



# **Integrating CFIR into a culturally responsive evaluation approach: Examples from mixed-methods evaluations of diabetes prevention and management programs**

Sara Jacobs, PhD

LaShawn Glasgow, DrPH; Peter Amico, PhD;  
Kimberly D. Farris, PhD, MPH, MSW; Gia  
Rutledge, MPH; Bryce D. Smith, PhD, MSSW

RTI International

November 19, 2020

# Presentation Overview



Background



Approach



Dissemination  
& Implications

# Background





# Impact of Diabetes

- Diabetes disproportionately impacts racial and ethnic minorities.
- Evidence-based programs can help with type 2 prevention or delay and with diabetes management.
- Participation is suboptimal, particularly among racial and ethnic minorities and populations in underserved communities.
- Programs specifically targeting underserved participants have not been previously evaluated.
- More research and evidence are needed on effective strategies for how best to engage underserved populations.



# Project Evaluation Aims

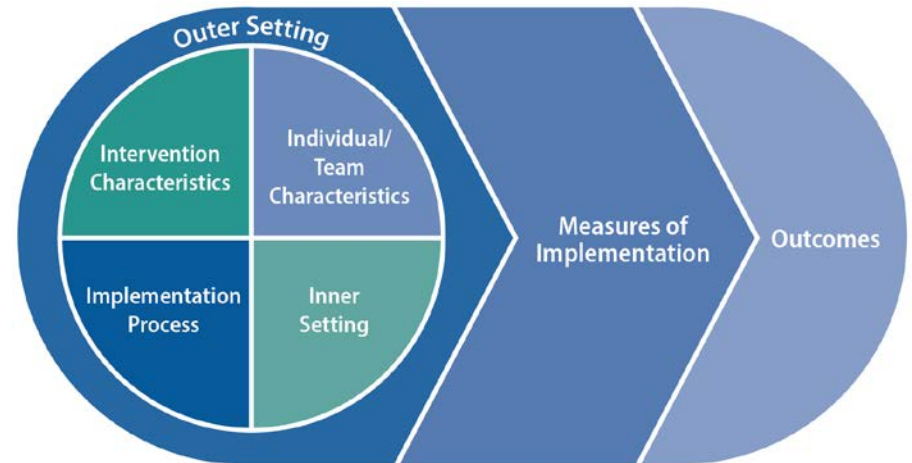
- 1 Gather evidence to enhance the implementation of programs in real-world settings, particularly among underserved communities.
- 2 Elucidate how these evidence-based interventions can be adapted or tailored effectively for underserved populations.
- 3 Share lessons learned with broader audiences.



# Evaluation Frameworks



Adapted Consolidated Framework for Implementation Research



Sources: Frierson, H. T., Hood, S., & Hughes, G. (2002). Strategies that address culturally responsive evaluation. In J. F. Westat (Ed.), *The 2002 user friendly handbook for project evaluation* (pp. 63–73). Arlington, VA: National Science Foundation;

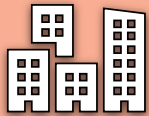
Rojas Smith, L., Ashok, M., Morss Dy, S., Wines, R. C., & Teixeira-Poit, S. (2014). *Contextual frameworks for research on the implementation of complex system interventions* [Internet]. Rockville, MD: Agency for Healthcare Research and Quality.

# Culturally Responsive Evaluation (CRE) Approach with CFIR





# Step 1: Prepare for the Evaluation



***Consider community context and impact of any external policies***



***Examine program history and population served***



***Understand participants' needs, traditions, culture, and practices***



# Steps 2 and 3: Engage Stakeholders and Identify Evaluation Purpose



- Collaborated with program directors to focus the evaluation, including determining appropriate questions and data collection techniques
- Established written scopes of work with clear evaluation purpose
- Received feedback on the evaluation team's interpretation of findings and written evaluation reports
- Gathered insights from a diverse group of stakeholders to capture and center the evaluation in the culture of the programs

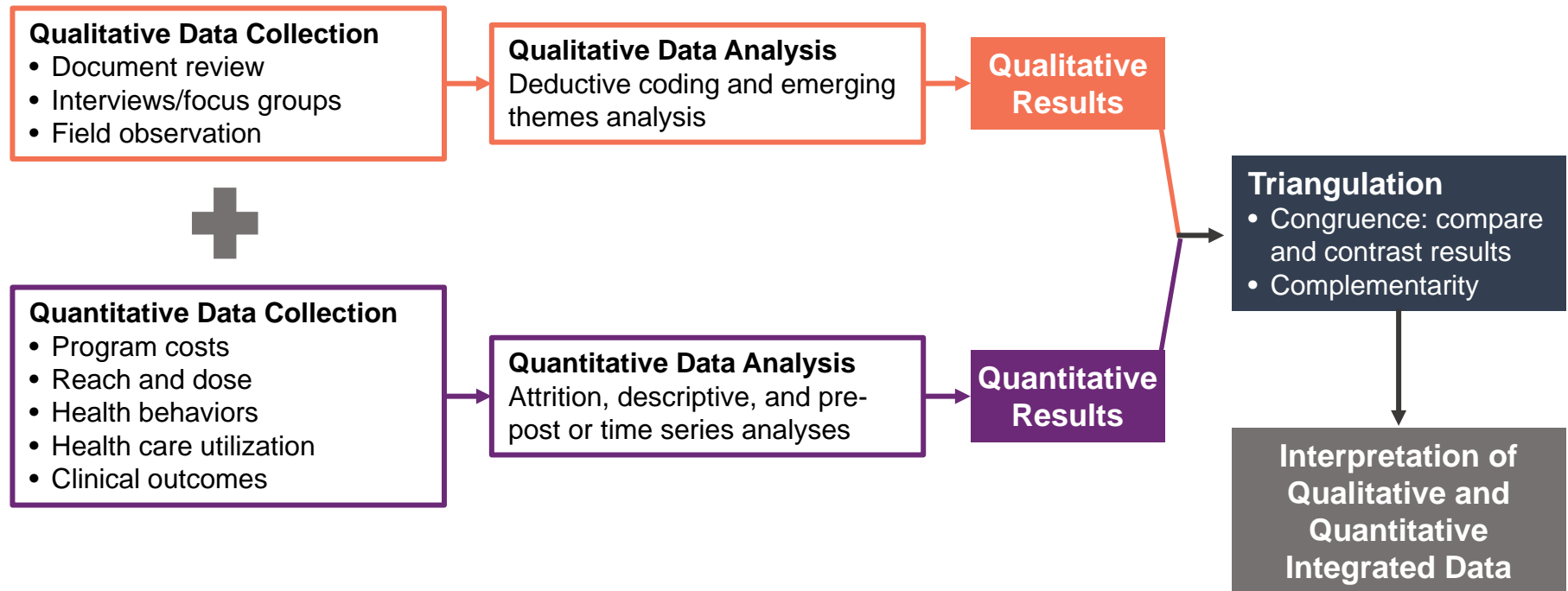
## Step 4: Frame the Right Questions

CFIR Construct	Example: CRE-Framed Evaluation Questions
Outer Setting	<ul style="list-style-type: none"><li>• How do contextual factors affect implementation of the programs?</li><li>• To what extent are the programs aware of participants' needs, particularly those of underserved participants?</li></ul>
Inner Setting	<ul style="list-style-type: none"><li>• How does organizational culture affect implementation?</li><li>• How does the commitment, involvement, and accountability of leaders and managers affect implementation?</li><li>• What resources are necessary for program implementation, cultural tailoring, and maintenance?</li></ul>

# Step 4: Frame the Right Question

CFIR Construct	Example: CRE-Framed Evaluation Question
Individual/Team Characteristics	<ul style="list-style-type: none"><li>• To what extent do staff believe they have the capabilities, including cultural competency, required to implement the programs?</li><li>• What traits, skills, and competencies of lifestyle coaches and diabetes educators are important for successful program implementation with underserved populations?</li></ul>
Intervention Characteristics	<ul style="list-style-type: none"><li>• How are the programs tailored to meet the needs of underserved participants?</li><li>• What proportion of costs is related to tailoring the recruitment and intervention strategies for underserved participants?</li></ul>
Implementation & Clinical Outcomes	<ul style="list-style-type: none"><li>• What are the characteristics of the populations served by the programs?</li><li>• How many sessions, on average, do participants attend?</li><li>• To what degree is participation associated with improved clinical outcomes among different population groups?</li></ul>

## Step 5: Design the Evaluation



◀◀◀◀ Capture and account for program context and cultural factors ▶▶▶▶



# Step 6: Select, Adapt, and Develop Instrumentation

CFIR Domain	Example: Interview/Focus Group Questions
Outer Setting	<ul style="list-style-type: none"><li>• Describe the community surrounding the program. Probe: For example, find out about the geographic location, demographics, political and social climate, and economic conditions.</li><li>• In your opinion, how does the community environment affect the program?</li><li>• In your experience, what are the unique needs of your participants in the lifestyle change/DSMES program? (Needs that participants from these populations have that differ from the needs of the general population.)</li></ul>
Inner Setting	<ul style="list-style-type: none"><li>• How much is program leadership committed to integrating culturally tailored strategies into the program?</li><li>• What role do community-based organizations that represent this population play in implementing the program (serve as advisors, help with recruitment)?</li></ul>
Individual/Team Characteristics	<ul style="list-style-type: none"><li>• Complete this sentence: An effective educator in a DSMES program/coach in a lifestyle change program working with underserved populations needs to be...</li></ul>
Intervention Characteristics	<ul style="list-style-type: none"><li>• How has the curriculum been developed to meet the needs of diverse program participants, specifically your participants?</li></ul>

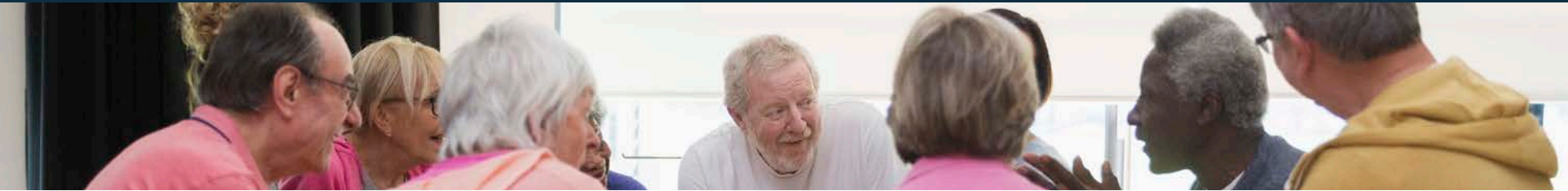
## Step 7: Collect the Data

- Document review
- Plans for in-person visits
  - Work with key contacts to set up interviews and observation schedule
- Interviews with relevant stakeholders
  - Program leaders/implementers
  - Clinical staff
  - Coaches/educators
  - Referral partners
- Class observations
- Cost data collection





## Step 8: Analyze the Data



- Integrating CFIR into the evaluation enabled us to analyze data in a culturally responsive manner.
  - Included disaggregating data, capturing the perspectives of multiple stakeholders, and exploring unintended outcomes
- The subject matter expert panels were valuable for engaging health disparities and diabetes experts in interpreting findings, particularly regarding divergent perspectives.
  - Also provided additional real-world examples and key insights
- For quantitative analysis of data for program reach, dose, and clinical outcomes, the evaluation team disaggregated data by race, ethnicity, gender, and age.
  - Sample size was relatively small; disaggregating data is important in CRE



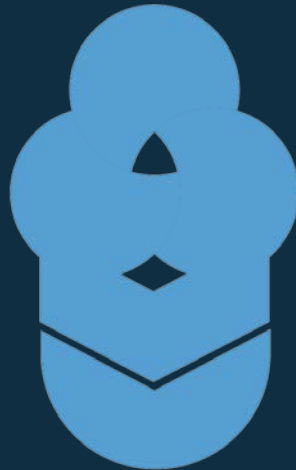


## Step 8: Analyze the Data

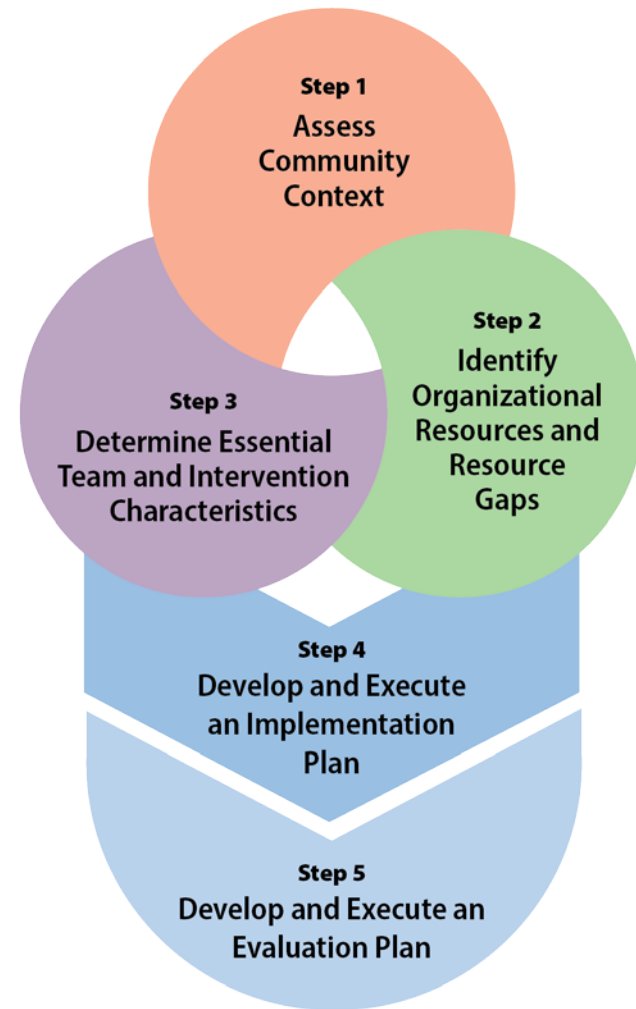
CFIR Domain	Sample Findings/Lessons Learned
Individual/Team Characteristics	<ul style="list-style-type: none"><li>• Emphasize important coach characteristics: culturally competent, personable, flexible, adaptable, supportive.</li><li>• Pair coaches.</li><li>• Use one-on-one communication between coaches and participants.</li></ul>
Intervention Characteristics	<ul style="list-style-type: none"><li>• Tailor the curriculum for literacy or language concerns.</li><li>• Use images in curriculum/ads to represent the community.</li><li>• Consider cultural, familial, and socioeconomic issues.</li><li>• Implement a “Session Zero.”</li><li>• Limit class sizes.</li><li>• Provide incentives.</li></ul>
Implementation & Clinical Outcomes	<p>To ensure sustainability:</p> <ul style="list-style-type: none"><li>• Consider the costs of covering the program.</li><li>• Consider current revenue sources.</li></ul>



# Dissemination & Implications



# **Step 9:** **Disseminate** **Practice-Based** **Insights** **and Guidance**





# Sample Pages from Toolkit



## Tool 1 Resources Inventory Worksheet

Types of Resources	Examples of Available Resources	Examples of Resource Gaps	Examples of Strategies to Address Gaps
<b>Key Staff</b>	Certified diabetes educators with continuing education units that meet national standards, program director, data manager, community health workers <hr/> <hr/> <hr/> <hr/> <hr/>	Lack of bilingual diabetes educators <hr/> <hr/> <hr/> <hr/> <hr/>	Engage staff outside the program who can translate and interpret <hr/> <hr/> <hr/> <hr/> <hr/>
<b>Educational Materials</b>	Curriculum, visual and tactile learning aids <hr/> <hr/> <hr/> <hr/> <hr/>	Lack of culturally appropriate cookbooks and diabetes management guides <hr/> <hr/> <hr/> <hr/> <hr/>	Request resources from local or state health department, diabetes organizations, or pharmaceutical companies <hr/> <hr/> <hr/> <hr/> <hr/>
<b>Data Systems</b>	Electronic medical records, Diabetes Education Accreditation Program Annual Status Reports <hr/> <hr/> <hr/> <hr/> <hr/>	Data staff have limited availability to support DSMES reporting <hr/> <hr/> <hr/> <hr/> <hr/>	Save report commands so they can be re-run efficiently <hr/> <hr/> <hr/> <hr/> <hr/>



# Sample Pages from Toolkit



## Tool 2 Intervention Tailoring Worksheet

### Example Barriers to DSMES Participation (build on your context assessment)

### Example Tailoring Strategies

#### Financial Needs

Tailor DSMES services and examples to the socioeconomic status of participants—teach participants about affordable healthy food options.

Provide education on options for obtaining lower-cost diabetes medications, meters, and testing strips, such as using the clinic pharmacy.

Work with community partners to offer free support services, including cooking classes.

#### Language- and Literacy-Related Needs

Use plain language, visuals, and models to help participants grasp DSMES content (e.g., show the amount of sugar in one soda).

Work with bilingual educators or translators for non-English-speaking participants and offer education materials in participants' preferred language.

## Exhibit 3. Tips for Engaging Providers

### FQHCs

#### Tips for Engaging Providers

- Involve DSMES program administrators in provider and clinical team meetings.
- Communicate clinical improvements to providers.
- An automated EMR referral feature based on high A1C may help further boost physician referrals to DSMES.
- Provider education about the DSMES program can occur on an ad hoc basis and more formally during daily huddles, during weekly ambulatory care meetings (cross-disciplinary), during monthly diabetes meetings, and through electronic health record secure messaging.
- CDEs can educate providers to help overcome the perception that certain patients are well-controlled and don't need to see the CDE.

### SMEs

#### Tips for Engaging Providers

- If provider referrals are required, invest in protocols that make it easy for providers to refer people to the DSMES program.
- Frame the benefits of DSMES to providers in terms that are relevant to them (e.g., handing education duties off to a CDE so providers can focus more on the clinical aspects of care).





# Sample Pages from Toolkit

Evaluating DSMES Programs for Underserved Populations/Communities | 27



## Step 5: Develop and Execute an Evaluation Plan

The program description developed under step 4 is a starting point for evaluation planning because it depicts the plan for implementing the program and achieving key DSMES outcomes. In general, evaluating DSMES programs involves assessing the degree to which the program was implemented as planned and intended outcomes were achieved. **Exhibit 6** includes example evaluation questions, indicators, and data sources. These examples are based on our rapid evaluation of two FQHC-based DSMES programs reaching underserved populations/communities, and examples can be adapted to fit programs' unique context and resources. See the CDC Program Performance and Evaluation website for additional guidance indicators.



DSMES Programs for Underserved Populations/Communities: A Practice-Based Guide

## Exhibit 7. Factors that Affect Sustainability of DSMES Programs

### Example Factors That Support Sustainability

#### Value to quality incentive programs and value-based payment models

"The Medicaid managed care plan, Healthfirst, which is our main insurance company [uses a value-based model], but all of the insurance companies are moving to a value-based model where we take risk. I always explain to the administration, and they know this, that having the clinical diabetes educators controlling the diabetes, it's not just billing them for the visit ... but we get a couple million dollars if we do well on this ... for Healthfirst."

—FQHC program administrator

#### Positive participant outcomes

"But right now, they haven't kicked us out the door yet. And I think it's because of what we do for the patients. And it's a commitment. Plus, people who have better A1Cs tend to keep their follow-up appointments. It would be nice if everybody would see the return on investment by improving people's health."

—FQHC program administrator

#### Having the program within a FQHC setting

"I don't know seriously how a non-embedded program financially and patient-wise could survive because just having them coming within a familiar setting is hard.

But if you ask them to go to an unfamiliar setting it's going to be another barrier."

—FQHC program administrator

### Example Factors That Challenge Sustainability

#### Cost of DSMES and limited reimbursement

"It can be costly with the staff and the clinic ... the utilization ... especially since we have a high Medicaid population and a high uninsured population. Not seeing that return unfortunately in the long run could be detrimental to the program."

—FQHC biller

#### Barriers to care participants face

"Right now, I don't know that we have enough [resources to sustain], because we identified transportation, financial barriers, and I don't know that we have enough to satisfy those barriers yet."

—FQHC clinical staff

## D&I Implications

- Integration of CRE principles with CFIR helped capture elements of the cultural context when assessing implementation effectiveness
- Use in other evaluations designed to evaluate the implementation of evidence-based health interventions aimed at reaching underserved communities
- Examine within both the health care delivery and community-based settings

# Acknowledgements

The authors would like to thank Palmetto Health and Emblem Health National Diabetes Prevention Programs and the Tandem Health and BronxCare diabetes self-management education and support programs for participating in the rapid mixed-methods evaluations. We also thank subject matter experts who contributed to the guide.