

Supplemental materials for

Nguyen AM, Cleland C, Dickinson L, et al. Considerations before selecting a stepped-wedge cluster randomized trial design for a practice improvement study. *Ann Fam Med.* 2022;20(3):255-261.

Supplemental Table 1. Cooperative Intervention Components

Cooperative	Intervention Components											
	Facilitation	EHR/Data Experts	Audit and Feedback	Performance Benchmarking	Data Infrastructure	Online Learning	Expert Consultation	Learning Collaborative	Community Engagement	Peer-to-Peer Learning	Tailored CVD/ABCS Messaging	Patient and Family Engagement
Midwest Cooperative	All practices received*	N/A	All practices received	Practices can receive depending on EHR functionality	Practices can receive depending on EHR functionality	N/A	N/A	N/A	Population Management arm only (all practices in arm received)	N/A	N/A	N/A
New York City Cooperative	All practices received	All practices received	All practices received	All practices received	All practices received	Practices can receive but optional	Practices can receive but optional	N/A	N/A	Practices can receive but optional	N/A	N/A
North Carolina Cooperative	All practices received	All practices received	All practices received	All practices received	Practices can receive depending on EHR functionality	Practices can receive but optional	Practices can receive but optional	All practices received	N/A	N/A	N/A	N/A
Northwest Cooperative	All practices received	All practices received	All practices received	All practices received	All practices received	Practices can receive but optional	Enhanced arm only (practices in arm can receive but optional)	N/A	N/A	Enhanced arm only (practices in arm can receive but optional)	N/A	N/A

Oklahoma Cooperative	All practices received	All practices received	All practices received	All practices received	All practices received	N/A	All practices received	N/A	All practices can receive <i>upon availability</i>	N/A	N/A	N/A
Southwest Cooperative	All practices received	All practices received	All practices received	All practices received	Practices can receive depending on EHR functionality	Practices can receive but optional	New Mexico Enhanced arm only (practices in arm can receive but optional)	All practices received	All practices received	N/A	Enhanced arm only (all practices in arm received)	Enhanced arm only (practices in arm can receive but optional)
Virginia Cooperative	All practices received	N/A	All practices received	All practices received	All practices received	Practices can receive but optional	Practices can receive but optional	All practices received	N/A	N/A	N/A	N/A

Notes. EHR = electronic health record; CVD = cardiovascular disease; ABCS = aspirin use, blood pressure control, cholesterol management, smoking cessation

** The Midwest Cooperative's "Population Management" arm received additional facilitation focused on population health activities.*

Supplemental Appendix 1. Interview guides

EvidenceNOW Stepped Wedge Design Interview Guide: Cooperatives that Used the SW-CRT Design

Participants: PIs, data leads, and Stepped Wedge-Cluster Randomized Trial (SW-CRT) experts from all EvidenceNOW cooperatives that used the SW-CRT design

Interview modality: Phone or video

Duration: 30 minutes

Thanks for taking the time to talk with me today. We'd like to learn from your perspective on what you believe worked and didn't work for the EvidenceNOW study, specifically regarding the SW-CRT methodology and its practical implementation.

1. What were your experiences with the SW-CRT before this project?
 - a. (If none) Were you aware of SW-CRT before the AHRQ FOA mentioned it?
2. For the following questions, I'd like you to focus on your thought process during your design phase. What would you say were your top three reasons for using the SW-CRT?
 - a. What, if any, disadvantages of the SW-CRT did you need to consider during your design phase?
 - b. *(As needed depending on what interviewee brought up for question #2)* I'm now going to ask for your thoughts on some common advantages and disadvantages associated with the SW-CRT.
 - i. How was site recruitment affected by the fact that you could guarantee each would receive the intervention?
 - ii. How did the SW-CRT ease logistical issues associated with your sites, facilitator workforce, and/or intervention rollout?
 - iii. What, if any, problems did you experience in ensuring sites and facilitators adhered to the intervention schedule?
 - iv. What, if any, difficulties did you experience in accounting for temporal trends?
 - v. How did you determine that the SW-CRT would give better statistical power than other designs?
3. For the following questions, I'd like you to focus on your thought process during the practical implementation of the study. What would you say were the top three complications that arose during implementation?
4. Based on your experiences in this study, including what you have learned from the other cooperatives and ESCALATES, would you consider using a stepped wedge design in your future work?
5. Please feel free to discuss anything you feel we haven't touched on to this point regarding the SW-CRT and its implementation.

EvidenceNOW Stepped Wedge Design Interview Guide: Cooperatives that Did Not Use SW-CRT Design

Participants: PIs, data leads, and Stepped Wedge-Cluster Randomized Trial (SW-CRT) experts from all EvidenceNOW cooperatives that did NOT use the SW-CRT design

Interview modality: Phone or video

Duration: Less than 30 minutes

Thanks for taking the time to talk with me today. We'd like to learn from your perspective on what you believe worked and didn't work for the EvidenceNOW study, specifically regarding the methodology and its practical implementation.

1. What was your study design?
2. What were your experiences with the SW-CRT before this project?
 - a. (If none) Were you aware of the SW-CRT before the AHRQ FOA mentioned it?
3. Did you ever consider using the SW-CRT for this project?
 - a. What would you say were your top three reasons for choosing (your design) over the SW-CRT? These can be either advantages of (your design) or disadvantages of the SW-CRT. *Prompt: site recruitment, logistical issues, adherence to intervention schedule, temporal trends, statistical power.*
4. Based on your experiences in this study, including what you have learned from the other cooperatives and ESCALATES, would you consider using a stepped wedge design in your future work?
5. Please feel free to discuss anything you feel we haven't touched on to this point regarding your study's design and implementation.

Supplemental Appendix 2. Structured template and matrix used for rapid assessment procedure

Rapid analysis step 1. Structured template used to summarize each interview.

Complete for each EvidenceNOW cooperative that used the SW-CRT design:

Domain (Interview Guide Question #)	Description	Representative Quote
Past SW-CRT experiences (1)		
SW-CRT consideration: Site recruitment (2)		
SW-CRT consideration: Logistics (2)		
SW-CRT consideration: Fidelity to intervention schedule (2)		
SW-CRT consideration: Temporal trends (2)		
SW-CRT consideration: Statistical power (2)		
SW-CRT consideration: Other (2)		
Complications/Challenges (3)		
Whether would use SW-CRT in future (4)		
Additional comments (5)		

Complete for each EvidenceNOW cooperative that did NOT use the SW-CRT design:

Domain (Interview Guide Question #)	Description	Representative Quote
Study design (1)		
Past SW-CRT experiences (2)		
SW-CRT consideration: Site recruitment (3)		
SW-CRT consideration: Logistics (3)		
SW-CRT consideration: Fidelity to intervention schedule (3)		

SW-CRT consideration: Temporal trends (3)		
SW-CRT consideration: Statistical power (3)		
SW-CRT consideration: Other (2)		
Complications/Challenges (3)		
Whether would use SW-CRT in future (4)		
Additional comments (5)		

Rapid analysis step 2. Example matrices for identifying themes across cooperatives, populated using the structured template.

Cooperative	Logistics: Incentivized Recruitment	Logistics: Staggered resource allocation	Logistics: Time- sensitive recruitment	Logistics: Retention	Logistics: Intensive data collection
Northwest	<ul style="list-style-type: none"> • Description • Quote 				
Midwest					
Southwest					
North Carolina					
Oklahoma					
Virginia					
New York City					
ESCALATES					

Cooperative	Fidelity to intervention schedule: Randomization requirements and practice preferences	Statistical: Statistical power	Statistical: Temporal trends	Other: Hawthorne effect
Northwest	<ul style="list-style-type: none"> • Description • Quote 			
Midwest				
Southwest				

North Carolina				
Oklahoma				
Virginia				
New York City				
ESCALATES				