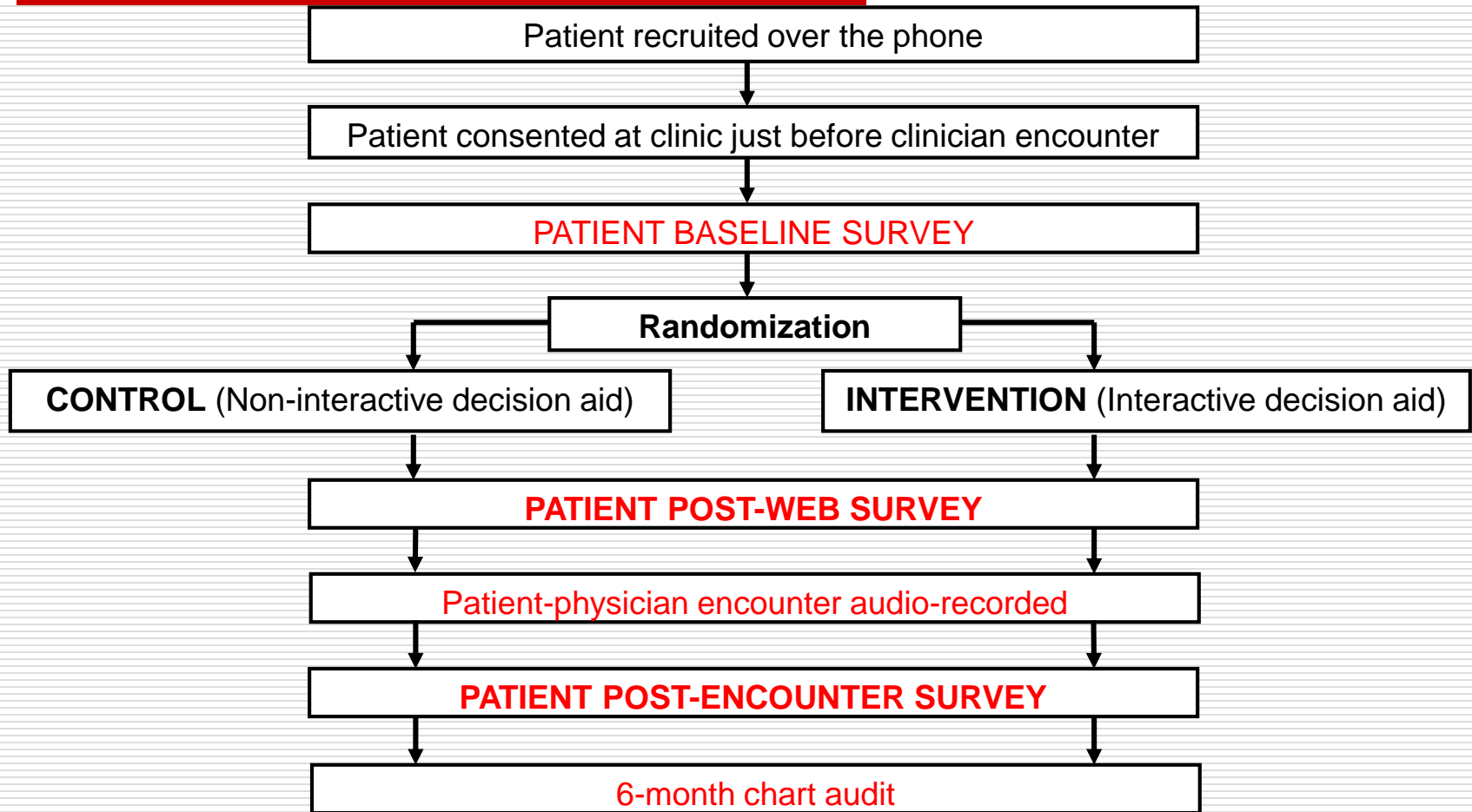
Baseline Demographic Data

Variable	Overall (n=549)
Age (years) – Mean(SD)	**57.7** (6.9)
Race: number (%)	
Caucasian	298 (54.5)
African American	**204 (37.3)**
Other	45 (8.2)
No Answer (Missing)	2
Gender: number (%)	
Female	**310 (56.5)**
Current Health: number (%)	
Excellent	**45 (8.2)**
Very Good	**166 (30.2)**
Good	**209 (38.1)**
Fair	109 (19.9)
Poor	20 (3.6)
Prior Exposure to CRCS: number (%)	
Yes	**302 (55.0)**

Study Flow

OPTION Observing patient involvement © March 2009

Date of Rating: .... (DD MM YY)	Practitioner: .... (Age Sex)
Rater Name:	Patient: .... (Age Sex)
Clinician Code:	Consultation Type: ☐ New ☐ Review ☐ Composite
Consultation Number:	
Consultation Duration: .... (minutes seconds)	Another Person In The Room? ☐ Yes ☐ No Who? ....

Description of Index Problem:

1. **The clinician draws attention to an identified problem as one that requires a decision making process.**
   0 = No attempt to draw attention to a need for a decision making process *(there is no clarity about problems, or at least no clarity about the decisions to be taken about the problem or problems identified).*
   1 = Very brief or perfunctory attempts to draw attention to the need to embark on a decision making process.
   2 = Baseline skill level: Clinician draws attention to a problem that requires a decision making process.
   3 = Clinician puts emphasis on the decision making process required.
   4 = The skill is exhibited to a high standard *(e.g. supplementary explanations and evidence of patient recognizing the need to engage in the process of decision making).*

2. **The clinician states that there is more than one way to deal with the identified problem ('equipoise').**
   0 = The clinician does not state that there is more than one way of managing problems.
   1 = Perfunctory attempt to convey the existence of more than one option.
   2 = Baseline skill level: Clinician conveys the sense that the options are valid and need to be considered in more depth.
   3 = Explains 'equipoise' in more detail and that options have pros and cons that need to be considered.
   4 = The clinician also explains 'why' choices are available *(e.g. there is genuine professional uncertainty as to the 'best' way of managing the problem – clinical equipoise);* the skill is exhibited to a high standard.

3. The clinician assesses patient's preferred approach to receiving information to assist decision making *(e.g. discussion in consultations, read printed material, assess graphical data, use videotapes or other media).*
   0 = The behaviour is not observed.
   1 = A minimal attempt is made to exhibit the behaviour.
   2 = Baseline skill level: Clinician asks for patient's preferred method of receiving information.

OPTION-12

- **12 items, assessing physician performance, raw score of 0-4 each (total: 0-48) that is adjusted to 0-100 total score**
  - ☐ Draws attention
  - ☐ Equipoise
  - ☐ Assess patient preference
  - ☐ Lists options
  - ☐ Explains pros and cons
  - ☐ Expectations
  - ☐ Concerns
  - ☐ Understood
  - ☐ Opportunities
  - ☐ Preferred level of involvement
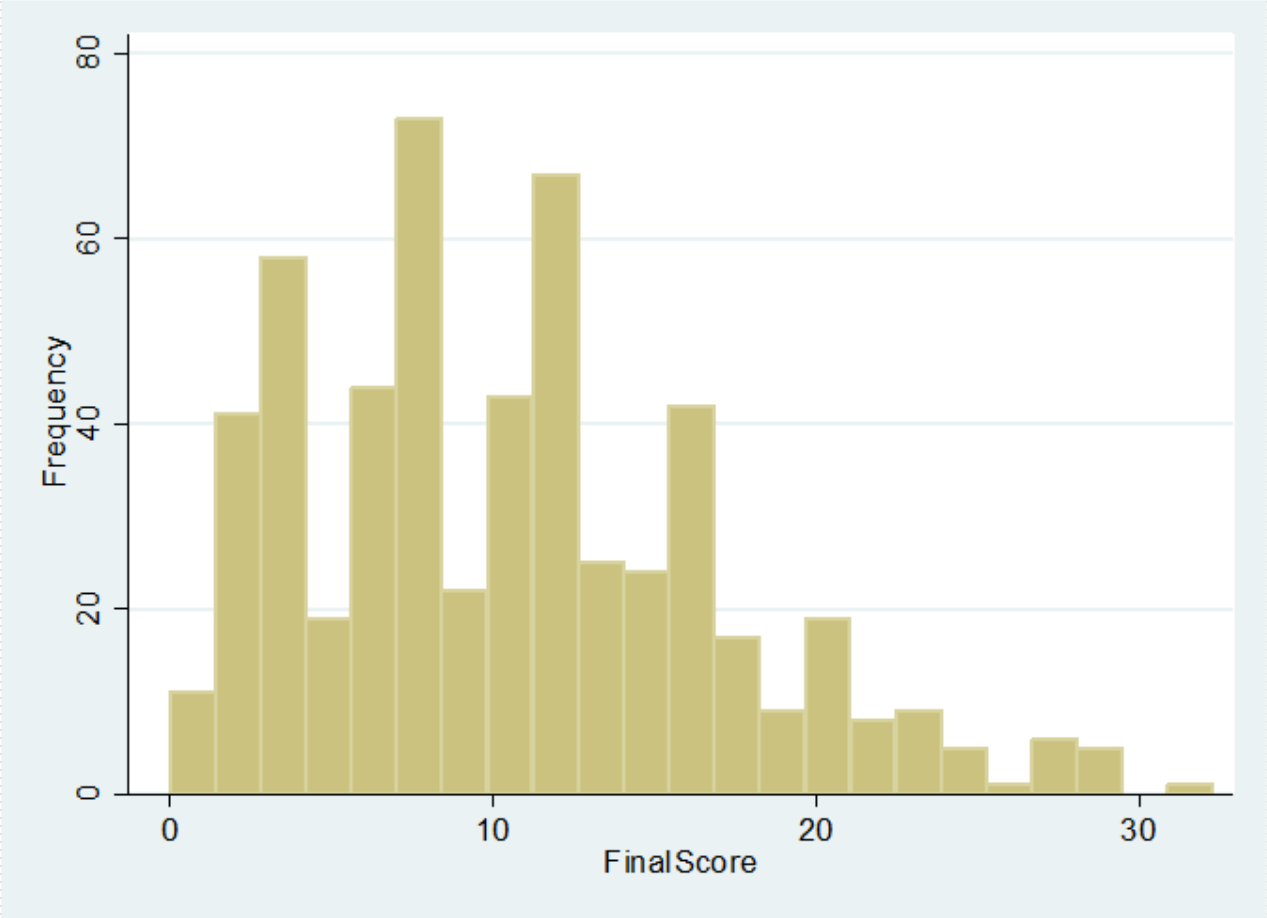 - ☐ Decision making
  - ☐ Review

So What Did We See?

- **549** total eligible patient-clinician transcripts

- Most items ranged from **0 to 2**

- Mean of **10.6** (SD=6.2) out of 100, range of 0-32, most transcripts $\leq$20

Distribution of Scores

There Was Association Between SDM and Increase in Intent

- ☐ Change score analysis where the original 5 point responses to the intent questions ("definitely will not do" to "definitely will do") were compared **prior to and after encounter** to see if there was any increase and how that might associate with SDM measured by OPTION-12

- ☐ The difference was taken and dichotomized into **positive change in intent (difference>0)** vs **negative or no change (intent difference<0)**

- ☐ Of the 538 patients for which data was available, **196 (36.4%)** had increased intent

- ☐ Increasing OPTION-12 scores were associated with higher odds of increasing intent (OR(SE)=1.03(0.02), p-value=0.051), adjusting for patient level factors and physician.

What About SDM and Preference?

Preference Coding	Post-Encounter: No Clear Preference	Post-Encounter: Clear Preference
Post-Web: No Clear Preference	23	60
Post-Web: Clear Preference	24	441

- The majority of patients (n=441) had a preference prior to physician encounter and remained with a preference after encounter.
- There were **60** patients who had no preference prior but a clear preference after the encounter.

There Was Association Between Pre-Encounter Preference and SDM on Post-Encounter Preference

- ☐ Higher OPTION-12 scores associated with increased odds of clear post-encounter test preference among those without a clear preference before the encounter: OR(SE)=1.16(0.06), p-value=0.007

- ☐ No significant association between OPTION-12 and post-encounter preference was found among those with a clear preference before the encounter: OR(SE)=0.98(0.03), p-value=0.478

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How About SDM and CRCS?

- Adjusting for study arms and other variables found to be significant in previous model (race, current health, prior exposure, intent), OPTION-12 score was **not significantly associated with CRC screening**.
  - **Lower in African Americans**: OR 0.48 (0.28, 0.85), p=0.011
  - Significantly **higher in those with better current health**: OR 1.32 (1.05, 1.65), p=0.017
  - Age, gender not significant
  - Significantly **higher in those with prior exposure**: OR 1.82 (1.15, 2.88), p=0.011
  - Significantly **higher in those with greater intent**: OR 2.22 (1.10, 4.47), p=0.026

So, Our Conclusion…
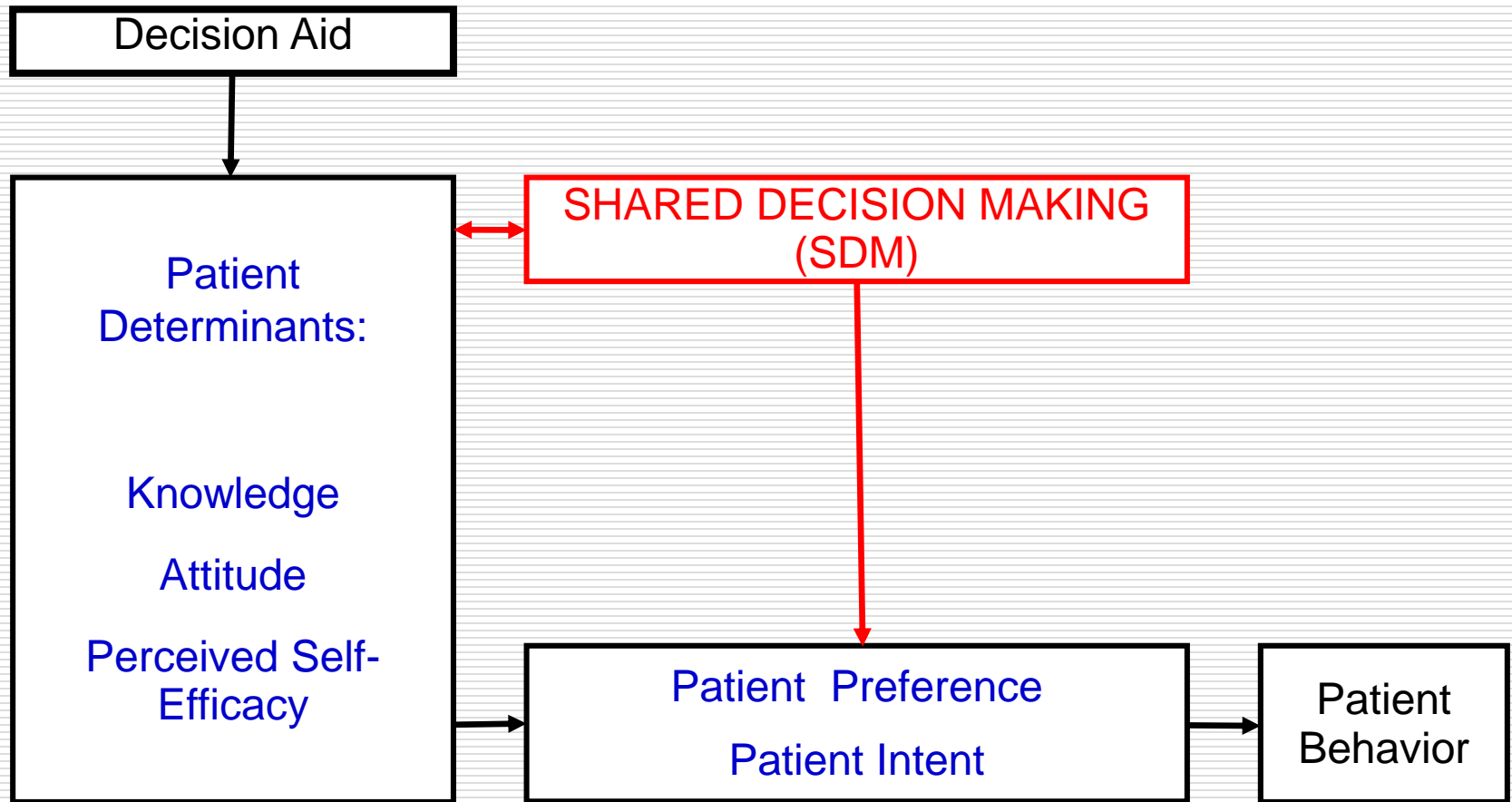
Strength of Our Study

- ☐ Measured SDM's effect on both:
  - ■ Sociocognitive variables
    - ☐ Intent
    - ☐ Preference clarification
  - ■ Patient behavior
- ☐ Measured SDM both:
  - ■ Subjectively (Degner: Control Preferences)
  - ■ Objectively (Elwyn: OPTION-12)

What We Didn't Find

- There was no difference in SDM between those who underwent an interactive decision aid vs. non-interactive decision aid.

- We do not know whether a patient decision aid administered prior to the visit with a clinician improves SDM.

  - 5 small studies from Mayo Clinic showed decision aids administered during the visit improved SDM as assessed by OPTION-12.

Do Decision Aids Really Lead to Greater SDM?

- ☐ If the patient reached a clear preference and increased intent after reviewing the decision aid, does it need to be rehashed with the physician?

- ☐ How do we measure the combined effect of informed decision making (decision aid) and shared decision making (physician encounter)?

Other Questions to Ponder

- ☐ Does SDM need to be done by the physician?
- ☐ Is SDM the right way to measure patient-physician communication?
  - ■ Just focuses on task
    - ☐ Does not incorporate relational and identity
  - ■ What incorporates all three? Communication Quality Analysis
    - ☐ LJ Van Scoy, MD; Allison Gordon, PhD

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