What is ACCORDS?
Adult and Child Center for Outcomes Research and Delivery Science

ACCORDS is a 'one-stop shop' for pragmatic research:

- A multi-disciplinary, collaborative research environment to catalyze innovative and impactful research
- Strong methodological cores and programs, led by national experts
- Consultations & team-building for grant proposals
- Mentorship, training & support for junior faculty
- Extensive educational offerings, both locally and nationally

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ACCORDS Upcoming Events

April 15, 2024 AHSB 2200/2201, Zoom	**Statistical Methods for Pragmatic Research** Opportunities and Challenges in the use of AI and ML for Population Health Informatics *Presented by:* Michael Matheny, MD (Vanderbilt University Medical Center)
April 26, 2024 AHSB 2200/2201, Zoom 11am-1pm MT	**ACCORDS/CCTSI Community Engagement Showcase**
May 20, 2024 Education 1 Room 1400, Zoom	**Statistical Methods for Pragmatic Research** Planning a Pragmatic Effectiveness Trial with a Factorial Design by Targeting the Posterior Distribution Variance *Presented by:* Keith Goldfeld, DrPH, MS, MPA/MURP
	Last seminars for the 2023-2024 academic year!

*all times 12-1pm MT unless otherwise noted

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Ethics, Challenges, and Messy Decisions in Shared Decision-Making
2023-2024 Seminar Series

Chris Knoepke, PhD, MSW

Laura Scherer, PhD

Training Clinicians in Shared Decision Making:
Lessons From SHARE

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- Knoepke receives funding from the NIH, PCORI, NIJ, RAND/Arnold Ventures, Fund for a Safer Future

- Scherer receives funding from the NIH, PCORI, CDPHE

- This work supported by AHRQ

- Other conflicts: none

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Talk Roadmap

- Overview of Shared Decision Making (SDM) & the SHARE Approach Model

- The SHARE Approach Evaluation:
  - Development of SHARE 2.0
  - Implementation Evaluation Results
  - Development of SHARE 3.0 based on study findings

- Vision for the Future

Shared Decision Making

Shared decision making (SDM) involves communication between clinicians and patients to make health care decisions consistent with patients' values, goals, preferences and circumstances

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Barry & Edgman-Levitan (2012) *NEJM*
Spatz, Krumholz & Moulton (2017) *JAMA*

Essential Elements of Shared Decision Making

Makoul & Clayman 2006 systematic review:

- No shared definition of SDM
- Reviewed 342 articles to identify essential elements of SDM, which included:

- Define/explain the problem
- Present options
- Discuss pros/cons (benefits/risks/costs)
- Elicit patient values/preferences

- Discuss patient ability/self-efficacy to follow through with different plans
- Check for understanding
- Make or explicitly defer the decision
- Arrange for a follow-up

## A decision aid for Implantable Cardioverter-Defibrillators (ICD)

For patients with heart failure considering an ICD who are at risk for sudden cardiac death (primary prevention).

What is an Implantable Cardioverter-Defibrillator (ICD)?
An ICD is a small device that is placed under the skin of the chest. Wires (called "leads") connect the ICD to the heart. An ICD is designed to prevent an at-risk person from dying suddenly from a dangerous heart rhythm. When it senses a dangerous heart rhythm, an ICD gives the heart an electrical shock. It does this in order to get the heart to beat normally.

Is an ICD right for me?
Your doctor has suggested that you might benefit from having an ICD. This is a big decision. Understanding what to expect after getting an ICD might help you to feel better about your decision. The ICD may not be right for some people. Although this may be hard to think about, other patients like you have wanted to know this information.
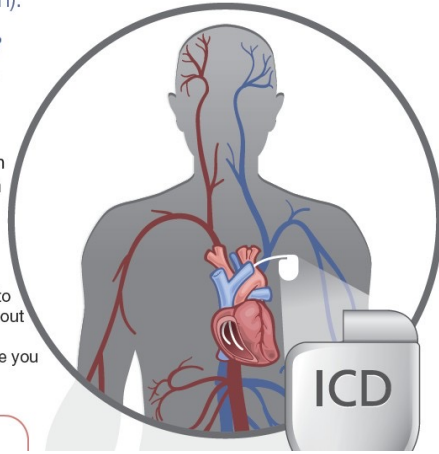
The ICD does not stop an advancing illness like heart failure. The only purpose of the ICD is to try to get a

IDECIDE LVAD
Better conversations, better decisions

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

Discreet Decisions

Lock to Live

You or someone you know may feel hopeless, down, or alone right now. Many people have gotten through times like this, and you can too.

This tool can help you make decisions about temporarily reducing access to potentially dangerous things, like firearms, medicines, sharp objects, or other household items.

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PRESENTATION TITLE

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Shared Decision Making is not always practiced effectively

- Substantial evidence that SDM is often not conducted effectively in practice
  - Speak quickly, interrupt frequently, use jargon
  - Do not effectively communicate that there are options
  - Do not effectively elicit patients' preferences & goals

- Lack of clinician support and SDM training is identified as an important barrier

Brenner, Malo, Margolis, et al., (2018) JAMA:IM; Redberg (2018) JAMA:IM; Scherr, Fagerlin, Hofer et al., (2016) *Medical Decision Making;* Legare & Witteman (2013) *Health Affairs*

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The SHARE Approach Model

STEP 1 — **S**eek your patient's participation.

STEP 2 — **H**elp your patient explore & compare treatment options.

STEP 3 — **A**ssess your patient's values and preferences.

STEP 4 — **R**each a decision with your patient.

STEP 5 — **E**valuate your patient's decision.

- Developed by AHRQ in 2014
- Based on Makoul & Clayman's systematic review
- Teaches clinicians 5 essential elements of SDM
- Designed as a general approach to SDM, to train clinicians from multiple disciplines
- Only freely available, generalized SDM clinician training program

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The SHARE Approach 1.0

1. SHARE 1.0:
   - Train-the-trainer model
   - 8 hours duration

2. SHARE 2.0:

- Train clinicians directly to improve likelihood of observing effectiveness
- Probably too long to implement

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Feedback from clinicians and patient stakeholders on SHARE Approach 1.0

Key feedback:

1. Make it shorter! Reduce number of slides and redundancies to emphasize key points.

2. Make it practical! Remove content that is overly academic, geared toward researchers ("intellectually interesting but not focused on teaching practicing clinicians how to implement SDM")

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Result: SHARE 1.0 VS. 2.0

SHARE 1.0

- Train-the-trainer approach
- 8 hours duration
- 5 modules
- Slide presentation, discussion, role play, video

SHARE 2.0

- Direct-to-clinician training
- 4 hours duration
- 3 modules
- Slide presentation, discussion, role play, video
- Introduced 2 options to facilitate implementation:
  1. Webinar vs in-person
  2. 1 block vs 2 2-hour blocks

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Evaluating the SHARE Approach 2.0
A Type II implementation-effectiveness trial

- Implement SHARE in 8 primary care and 4 cardiology practices located across Colorado

- Using a pre-post design, evaluate SHARE's effectiveness:
    1. Clinician evaluation of the training
    2. SDM occurring in clinical encounters
        a) Subjective reports from clinicians and patients
        b) Audio recordings

- Evaluate SHARE implementation using the RE-AIM framework

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Implementation Assessment:

	Definition	Primary outcome
Reach	*Number, proportion, and representativeness of individuals willing to participate*	Number & proportion of clinicians who participate in the training
Adoption	*Proportion and representativeness of settings that initiated a program*	1. Percent of primary care & cardiology practices approached that participated 2. Characteristics of participating practices 3. Qualitative evaluation of reasons for non-participation
Implementation	*Consistency of delivery and adaptations*	1. Selected mode of training delivery (webinar vs. in-person and 2 sessions vs. 1) 2. Documentation of adaptations made to the training during course of study

RESULTS:
Implementation

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Results: ADOPTION

- **Primary care: 71% adoption**
  - 14 contacted
  - 10 agreed
  - 10 completed

- **Cardiology: 20% adoption**
  - 10 contacted
  - 3 agreed
  - 2 completed

Practice Type	Setting	Region	Practice Size
Primary care	Independent Family	West-medium city	Large
Primary care	Independent Family	West-medium city	Small
Primary care	Independent Family	Eastern rural	Small
Primary care	Independent Family	Urban front range	Medium
Primary care	Independent Family	Mid-mountain small town	Small
Primary care	Independent Family	Urban front range	Small
Primary care	Health System	Mid-mountain small town	Large
Primary care	Independent Adult	Urban front range	Medium
Primary care	Federally Qualified Health Center	Eastern rural	Small
Primary care	Federally Qualified Health Center	Eastern rural	Small
Cardiology	Health System	Urban front range	Large
Cardiology	Independent	Urban front range	Small

Results: ADOPTION

Cardiology practices:

Reasons for non-adoption

- Too much time required for training

- Questioned value (e.g. impact on patient outcomes) and how to identify patients for SDM

- Logistics: Staff spread across multiple sites, staff change sites frequently (large health system)

- Relatively mundane reasons: No bandwidth, not a good time, short staffed, physical relocation, EMR change, practice's IRB too cumbersome for timeframe

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Results: ADOPTION

Primary care practices:

Reasons for non-adoption

- No response x2
- "No bandwidth"
- Questioned value and how to identify patients for SDM

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Results: REACH

- Received 176 email contacts from practice leadership; all staff that leaders deemed could benefit from SHARE
  - Of those, total clinical staff = 146
  - Additionally, one practice invited 7 patients to their training

- Out of 176 staff invited, 146 (82.9%) attended the training

- Out of 146 <u>clinical</u> staff invited, 129 CME certificates distributed (88.3%)

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Results: IMPLEMENTATION

- Which mode of training delivery was preferred?

1. **Most wanted in-person training:** In-person = 9 practices; Webinar = 3 practices
   - 1 webinar worked well, 2 did not: Low participation in discussion ("I had to ask by name for responses"), videos turned off ("I was the only one on camera")

2. **Equal (6:6) numbers chose 1 training block vs. 2 2-hour sessions:**
   - 1 training block took less time (one ended in 2.5 hours!): improved flow, less time allocated to starting up and introduction
   - 2-hour sessions were easier to schedule (improving Adoption)

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Results: IMPLEMENTATION

- 2 major training adaptations:

1. Video demonstrating poor vs. high-quality SDM for urinary incontinence
   - Topic felt irrelevant to their practice, too basic, "corny"
   - Replaced the video with discussion of a practice-relevant topic that lends itself to SDM

2. Final "Action Plan" activity
   - At the end of the training, participants did not feel ready to develop an action plan
   - Most groups were interested in decision aids, wanted more time to look at them
   - Replaced Action Plan activity with group exploration of decision aids (e.g., *Statin Choice*)

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Results: IMPLEMENTATION

- Dominant observations from field notes:

1. Practices communicated that they saw value ("this team realized the benefit of the training even at a cost of 4 hours of their time")

2. The more experienced practices reported the training felt basic ("this feels like SDM 101") but also saw value in interactive elements ("enjoyed discussion more than slide presentation, but this is a slide-driven training")

3. Webinars lacked engagement ("I was the only one on camera"; "Not one of the staff spoke during the training, only the three providers when called on")

RE-AIM Results, summary

- **Adoption:** Difficult to recruit cardiology practices, some questioned value of SDM training, some struggled with logistics / time required

- **Reach:** High rates of clinician participation among practices recruited

- **Implementation:**
  - In-person trainings preferred; webinars less effective
  - Breaking up the training into smaller 2-hour blocks made it possible for some practices to participate
  - SHARE felt valuable to some practices, too basic to others

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Did clinicians like the SHARE training?

Yes!

- 91% had positive evaluation of SDM training (1 was "somewhat negative")

- 75% agreed or strongly agreed that SHARE was useful for their daily practice (9% disagreed)

- 78% said their experience of using SHARE in daily practice was very or somewhat positive (1 was negative)

- 93% said SHARE helped them to overcome SDM barriers

NEXT STEPS…

How can we improve the SHARE Approach, based on these findings?

How can we increase the likelihood that the SHARE Approach is adopted in the future?

Some stand-out observations

Webinars were problematic and frustrating for our trainer

SHARE was too basic for some practices but all appreciated interactive elements

Implementing SHARE was resource intensive
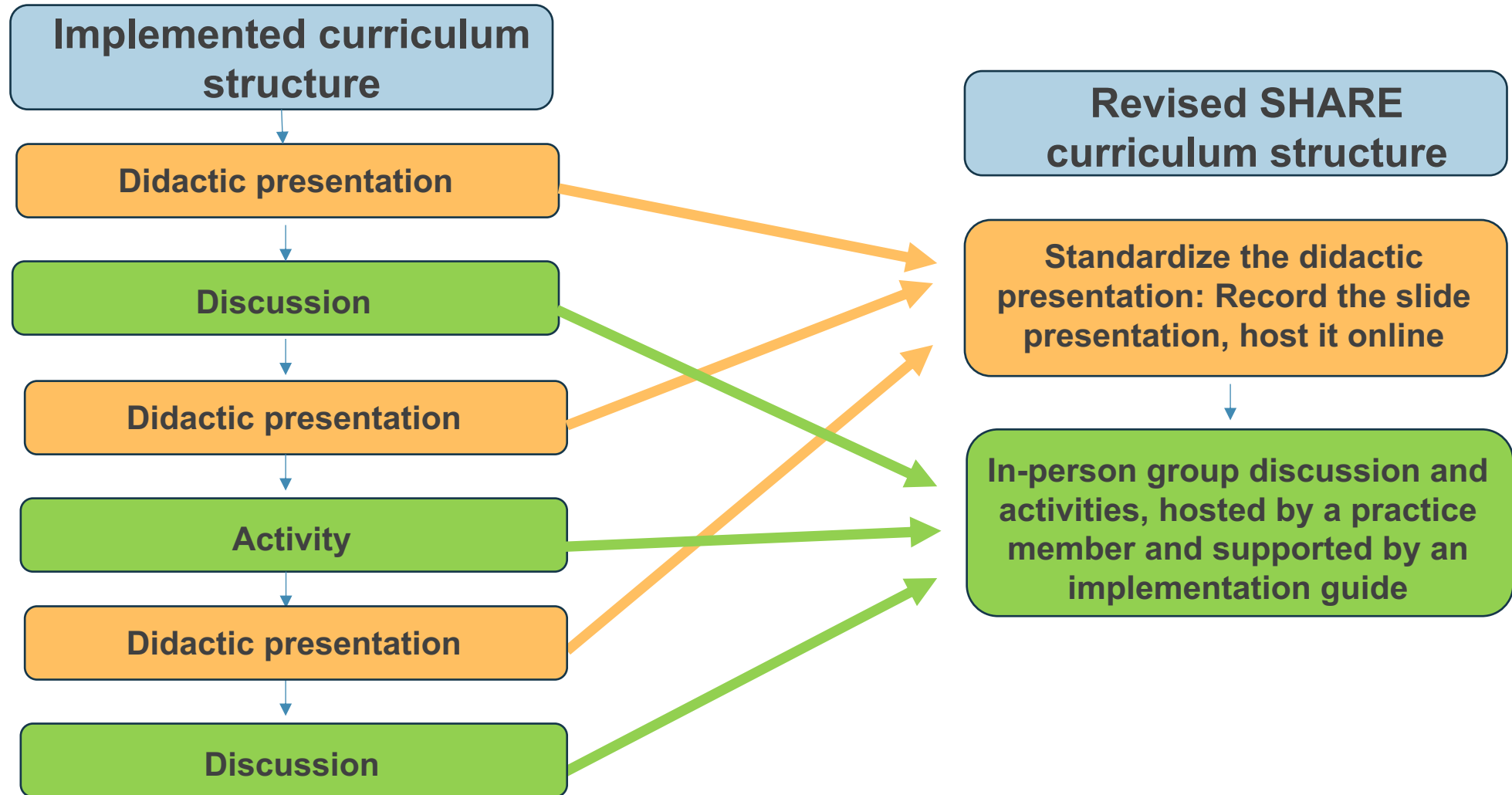
Any live component of the training should be delivered in-person

Can we make the SHARE Approach feel less slide driven & more interactive to create value for both more & less experienced practices?

Can we make the SHARE Approach deliverable without relying on an experienced trainer?

Development of SHARE Approach 3.0

Standardized didactic presentation: Recorded & hosted online

Module 1: Shared Decision Making and the SHARE Approach

Module 2: Decision Aids: What They Are and How To Use Them

Module 3: Communication Barriers and Solutions

In-person group discussion and activities, hosted by practice member and supported by an implementation guide

Activity: Making a patient-centered recommendation

Activity: Role play

Activity: Exploring decision aids

Discussion: What makes communication difficult

Activity: Communicating numbers

Discussion & wrap-up: How to implement regular SDM at your practice

Conclusions & Vision

- Evidence for the SHARE Approach's effectiveness is <u>encouraging</u>

- There is interest in the SHARE Approach!

- Support AHRQ's efforts in disseminating the SHARE Approach training and materials
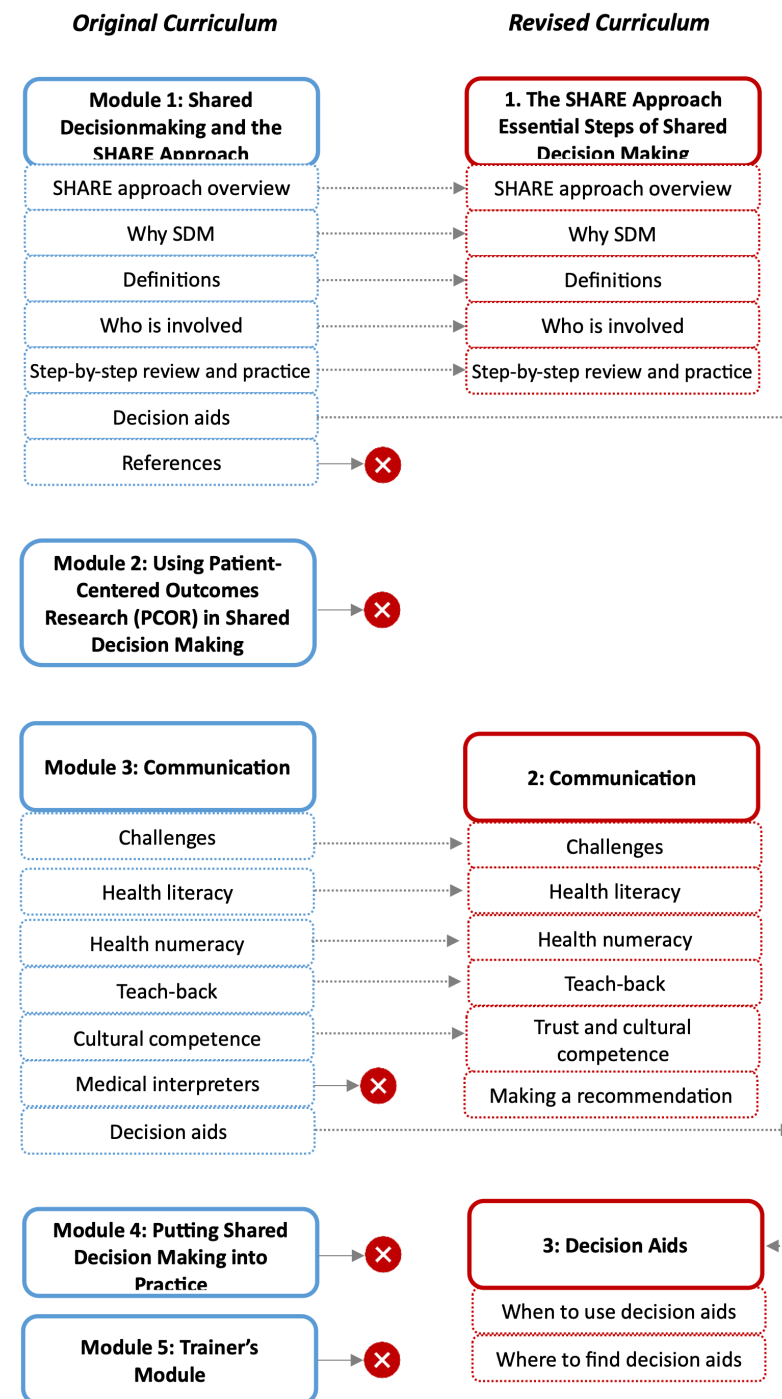
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THANK YOU

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Revisions for SHARE Approach 2.0

Original Curriculum

Module 1: Shared Decisionmaking and the SHARE Approach
- SHARE approach overview
- Why SDM
- Definitions
- Who is involved
- Step-by-step review and practice
- Decision aids
- References

Module 2: Using Patient-Centered Outcomes Research (PCOR) in Shared Decision Making

Module 3: Communication
- Challenges
- Health literacy
- Health numeracy
- Teach-back
- Cultural competence
- Medical interpreters
- Decision aids

Module 4: Putting Shared Decision Making into Practice

Module 5: Trainer's Module

Revised Curriculum

1. The SHARE Approach Essential Steps of Shared Decision Making
- SHARE approach overview
- Why SDM
- Definitions
- Who is involved
- Step-by-step review and practice

2: Communication
- Challenges
- Health literacy
- Health numeracy
- Teach-back
- Trust and cultural competence
- Making a recommendation

3: Decision Aids
- When to use decision aids
- Where to find decision aids

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Revisions for SHARE Approach 2.0

Original Curriculum

Revised Curriculum

Module 1: Shared Decisionmaking and the SHARE Approach	1. The SHARE Approach Essential Steps of Shared Decision Making
SHARE approach overview	SHARE approach overview
Why SDM	Why SDM
Definitions	Definitions
Who is involved	Who is involved
Step-by-step review and practice	Step-by-step review and practice
Decision aids	
References	✗

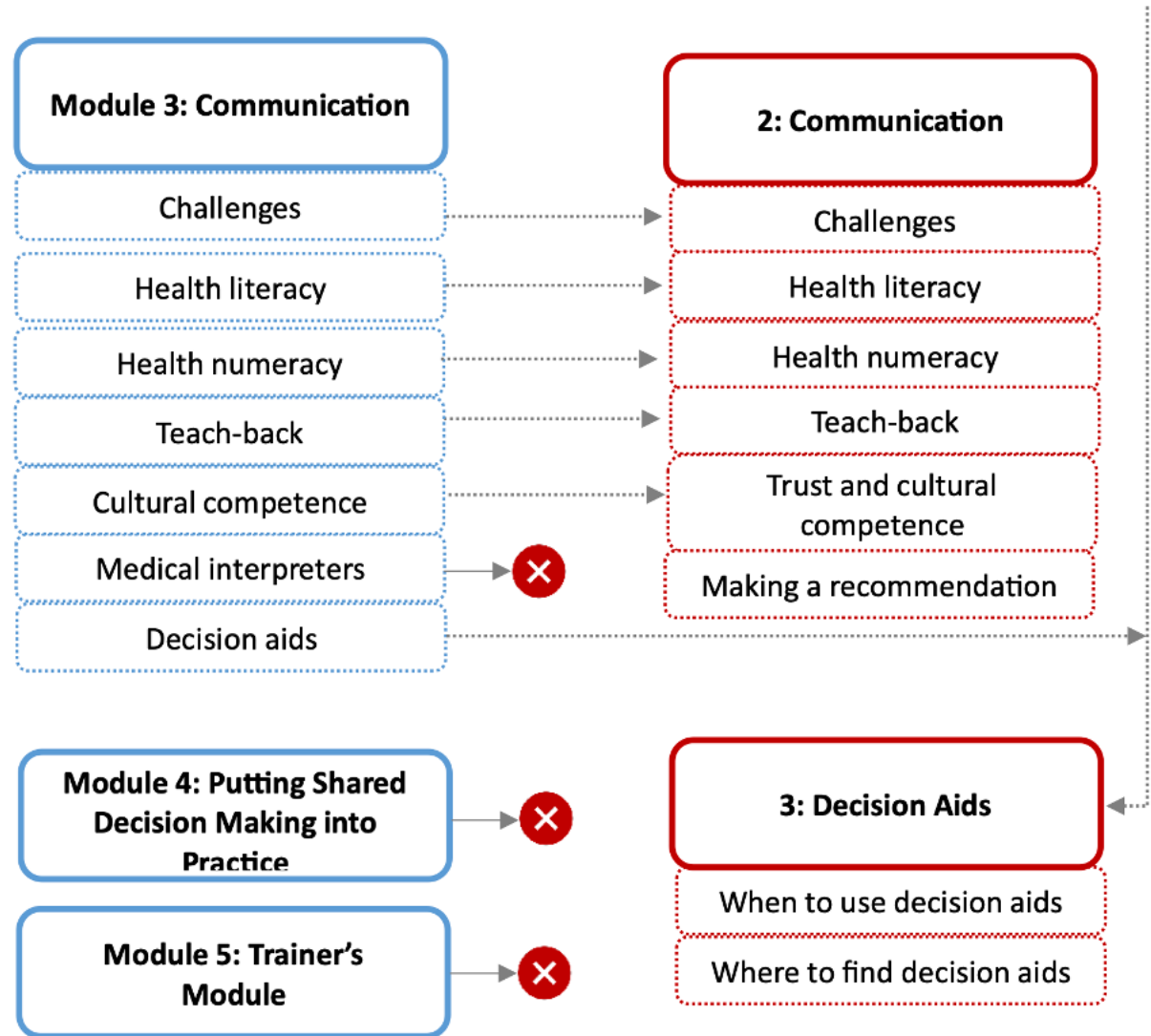| Module 2: Using Patient-Centered Outcomes Research (PCOR) in Shared Decision Making	✗

Revisions for SHARE Approach 2.0

Supplemental Results: Effectiveness of SHARE Approach 2.0

Specific skills showing improvement

	Pre-training M(SD)	Post-training M(SD)	6 month FU M(SD)	Effect of time
The clinician *draws attention* to an identified problem as one that requires a decision-making process.	0.43 (.90)	0.70 (1.13)	1.24 (1.44)	p=.002
The clinician *lists* 'options', which can include the choice of 'no action'.	2.24 (1.03)	2.14 (.96)	2.83 (1.10)	p=.04 (post vs. FU)
The clinician explores the patient's *expectations* (or ideas) about how the problem(s) are to be managed.	0.83 (1.04)	0.91 (1.18)	1.49 (1.22)	p=.003
The clinician explores the patient's *concerns* (fears) about how problem(s) are to be managed.	1.19 (1.18)	1.16 (1.13)	1.81 (1.26)	p=.022

Card Survey Results

First, a few more methods details:

- Not all encounters involved a decision or problem solving

- No decision or problem solving = SDM not necessary

Was there a choice? Was problem solving necessary?

Yes to either → Complete questions assessing quality of SDM → End survey

No to both → End survey

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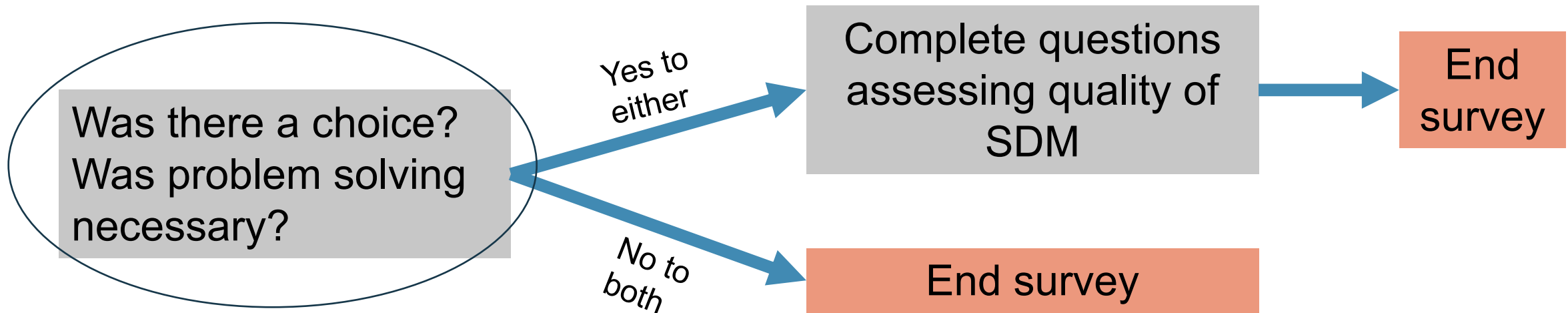
Card Survey Results

	Pre-training	Post-training	6-month FU	Effect of time
Patient survey: Was there a choice?	54%	56% =	54% =	ns
Patient survey: Was problem-solving needed?	56%	66% <	55% >	p=.07
Clinician survey: Was there a choice?	69%	69% =	68% =	ns
Clinician survey: Was problem-solving needed?	71%	74% =	71% =	ns

Percent responding "Yes"

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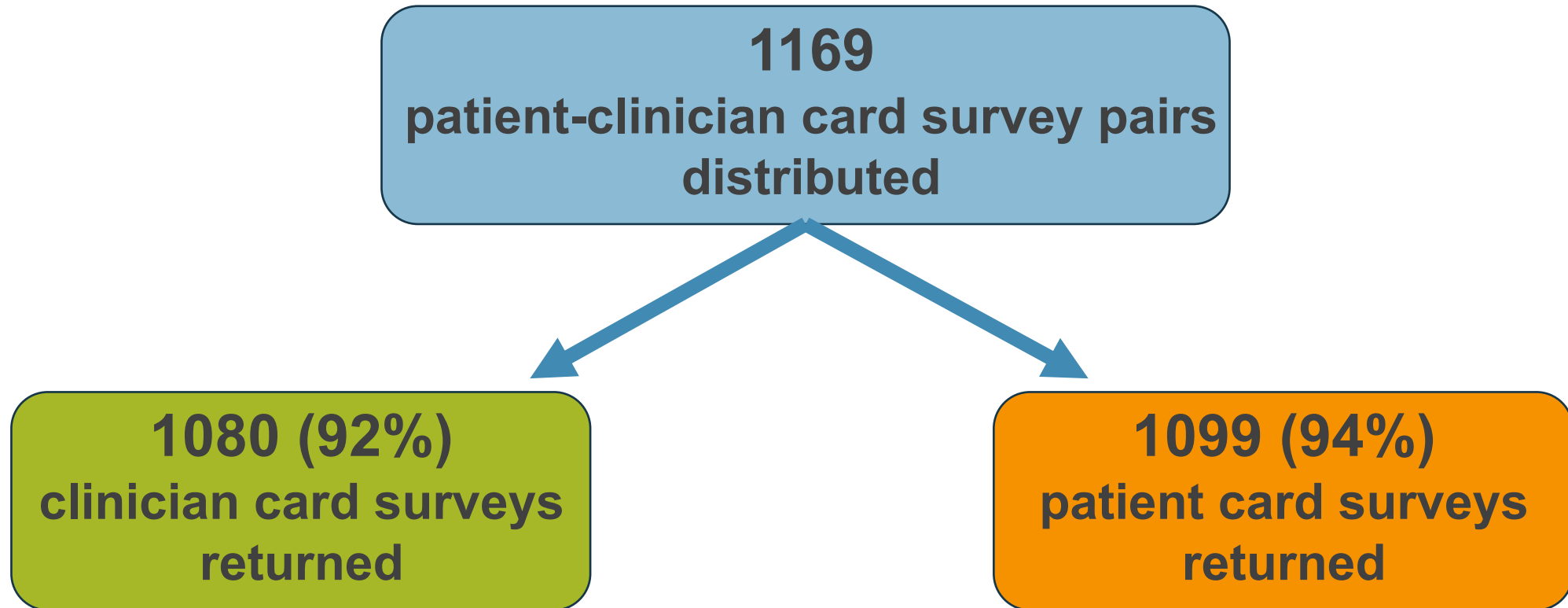
Practice Survey Results, cont.

	Pre-training M(SD)	Post-training M(SD)	3 month follow-up M(SD)	P-value for effect of time
How confident are you that you understand what SDM is?	2.24 (1.01)	3.44 (0.74)	N/A	p<.0001

All scales = 1-5 Likert

On-site data collection: Patient and Clinician Card Survey Results

1169
patient-clinician card survey pairs distributed

1080 (92%)
clinician card surveys returned

1099 (94%)
patient card surveys returned

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Patient- & Clinician-reported SDM

	Pre-training M(SD)	Post-training M(SD)	6 month FU M(SD)	Effect of time
Patient reported SDM (mean Dyadic OPTION score)	2.59 (0.48)	2.56 =(-.43)	2.64 =(0.47)	ns
Clinician reported SDM (mean Dyadic OPTION score)	2.38 (0.43)	2.35 =(-.42)	2.36 =(0.54)	ns

4-point (0-3) Likert strongly agree to strongly disagree scale

Audio Recording Results

Some additional key methods details…

- Coders were blinded to practice and observation timepoint

- Many encounters discussed >1 topic
  - Coders timestamped and scored complete codes for each topic discussed

- Scored SDM 2 ways:
  1. BEST SDM: Highest scored discussion
  2. OVERALL SDM: Average score for all topics discussed

170 audio recordings collected

500 unique topics scored

SDM observed in audio recordings

	Pre-training M(SD)	Post-training M(SD)	6 month FU M(SD)	Effect of time
Best SDM: highest scored discussion in encounter	0.73 (0.69) =	0.78 (0.8) <	1.18 (0.74)	p=.010
Overall SDM score: mean of all scores in encounter	0.65 (0.64) =	0.65 (0.59) <	1.08 (0.82)	p<.001

0-4 scale:
- 0=behavior not observed
- 1=minimal effort
- 2=moderate effort
- 3=skilled effort
- 4=exemplary effort

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Effectiveness Results: Summary

PRACTICE SURVEYS

SHARE was received positively

Improved clinicians' confidence & ability to engage in SDM

Increased perceived frequency that patient preferences should be taken into account

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