Dissemination and Implementation of the Healthy Eating and Active Living in the Spirit (HEALS) Intervention

Presented by:

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Background on the HEALS Intervention

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HEALS Intervention

- Evidence-based diet and physical activity intervention[1]
- Developed *with* and *for* community and faith-based partners in African-American churches
  - Lay health educator-delivered intervention
- 12 weekly sessions and 9 booster sessions over 1 year
- Assessments at baseline, 12 weeks, and 1 year
- Main outcome variables: inflammatory markers, dietary intake, physical activity, anthropometric assessments, and other psychosocial and behavioral measures

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HEALS Intervention | 12 Weekly Sessions

1. Introduction – Overview of HEALS
2. Health Disparities, including Anti-inflammatory Foods and Physical Activity content
3. Faith and Health Connection
4. Personal Empowerment, including Healthy Snacks content
5. Mindfulness, including Physical Activity content
6. Support Systems
7. Nutrition Basics, including Group Physical Activity
8. Menu Planning, including Grocery Store Tour
9. Fiber, including Cooking Demonstration and Strength Training
10. Strategies to Improve Outcomes
11. Stress Management, including Group Physical Activity
12. Planning for Lapses, including Modeling Healthy Behaviors

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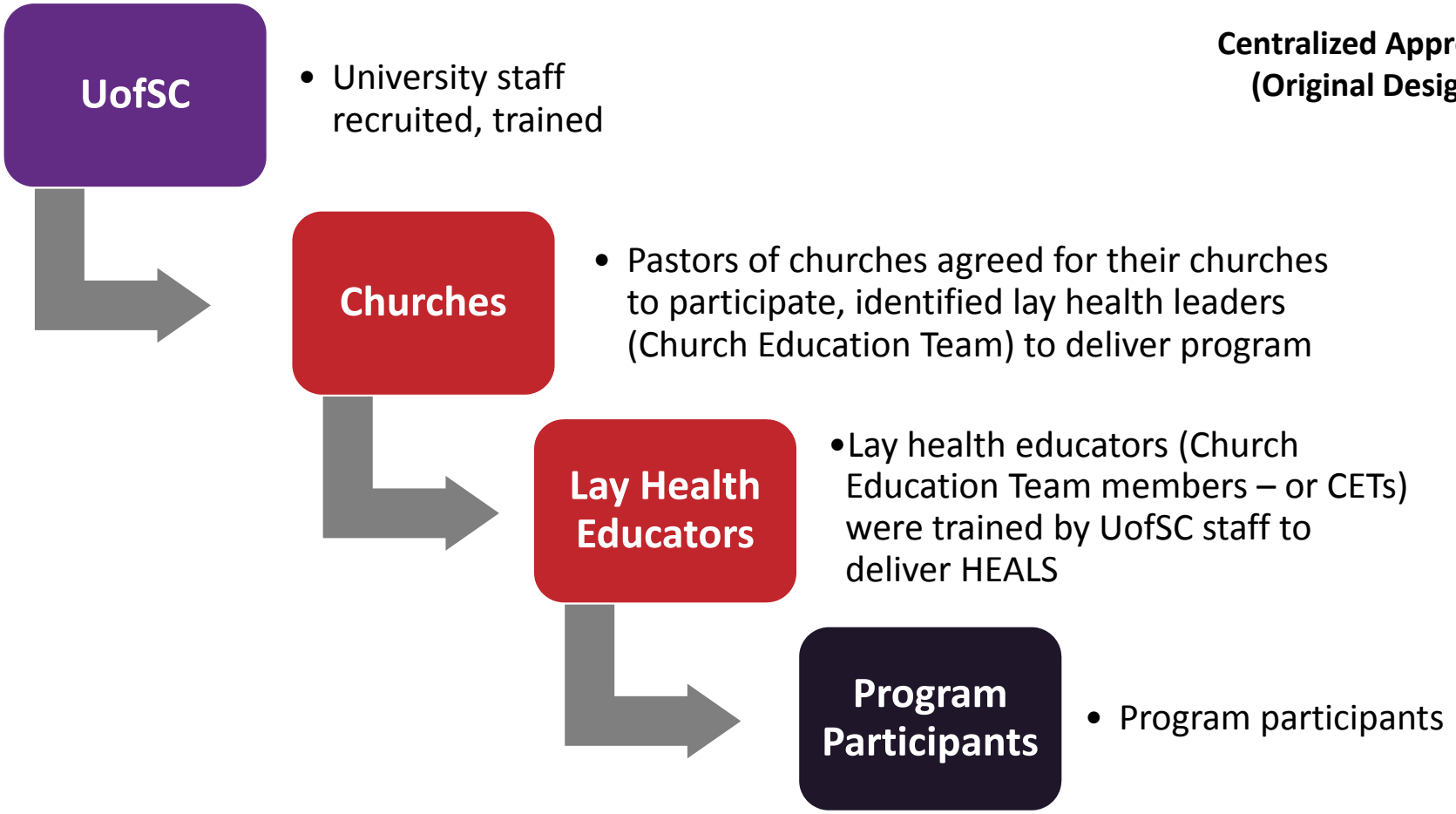
Centralized Approach (Original Design)



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The purpose of the presentation is to describe intermediate outcomes, challenges, and success with using a decentralized approach to implementing the HEALS intervention during the dissemination and implementation phase.

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Dissemination and Implementation of the HEALS Intervention

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Dissemination and Implementation of HEALS

- Why?
  - The HEALS intervention worked.[1]
  - Church leaders remained interested in health promotion programming.
  - Participants liked the HEALS intervention.
  - Modify measurement to be more practical and accessible in community settings.
  - Opportunity for sustainability and institutionalization of the HEALS intervention.

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Dissemination and Implementation of HEALS Specific Aims

(1) Disseminate and implement the successful HEALS intervention
(2) Evaluate and monitor the dissemination process, including testing for intervention effects – also examine implementation support strategies required
(3) Conduct a cost-effectiveness analysis of intervention dissemination and implementation to reduce health disparities, from both budgetary and societal perspectives
(4) Enhance the capacity of the target community to sustain delivery and for community partners to engage in future research and programming to address health disparities through cultivation of a network of active church and community educators and leadership development activities

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Academic-Community Partnerships

Academic / Researcher

- **University of South Carolina Arnold School of Public Health**
  - Cancer Prevention and Control Program
  - Epidemiology and Biostatistics
  - Health Promotion, Education, and Behavior
  - Health Services Policy and Management

Community / Practitioners

- **Faith-based African American Communities Empowered for Change (FACE)**
- **African-American churches**
  - Pastors
  - Volunteer lay health educators
- South Carolina Department of Health and Environmental Control
- Others, as needed for activities associated with HEALS

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(1) Disseminate and implement the successful HEALS intervention

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Decentralized Approach (D&I Phase Design)

UofSC

- University staff work with FACE to implement the HEALS intervention

FACE

- Faith-based African American Communities Empowered for Change (FACE) recruits and trains

Churches

- Pastors of churches agree for their churches to participate, identify lay health leaders (Church Education Team) to deliver program

Mentors

- Experienced lay health leaders serve as Mentors identified and trained by FACE to train lay health educators

Lay Health Educators

- Lay health leaders (Church Education Team members – or CETs) were trained by Mentors to deliver HEALS

Program Participants

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Dissemination and Implementation of HEALS

- Weekly meetings: 2 university researchers, university project coordinator, and FACE team
- Bi-monthly meetings: Full research team, including additional university researchers and a community consultant
- Technical skills of the university team are matched with practical realities of the FACE team in the field.
- University researchers and staff provide support to FACE in the field as needed.

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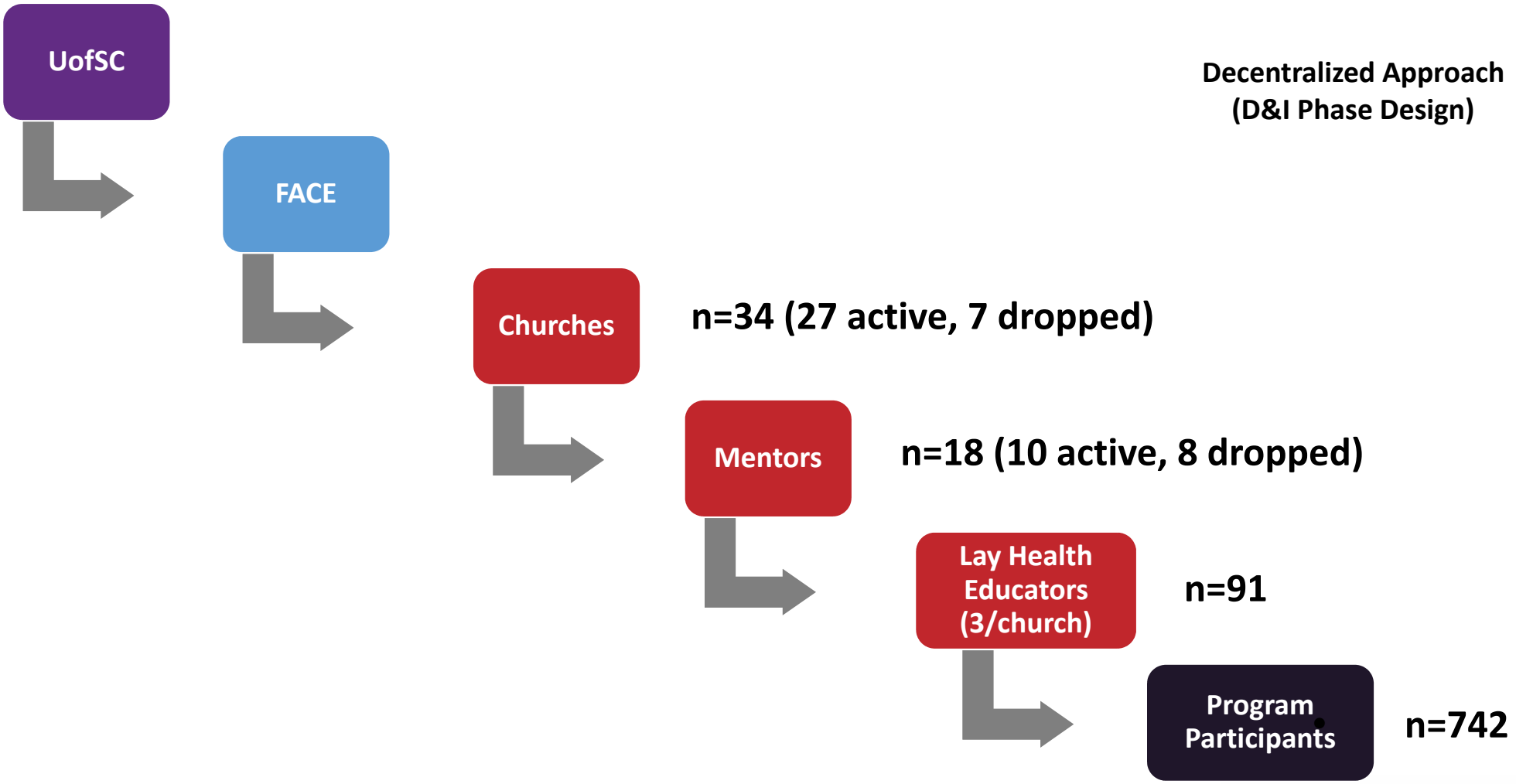

Decentralized Approach
(D&I Phase Design)

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(2) Evaluate and monitor the dissemination process, including testing for intervention effects – also examine implementation support strategies required

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Implementation Strategies

- Implementation Strategies (Powell et al., 2015[7]), example of application:
  - Access new funding (HEALS: R01 funding from NHLBI)
  - Conduct educational meetings (HEALS: orientation sessions at churches)
  - Conduct educational outreach visits (HEALS: FACE team)
  - Conduct ongoing training (HEALS: Mentor and CET training)
  - Develop a formal implementation blueprint (HEALS: Decentralized approach)
  - Develop and organize quality monitoring systems (HEALS: Observations by FACE)
  - Facilitation (HEALS: Technical assistance phone calls led by FACE)
  - Intervene to enhance uptake and adherence (HEALS: intervention content)
  - Promote adaptability (HEALS: CETs select booster session content)

Implementation Strategies, continued

- Implementation Strategies (Powell et al., 2015[7]), example of application:
  - Provide ongoing consultation (HEALS: FACE team provides, mentors provide)
  - Purposely reexamine the implementation (HEALS: Regular team meetings)
  - Recruit, designate, and train for leadership (HEALS: Leadership Development Series)
  - Stage implementation scale up (HEALS: Enrolled churches in waves)
  - Use advisory boards and workgroups (HEALS: FACE convened and supported a Community Advisory Board)
  - Use train-the-trainer strategies (HEALS: FACE-Mentors-CETs)
  - Work with educational institutions (HEALS: Academic-community partnership)

Implementation Monitoring

- A multi-level approach to monitor intervention delivery is utilized.[2,3,4]
- Implementers:
  - Trained 18 LHE mentors who previously delivered the intervention
  - Trained 91 first-time LHEs representing 27 churches
- Mentors and LHEs completed evaluations before and after training, 12-weeks, and 1-year to assess development and retention of key skills, knowledge, and role-specific experiences delivering the intervention.
- During intervention delivery, observations were conducted by mentors, FACE, and university staff to assess performance/quality.
- Church-level factors were collected.
- Data review occurred quarterly across type/sources.

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Implementation Monitoring

Fidelity	Addressed beginning with in-depth training for LHE mentors (n=10) and 91 first-time LHEs. Mentors and LHEs completed evaluations before and after training, 12-weeks, and 1-year to assess development and retention of key skills, knowledge, and role-specific experiences delivering HEALS. Fidelity checks occur through direct observation to assess performance/quality and to inform technical assistance efforts. Technical assistance sessions over the telephone and in-person are held at least monthly.
Completeness	Assessed through weekly forms to describe intervention delivery, identify challenges, and observe. FACE completes and submits these forms with input from LHE mentors and LHEs.
Dose Received	Assessed by tracking attendance at the 12 weekly sessions and 9 monthly booster sessions over a 1-year period.
Reach and Recruitment	Assessed by tracking number of churches contacted and enrolled and participants recruited, enrolled, and retained. The decentralized approach to recruitment during this phase has been informed by previous and related work.[5,6]
Context	Monitored through collecting church-level information on social and physical environment characteristics that may relate to implementation. Supplemental funding was obtained to capture additional contextual data (*in progress*).
Program Modifications	Tracked by FACE and university personnel and are discussed in weekly meetings.
Quality of Intervention Delivery	Assessed through observations were conducted by mentors, FACE, and university staff to assess performance and quality.
Support Systems	Inherent to the HEALS intervention design with teams of LHEs, under the guidance of mentors, implementing the intervention with African-American churches. Further, the FACE team provides technical support for intervention delivery and offers ongoing opportunities to cultivate sustainable support systems with community resources.

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Implementation Monitoring Results

- **Fidelity**
  - Challenging due to the decentralized delivery format
  - Fidelity checks (observations) revealed variability in quality of intervention delivery and support systems
- **Completeness**
  - Technical assistance sessions are utilized to address fidelity, quality, and completeness, such as by offering “hands-on healthy eating” to enhance knowledge and skills related to delivering HEALS intervention components related to healthy eating.
- Moderate **retention** of skills and knowledge and acceptable **performance** across assessment points among mentors and LHEs have been observed
  - May reveal higher quality over time when considering technical assistance sessions used to intervene

Implementation Monitoring Results

- **Dose received** continues to be monitored
  - 63% of participants attended the 1-year assessment through 19 churches
    - Attended 76% of weekly sessions (mean=9.12/12)
    - Attended 63% of booster sessions (mean=5.67/9)
- **Decentralized approaches to reach and recruitment have yielded high enrollment.**
  - Recruitment goal for churches was 30 with 34 recruited and 27 active.
  - Recruitment goal for participants was 350, which was far exceeded with 742 participants.
- **Context** continues to be assessed.

(4) Enhance the capacity of the target community

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Activities to Enhance the Capacity of the Target Community

- Inherent in decentralized approach
  - Mentors
  - Lay Health Educators (CETs)
- Leadership Development Series
  - Grant writing training
  - “Hands-on Healthy Eating” experiential learning
- Community Advisory Board development
- Connection to local resources
- Deliberate focus on sustaining efforts

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- Implementing a community-based organization-partnered and lay health educator-delivered program establishes a pipeline for sustainability by increasing agency for delivery, and careful implementation monitoring is needed.

- Results have led to changes to implementation and are used to enhance the dissemination of the intervention.

- Continued monitoring of the decentralized approach of delivery is essential to understanding how this type of approach may lead to sustainability and institutionalization of the intervention as well as procedures.

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Conclusions

- Decentralized approach has enhanced the contextual appropriateness of the HEALS intervention – but unclear of impact on outcomes

- Engaging partners – especially FACE and Mentors – important to bring HEALS intervention to scale

- Working with partners to increase capacity and ensure contextually-appropriate intervention content helps to accelerate the dissemination and implementation of the HEALS intervention.

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References

[1]Hébert JR, Wirth M, Harmon BE, Davis L, Davis B, Hurley TG, Drayton R, Murphy EA, Shivappa N, Wilcox S, Adams SA, Brandt HM, Blake CE, Armstead CA, Steck SE, Blair SN. C-reactive protein levels in African Americans: a diet and lifestyle randomized community trial. Am J Prev Med. 2013 Oct;45(4):430-440.

[2]Durlak JA, DuPre EP. Implementation matters: a review of research on the influence of implementation on program outcomes and the factors affecting implementation. Am J Community Psychol. 2008 Jun;41(3-4):327-350.

[3]Saunders RP. Implementation Monitoring and Process Evaluation. Los Angeles, CA: Sage Publications, 2015.

[4]Patton M. Essential of Utilization-Focused Evaluation. Thousand Oaks, CA: Sage Publications; 2012.

[5]Adams SA, Heiney SP, Brandt HM, Wirth MD, Khan S, Johnson H, Davis L, Wineglass CM, Warren-Jones TY, Felder TM, Drayton RF, Davis B, Farr DE, Hébert JR. A comparison of centralized versus de-centralized recruitment schema in two community-based participatory research studies for cancer prevention. J Community Health. 2015 Apr;40(2):251-259.

[6]Babatunde OA, Adams SA, Wirth MD, Eberth JM, Sofge J, Choi SK, Harmon BE, Drayton R, Hurley TG, Brandt HM, Armstead CA, Hébert JR. Predictors of retention among African Americans in a randomized controlled trial to test the Healthy Eating and Active Living in the Spirit (HEALS) intervention. Ethn Dis. 2017 July 20;27(3):265-272.

[7]Powell BJ, Waltz TJ, Chinman MJ, Dam Schroder LJ, Smith JL, Matthieu MM, Proctor EK, Kirchner JE. A refined compilation of implementation strategies: results from the Expert Recommendations for Implementing Change (ERIC) project. Impl Sci. 2015;10:21.