

Participatory Dissemination:



Getting to Physical Activity, Programs that are Effective, Reach a lot Of People, and Can be Sustained

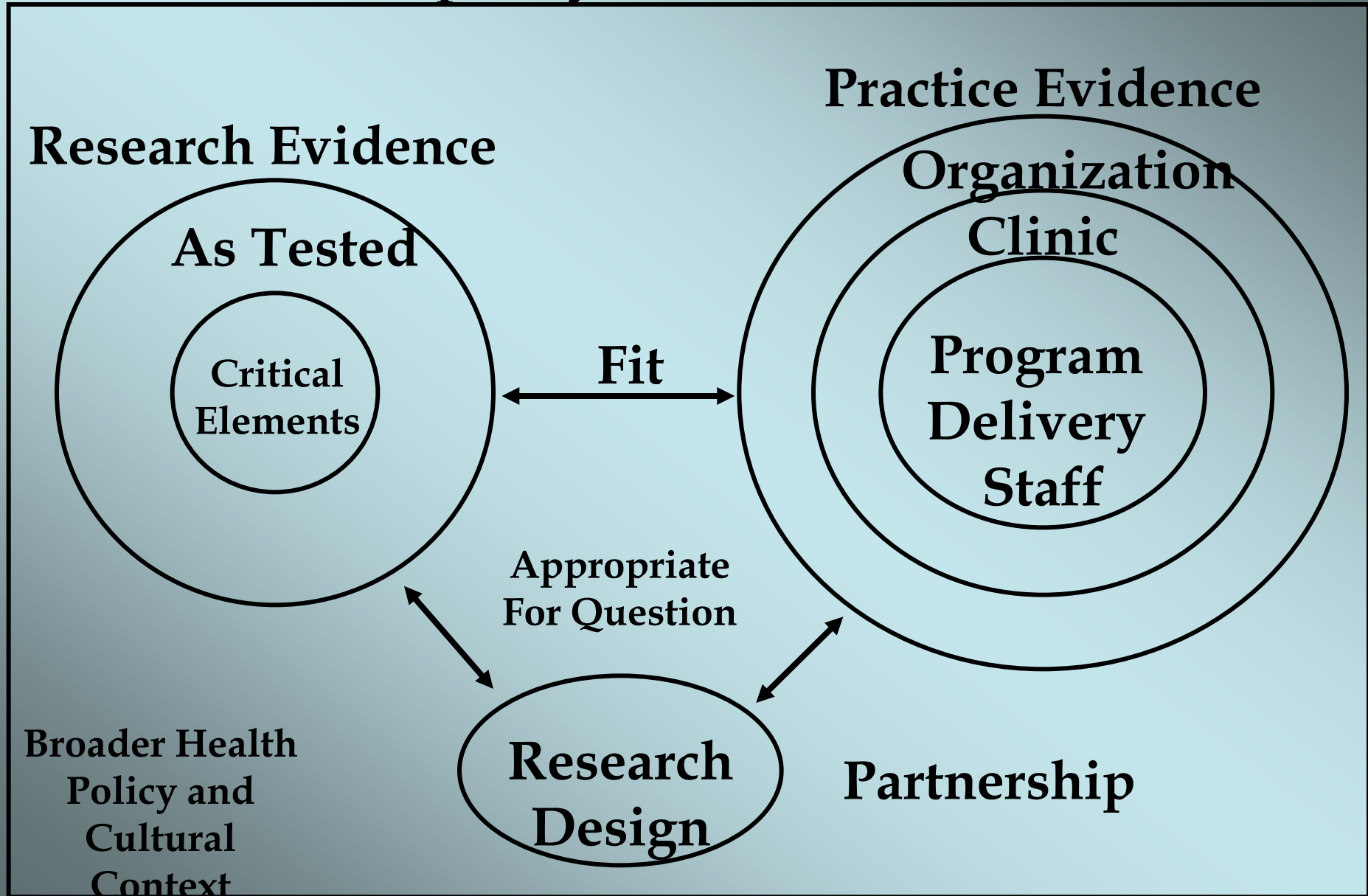
Paul Estabrooks, PhD



What is Participatory Dissemination?

- **The process of developing sustainable program, practice, or policy approaches in collaboration with key decision makers and delivery agents within existing delivery systems.**

Integrated Research-Practice Partnerships for Participatory Dissemination



The Diabetes Prevention Program

- **A multi-site RCT**
- **Intervention included:**
 - **Weight loss and physical activity goals**
 - **Individualized training by lifestyle coaches**
 - **Supervised exercise sessions**
 - **Individualized strategies to overcome barriers**
 - **Materials targeted toward ethnically diverse populations**
 - **An extensive network of physical activity, nutrition, and clinical support**

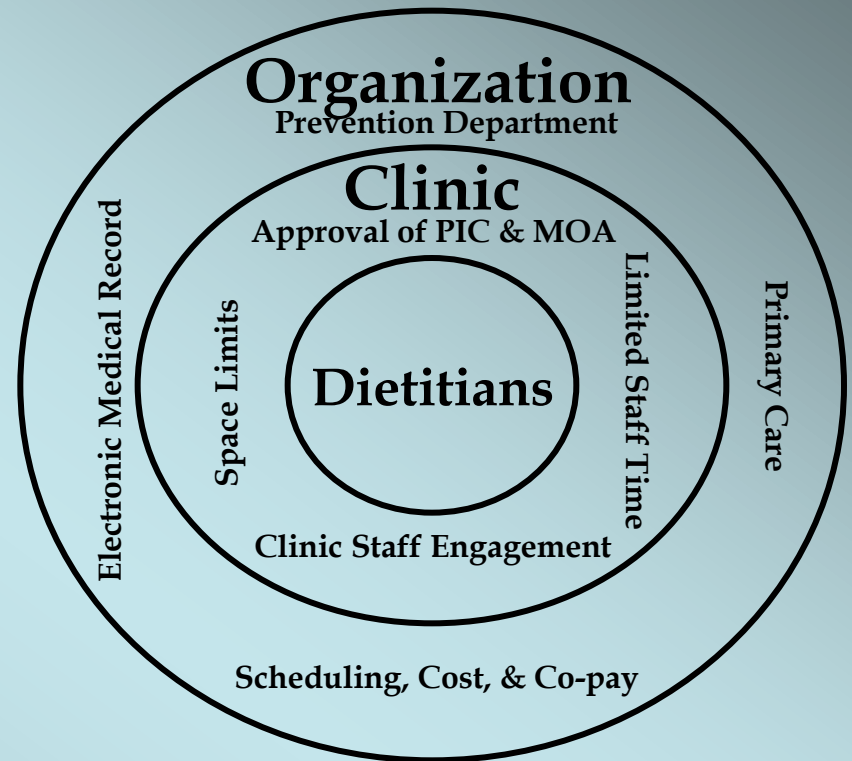
The Diabetes Prevention Program

- **Significant weight loss and increased physical activity**
- **Lowered the incidence rate of diabetes by 58 percent.**
- **The success attributed to:**
 - **The blend of nutrition, exercise and behavioral weight loss strategies employed**
 - **Intensive & highly individualized to improve the participants' chances of achieving challenging goals**

Application of Model to Diabetes Prevention

Broader Health Policy and Cultural Context

1. National
Organizational Campaign
To Promote Healthy
Lifestyles
2. Prevention Department
Desire to Provide
Diabetes Prevention
Program



Partnerships across organizational structure defined necessary results for decision to deliver broadly across multiple clinics

Application of Model to Diabetes Prevention

DPP Intervention



Be a Fat Detective

Three Ways to Eat Less Fat

Healthy Eating/Move Those Muscles

Being Active: A Way of Life

Tip the Calorie Balance

Take Charge of What's Around You

Problem Solving

The Four Keys to Healthy Eating Out

Talk Back to Negative Thoughts

The Slippery Slope of Lifestyle Change

Jump Start Your Activity Plan

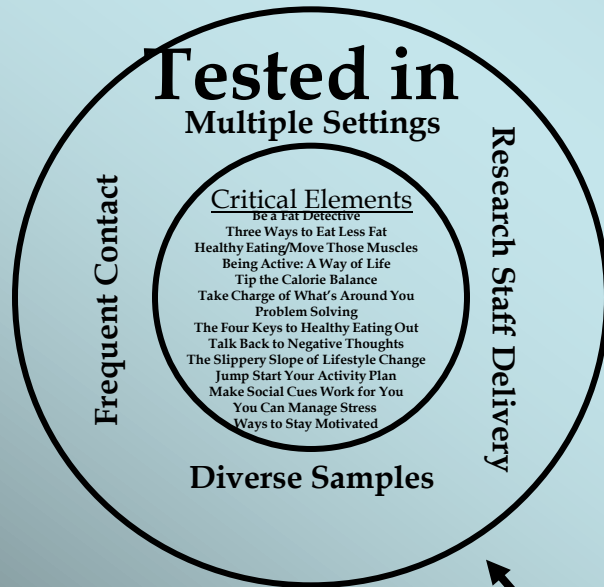
Make Social Cues Work for You

You Can Manage Stress

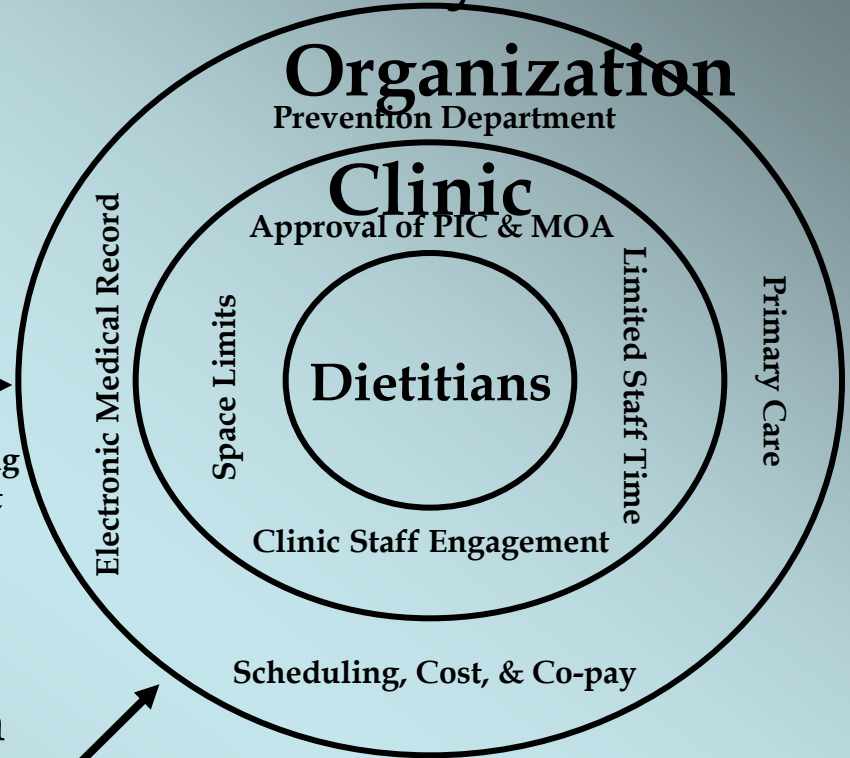
Ways to Stay Motivated

Application of Model to Diabetes Prevention

DPP Intervention



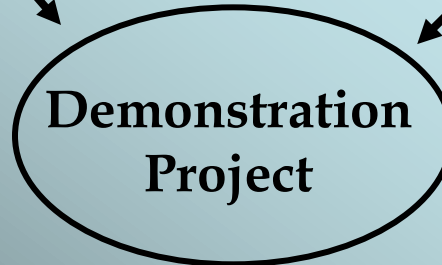
Delivery Sites



Fit

Re-invention of intervention retaining critical elements but drastically reducing contact

Appropriate For Question



Partnerships across organizational structure defined necessary results for decision to deliver broadly across multiple clinics

Broader Health Policy and Cultural Context

1. National Organizational Campaign To Promote Healthy Lifestyles
2. Prevention Department Desire to Provide Diabetes Prevention Program

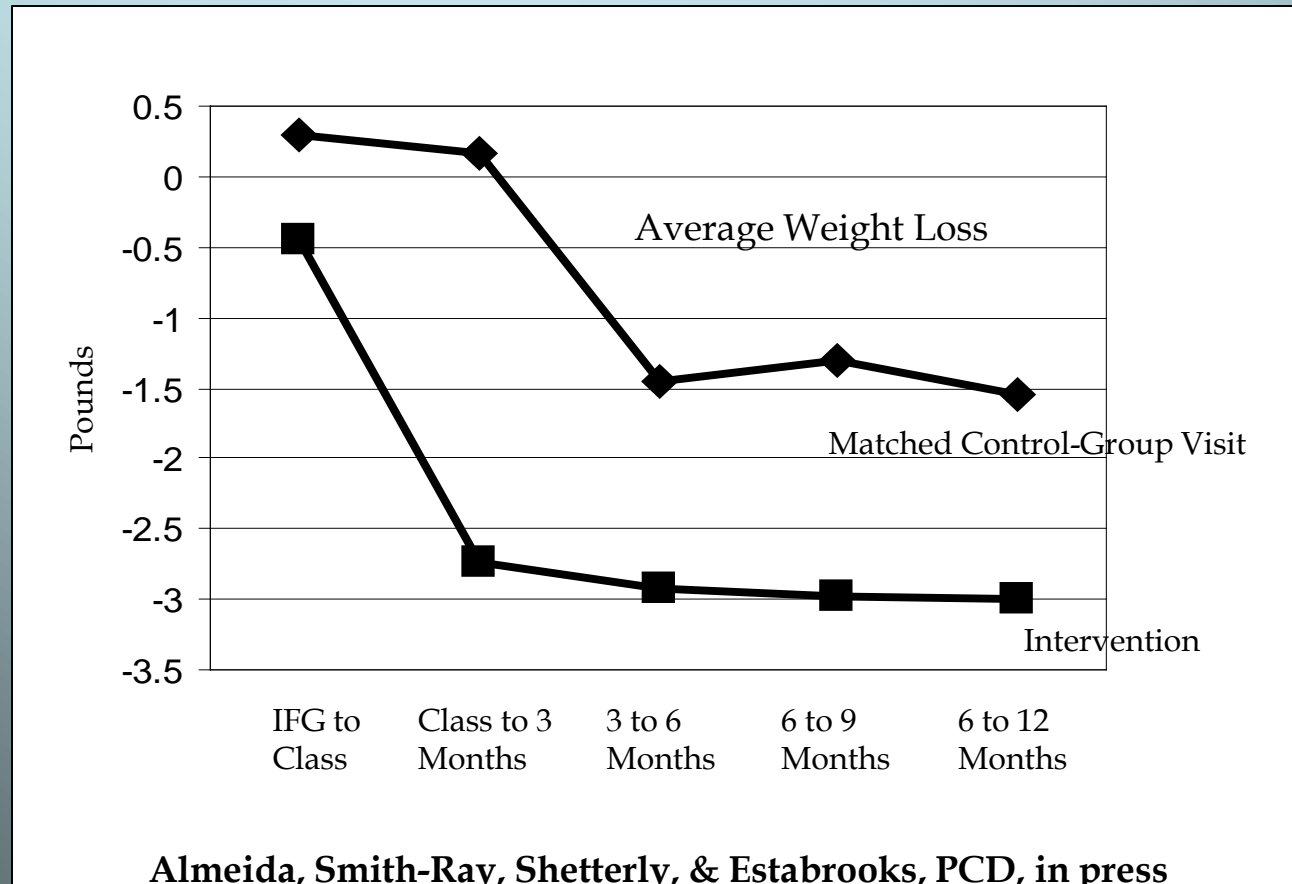
Note: PIC=Physician in Charge; MOA=Medical Office Administrator

Outcome

- A 90-minute intervention was developed based upon a patient-centered approach that highlighted the content used in the Diabetes Prevention Program.
- The intervention was taken to scale and offered for all patients with pre-diabetes
- The proportional reach of the intervention based on the number of patients with pre-diabetes was calculated
- A matched-case control group (n=1095 pairs) was used to determine effectiveness

Reach & Effectiveness

- Over the 12 months 12,834 patients were eligible, 1080 (8.4%) received the intervention



Phase 2: Automated Telephone

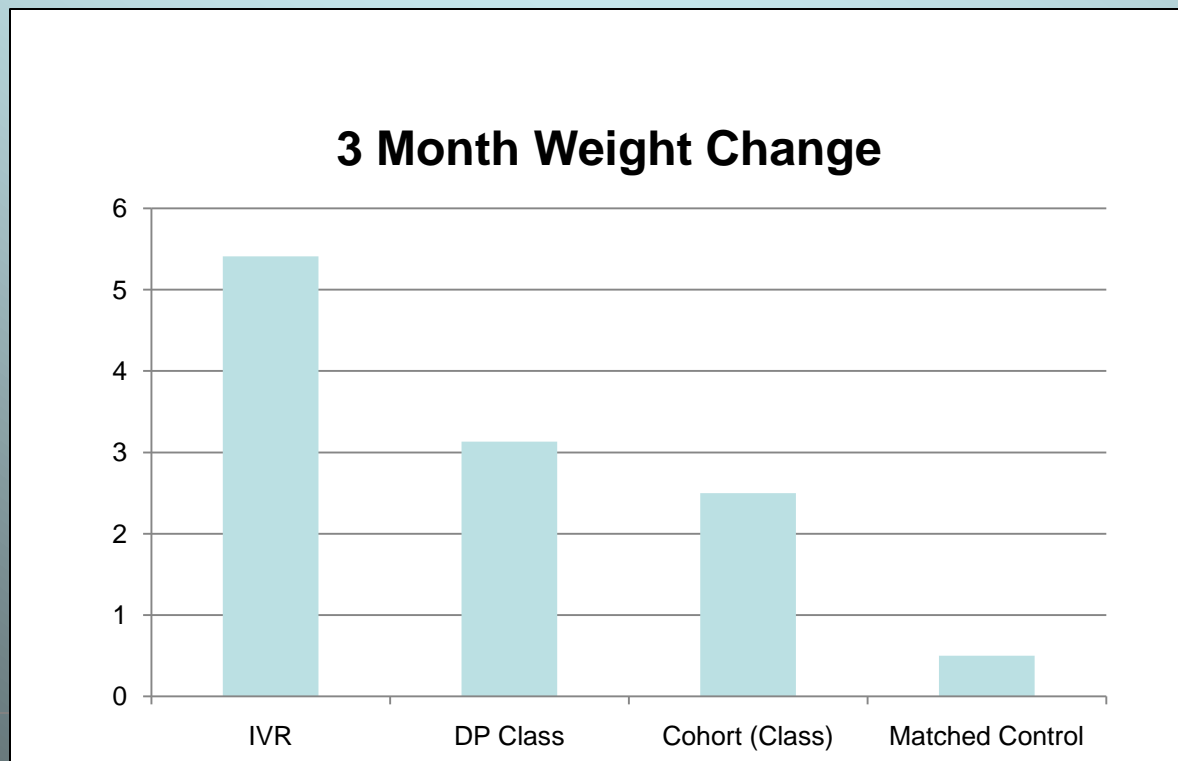
• Intervention

- Interactive voice response (IVR) automated telephone calls over a 12-week period
- Addition to the 90-minute pre-diabetes class
- Tailored IVR calls were designed to follow DPP components
- 7 calls provided about 5-10 minutes of participant driven counseling
- 5 calls provided a tip of the week (<1 minute)

Phase 2: Methods for Testing

- **Small RCT pilot**

- Reach= 78/205 (38%)
- Completion rate=90% of participants completed 75% or more of the intervention



So... What happened?

- **If you had to guess, which of the following is true?**
 - **The class is still being delivered**
 - **IVR is still being delivered**
 - **Both are still being delivered**
 - **Neither are being delivered**

Lessons Learned

- **Integration and use of existing resources can lead to translation of research into practice**
- **Effectiveness is not the only consideration in the translation process**
- **Even integrated projects may not lead to translation**



Participatory Dissemination:



Getting to **Physical Activity** Programs that are Effective, Reach a lot Of People, and Can be Sustained



The RE-AIM Framework:

- **R**eception
- **R**efectiveness
- **A**doption
- **E**ffectiveness
- **M**aintenance

Team-building PA Interventions

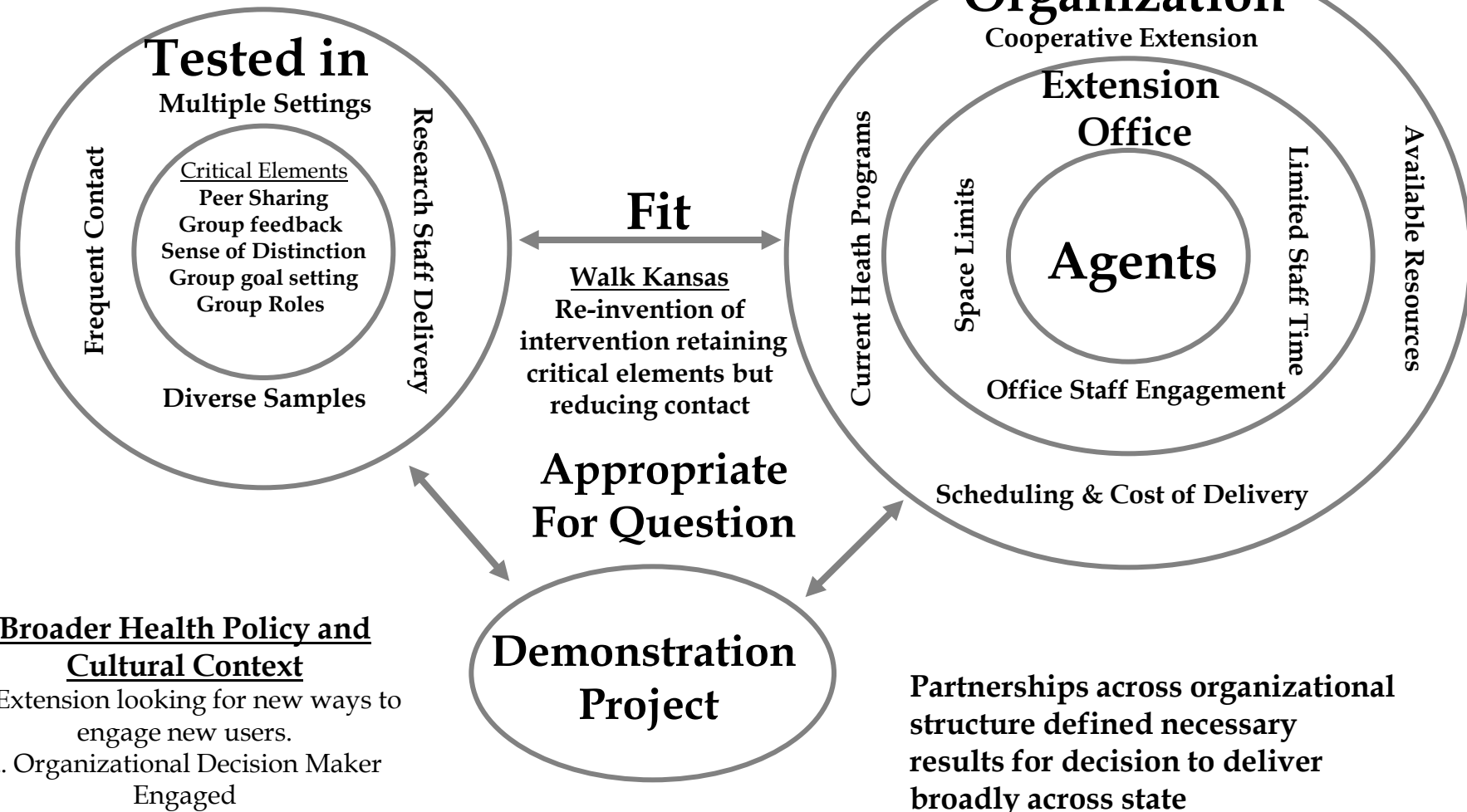
Delivery Sites

Organization

Cooperative Extension

Extension Office

Agents



Walk Kansas Principles in Practice

- **Primary Principles**
 - **Team-based registration**
 - **Team-name (sense of distinction)**
 - **Team size**
 - **Group goal to walk across Kansas**
 - **Regular feedback on individual contribution to group goal**
 - **Regular comparative group feedback**



Walk Kansas Principles in Practice

- Program components as originally implemented
 - Teams of 6 to allow team to reach 8 week goal if all members were active at the recommended level
 - All teams reported miles each week to extension office
 - All counties used newsletters
 - Weekly feedback was sent with each newsletter to each team member
 - 8 Weeks in duration

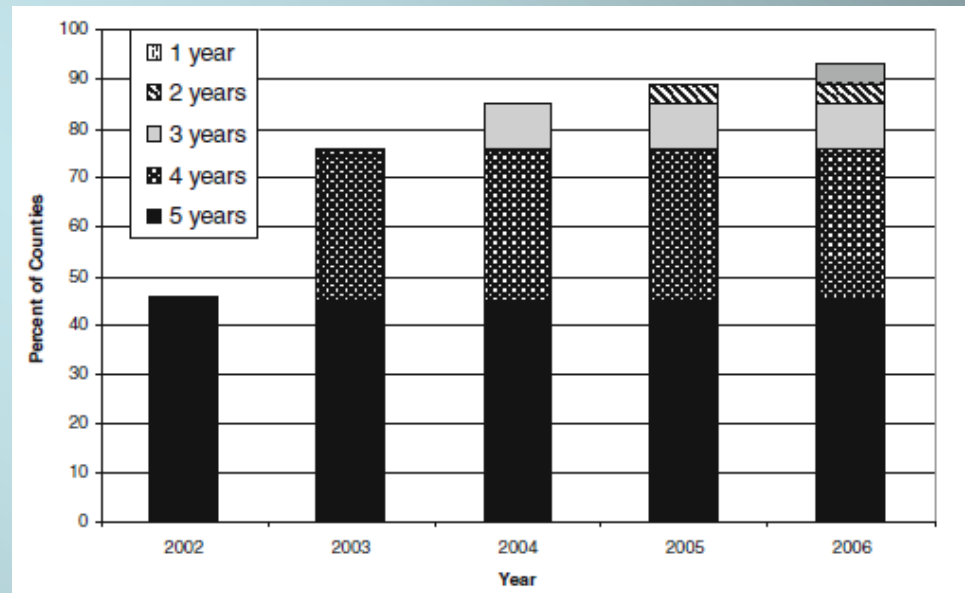




Representativeness

- Year 1 differences only:
- Less active agent, less likely to deliver
- Smaller population counties, more likely to deliver
- Non-adopting counties by Year 5 have no specific agent assigned

Adoption & Maintenance



Implementation

- Average team size: 6 participants
- 96% provided weekly newsletter
- 100% had captains report miles weekly
- 80% provided team feedback; 63% offered it weekly
- Participant indicators**
 - 7.5 of 9 newsletters received
 - 6.7 of 9 newsletters read



Doerksen & Estabrooks, IJBNPA, 2007

Downey, Wages, Flaming-Jacksons, & Estabrooks, under review



Implementation-Understanding of Principles

- In your opinion, what is it about Walk Kansas that helps people to do more physical activity? (n=96)
 - Open ended responses:
 - Teamwork, the team aspect 85% of agents
 - Accountability to teammates 40% of agents
 - Goal setting 28% of agents
 - Newsletters 7% of agents
 - *Time of the year the program is offered 13% of agents*

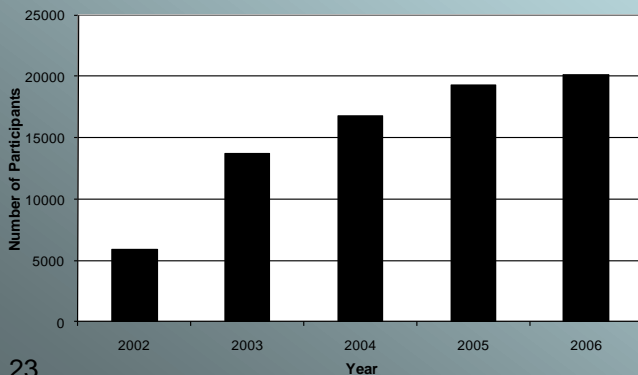


Downey, Wages , Flaming-Jacksons, & Estabrooks, under review

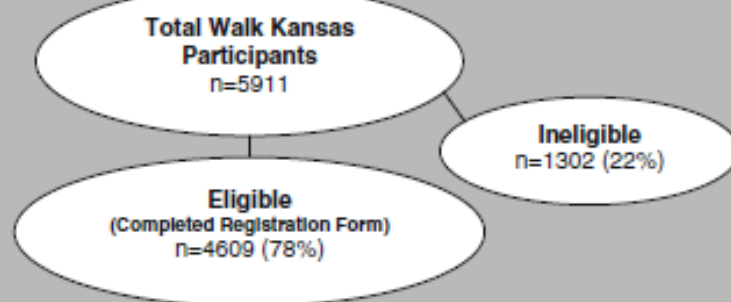
Individual-level Design

Reach Outcomes

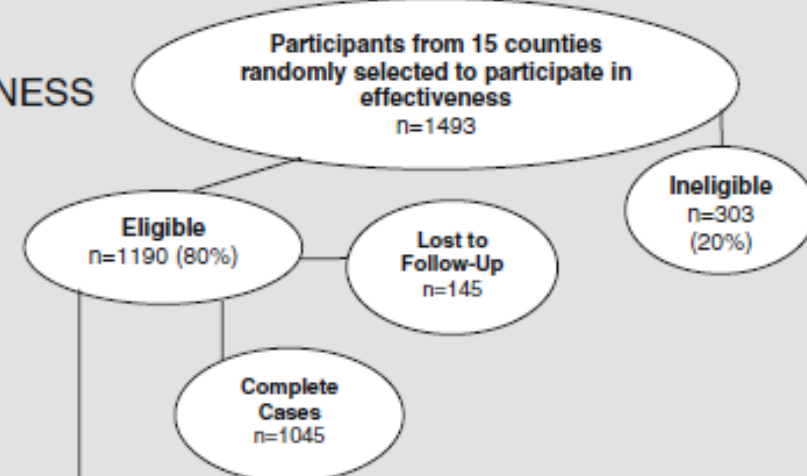
- From 1 to 3% of pop.
- Older, more likely to be women
- Slightly more likely to meet PA guidelines
- No other differences with larger pop.



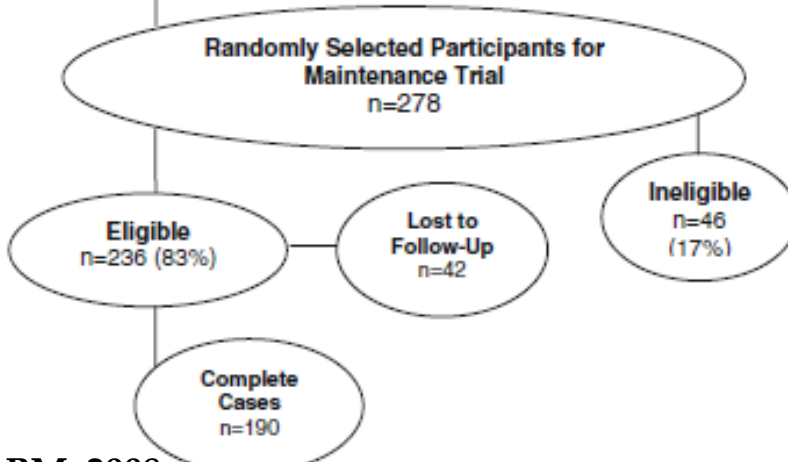
REACH



EFFECTIVENESS



MAINTENANCE



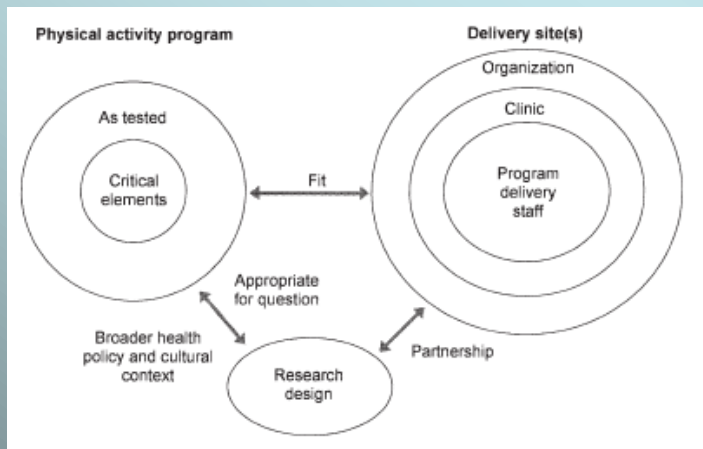
Effectiveness & Maintenance (individual)

Table 2 Effectiveness and Maintenance of the Walk Kansas Program: results from multilevel repeated measures ANOVA

Time period	Activity level	Estimate (change in minutes of PA)	SE	<i>df</i>	Adjusted <i>p</i>
Effectiveness: minutes of moderate physical activity					
Baseline to 8 weeks	Inactive	177	17.55	1,008	<0.001**
	Insufficiently active	107.81	8.51	1,008	<0.001**
	Active	15.61	6.74	1,008	0.189
Effectiveness: minutes of vigorous physical activity					
Baseline to 8 weeks	Inactive	45.93	12.81	1,008	0.005*
	Insufficiently active	57.03	6.21	1,008	<0.001**
	Active	18.35	4.92	1,008	0.003*
Maintenance: minutes of moderate physical activity					
Baseline to 8 weeks	Inactive	203.33	25.71	371	<0.001**
	Insufficiently active	97.43	22.16	371	<0.001**
	Active	9.23	22.75	372	1.00
Baseline to 6 months	Inactive	134.13	25.71	371	<0.001**
	Insufficiently active	101.64	22.16	371	<0.001**
	Active	-52.39	22.64	371	0.3367
8 weeks to 6 months	Inactive	-69.19	25.71	371	0.1543
	Insufficiently active	4.21	22.16	371	1.00
	Active	-61.62	22.75	372	0.1485

Is this participatory model better than our traditional model?

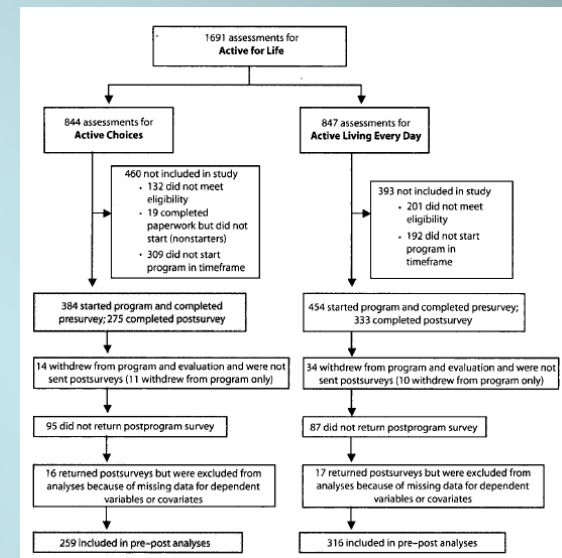
Participatory Dissemination Targeted Model



Fit Extension

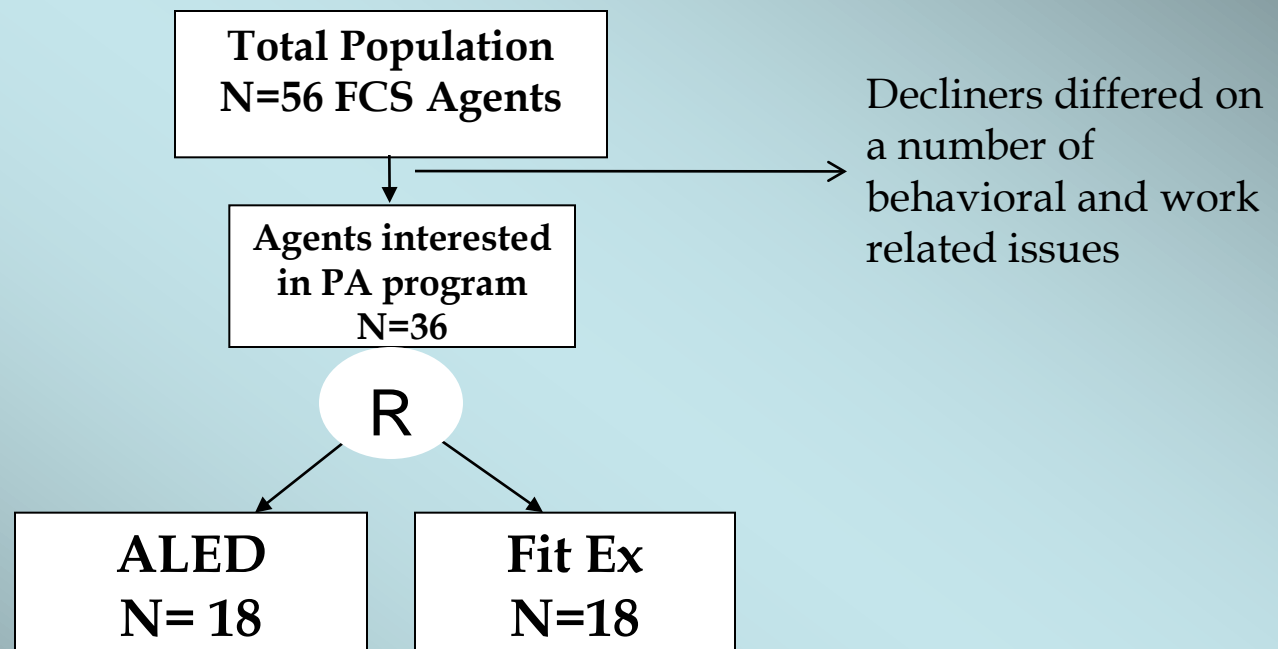
Versus

Efficacy to Effectiveness to Demonstration to Dissemination Model

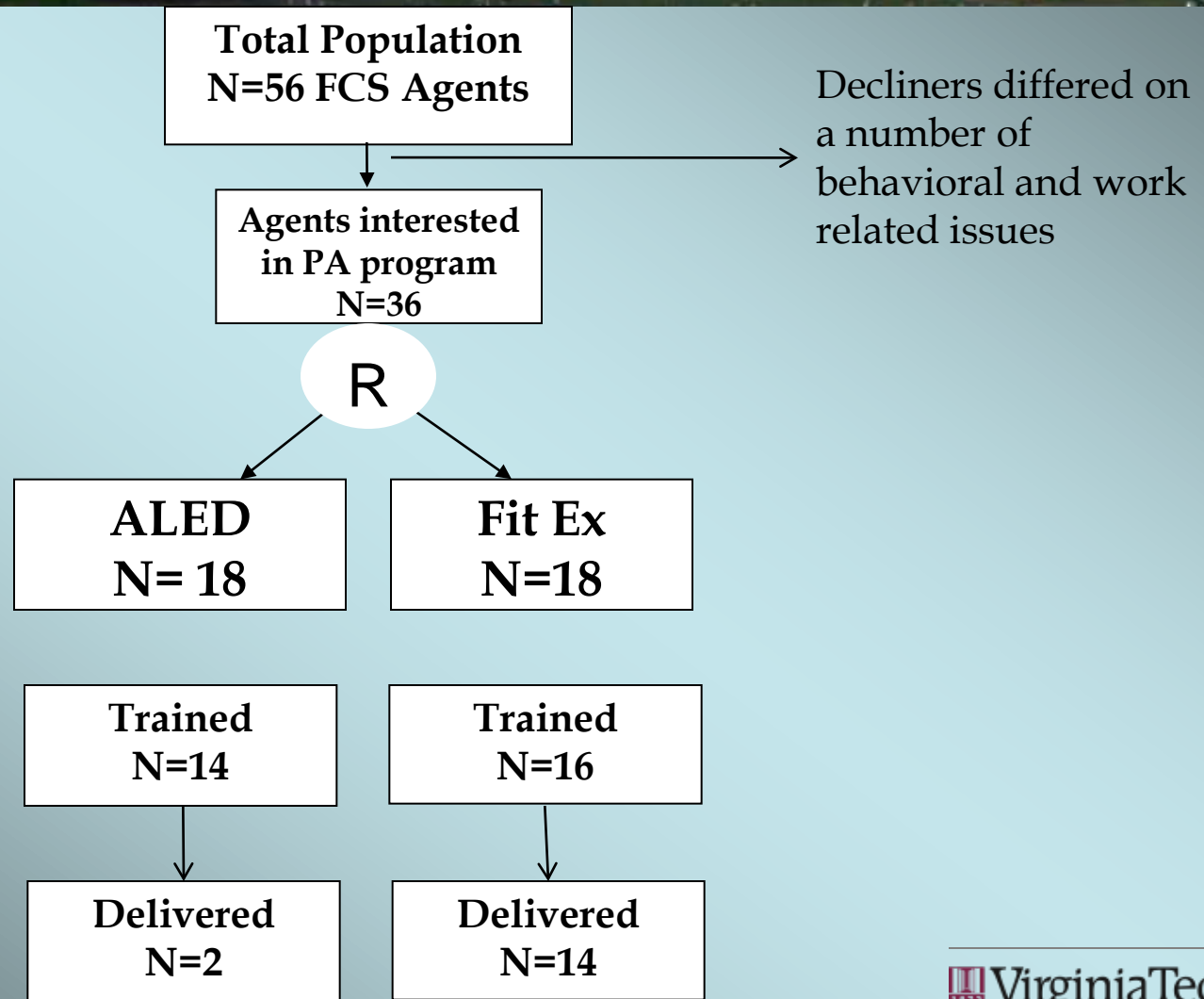


Active Living Everyday

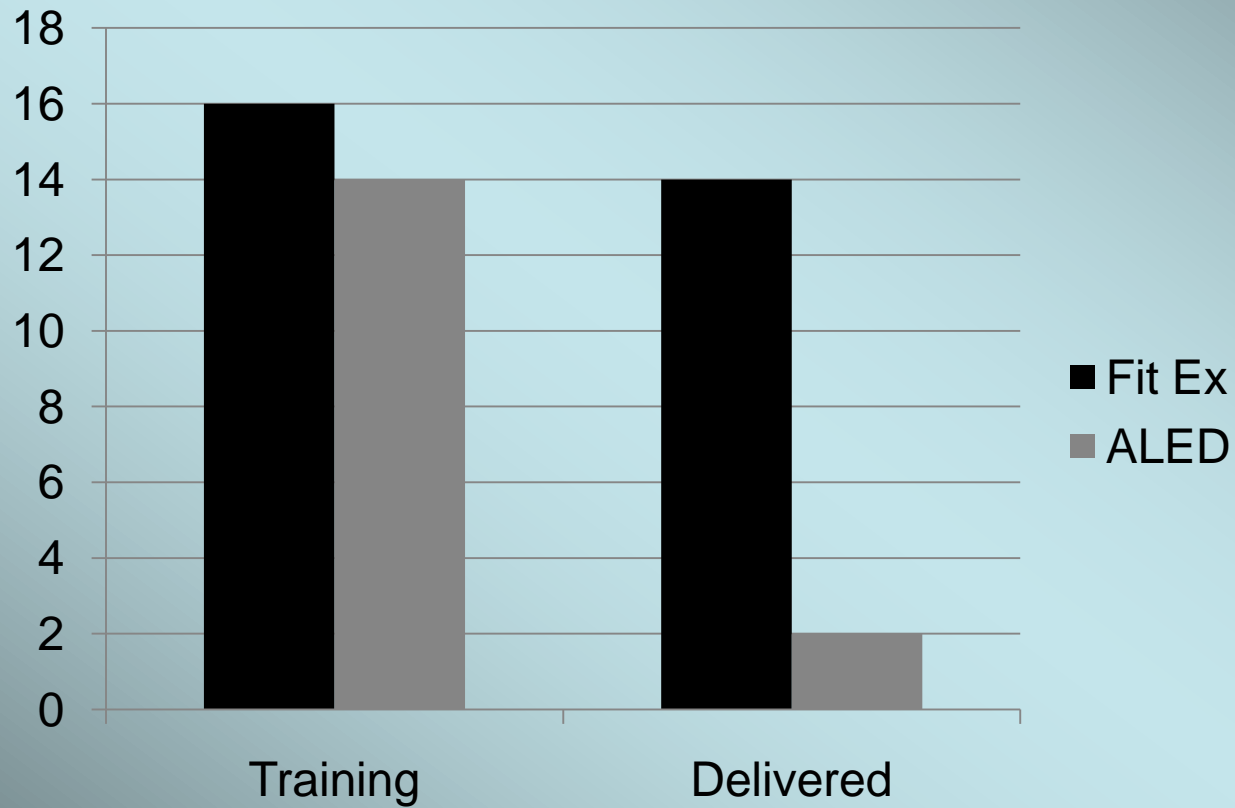
Adoption Trial



Adoption Trial

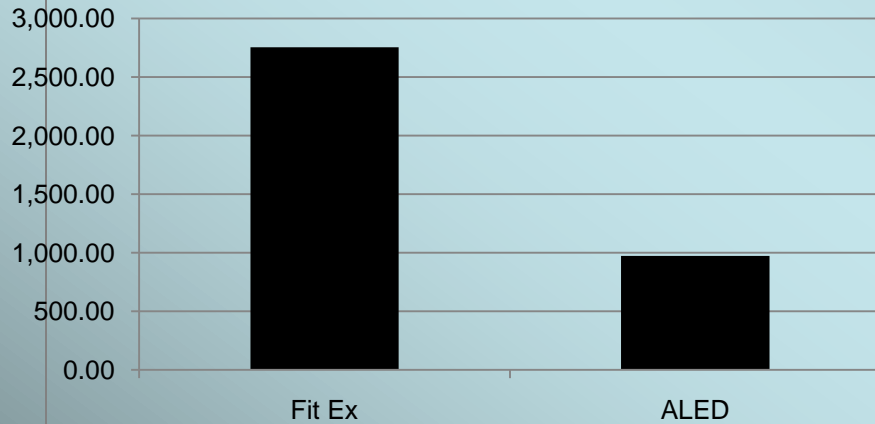


Adoption Trial: Outcomes

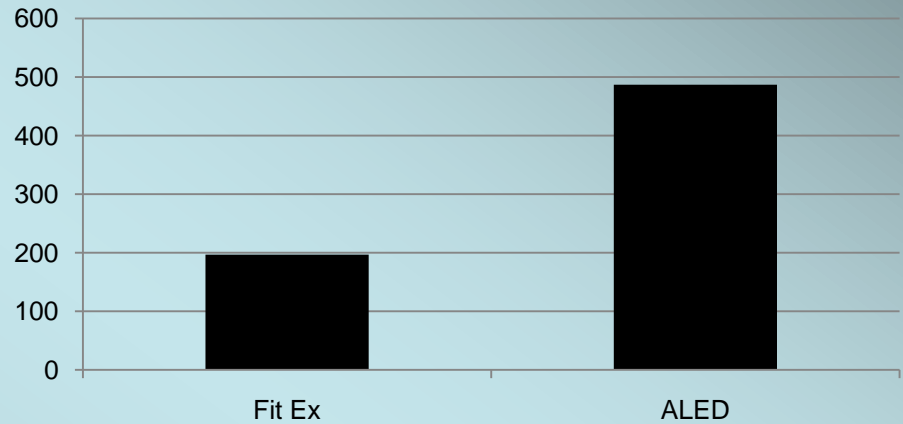


Implementation: Human Resource Needs

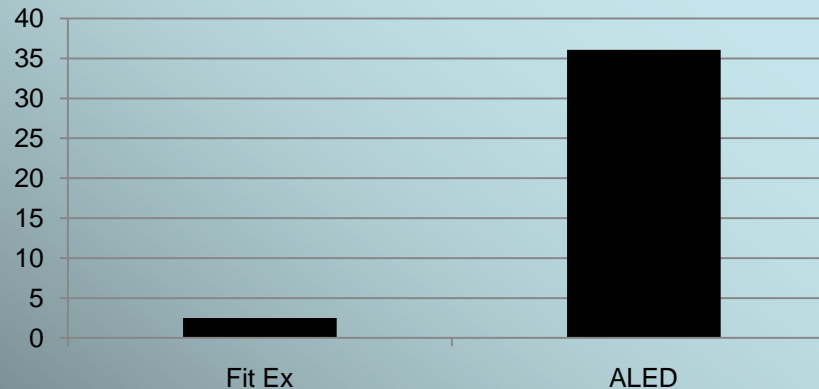
Total Hours



Total Hours Per Program



Total Hours Per Participant



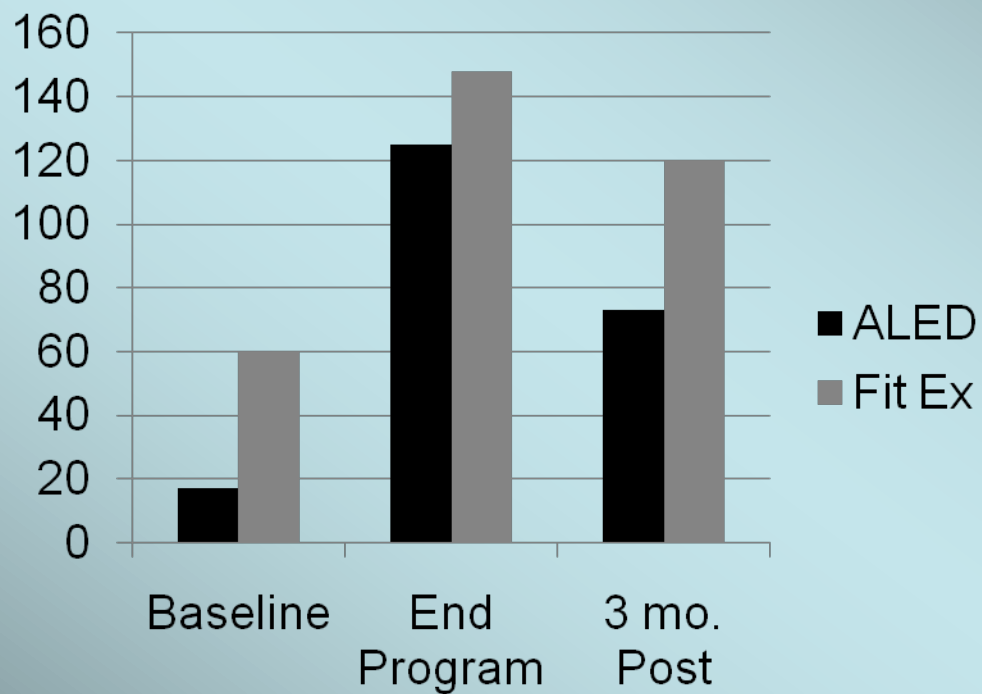
Reach & Representativeness:

ALED: 30 participants (15/agent)

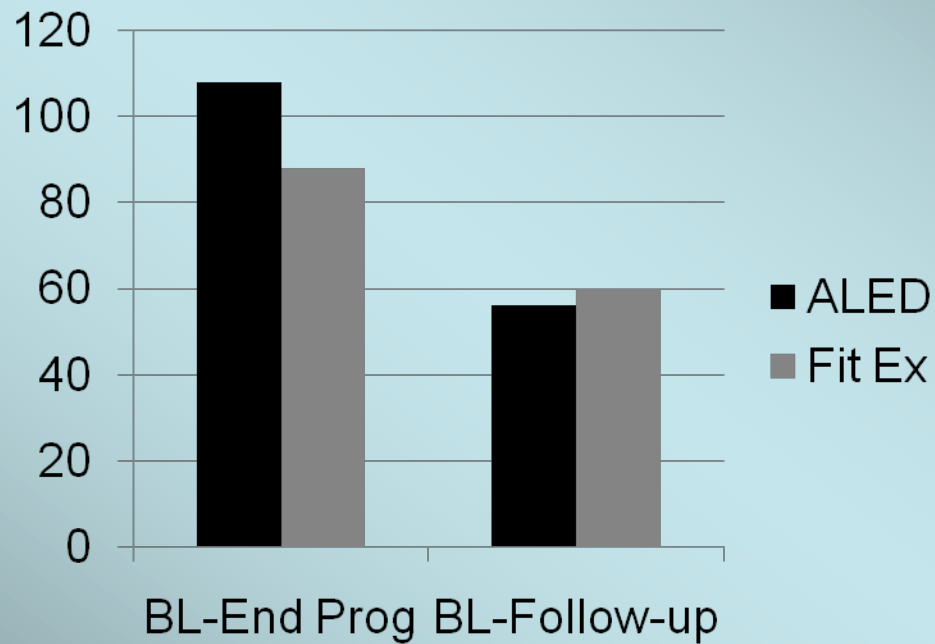
Fit Extension: 1104 participants (78/agent)

	Virginia Residents		Fit X Yr. 1	
Population	2,337,911			
Gender	Female:	51%	Female:	83%
	Male:	49%	Male:	17%
Race	Cauc:	81%	Cauc:	68.5%
	A.A.:	14%	A.A.:	17.8%
	As.:	2%	As.:	11%
Ethnicity	His/Lat:	3%	His/Lat:	1.5%
	Non:	97%	Non:	98%
Age	Mean:	38	Mean:	44

Effectiveness & Maintenance



Effectiveness & Maintenance



Promise of integrated research & practice

- Programs can be developed that fit the organizational structure, resources, and mission
- Psychology of physical activity principles can be translated into clinical and community programs
- Strategies based on these principles can be identified by those delivering the program
- Local health professionals can identify critical elements of intervention effectiveness.

Pitfalls of integrated research & practice

- Can take much longer to develop and trade-offs are often made between what a researcher may consider optimal and what practitioners may consider practical.
- Fidelity to principles is just as important as treatment fidelity in the more traditional sense--adaptations can reduce effectiveness (or improve?)
- Insignificant findings are often more uncomfortable because of organizational desire to fill gaps
- Shared design decisions could reduce internal validity.

Future Directions

- Research that determines the comparative effectiveness of integrated research/practice developed interventions with those developed through a more linear scientific approach
- Understand mediational pathways in physical activity intervention adoption at the organizational level
- Examine the impact of adaptations to intervention strategies while adhering to underlying principles

Question's, Comments, or Smart Remarks?

