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Midlife African American women's maintenance of life-style physical activity following the Women's Lifestyle Physical Activity Program

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Rush is a not-for-profit health care, education and research enterprise comprising Rush University Medical Center, Rush University, Rush Oak Park Hospital and Rush Health.

BACKGROUND

- Group behavioral interventions increase PA in African American women
- Little known about maintenance
- NIH Office of Behavioral and Social Sciences Research defined maintenance as continued behavior for a defined period of time after the active intervention. Distinguished between two types of maintenance studies:
 - Testing maintenance strategies following an active intervention
 - Long-term maintenance without a maintenance intervention

We examined 13 physical activity interventions with African American women

- Only 4 looked at maintenance after cessation of the intervention.
- All 4 showed improvements in physical activity at the end of the intervention, but only 1 maintained improvements
- None looked at sustained maintenance following a maintenance intervention

- To determine midlife African American women's long-term maintenance of physical activity following the end of the 48-week Women's Lifestyle Physical Activity program.
- To determine differences in long-term maintenance of physical activity by three treatment conditions.

Methods: Intervention

The Women's Lifestyle Physical Activity Program (48-weeks)

24-week active phase

24-week maintenance intervention phase

Group meetings

- 5 during active phase and 1 during maintenance phase
- Guided by Social Cognitive Theory
 - ◆ Individual component:
 - ◆ Lifestyle physical activity prescription
 - ◆ Group component:
 - ◆ Role modeling
 - ◆ Problem solving



Methods: Intervention

Telephone contacts (designed to keep connected between group meetings)

- ◆ Personal calls (PC)
Motivational interviewing
(9 active phase, 2 maintenance phase)
- ◆ Automated telephone calls (AC)
Barrier tips (9 active phase, 2 maintenance phase)
- ◆ No telephone calls



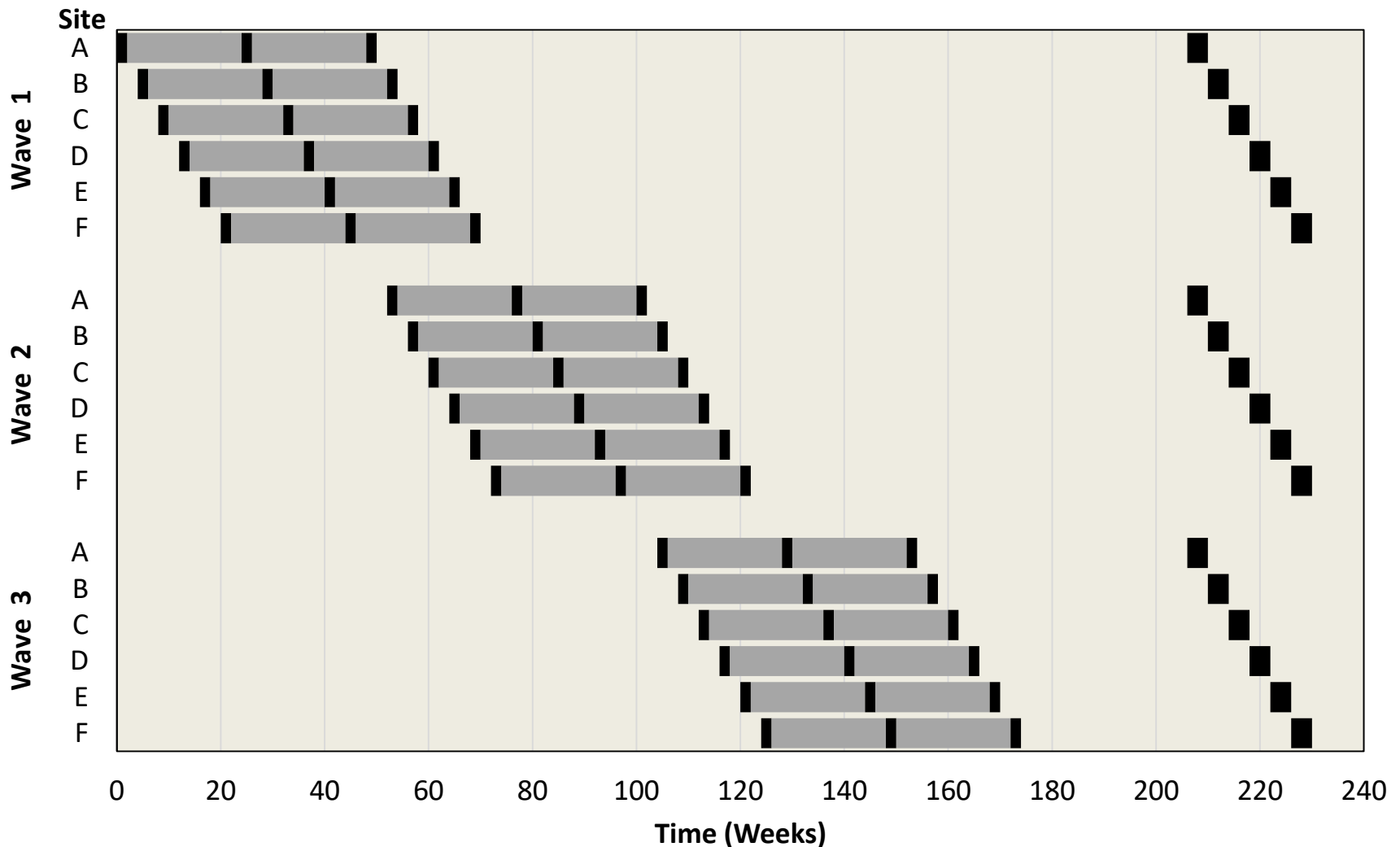
METHODS: RCT Design

- 3 intervention conditions
 - Group only
 - Group + Personal Calls
 - Group + Automated Calls
- 6 sites
 - 3 waves per site
 - A different treatment condition for each wave
- Order of intervention conditions within site randomly counterbalanced

METHODS: Design supplementary analyses

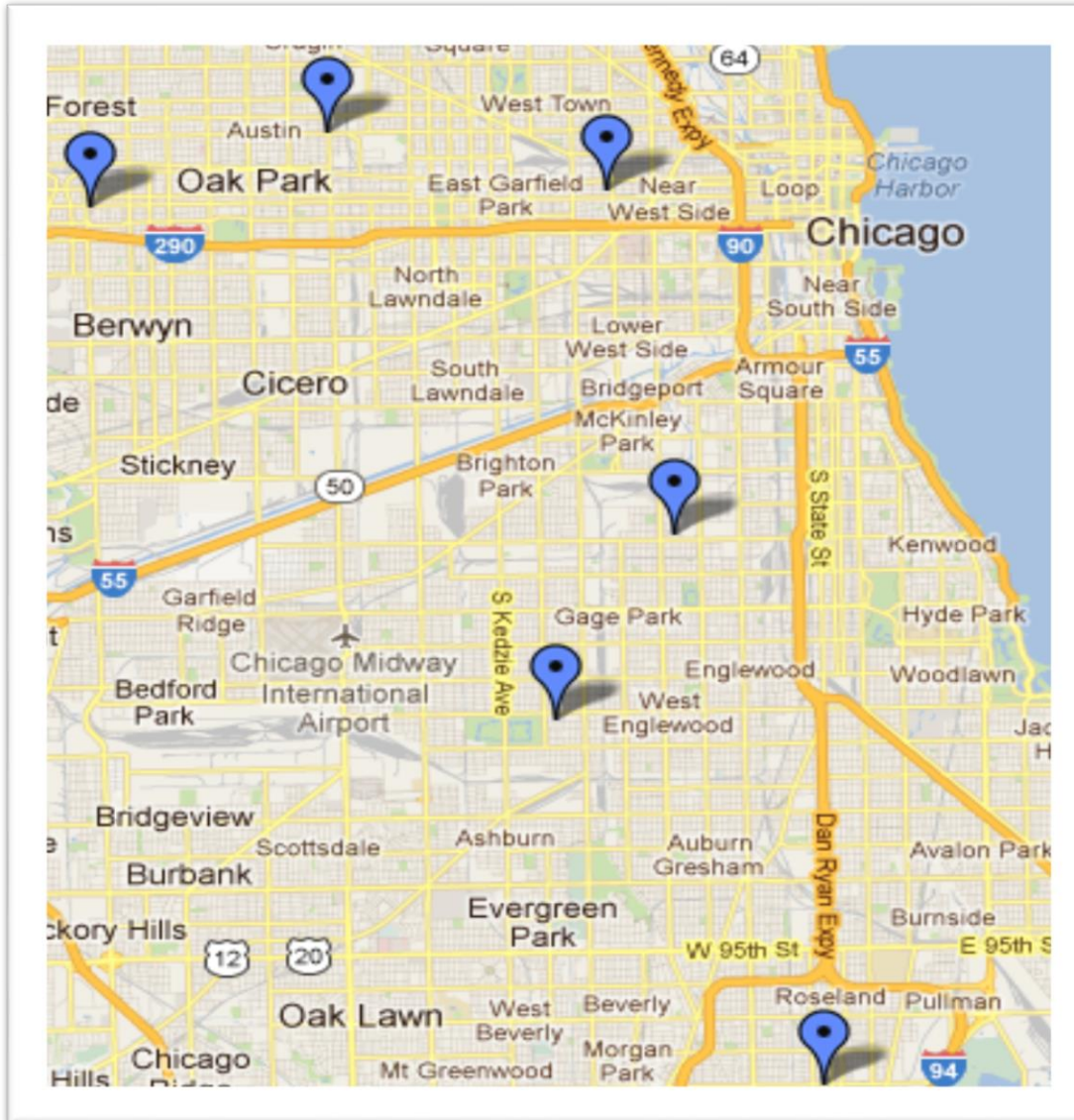
- Assessment of long-term maintenance began 1 year after the final wave of first site completed 48-week assessment
- Completed long term maintenance assessment 1 to 3 years after completing the intervention.
- 4 assessment times
 - Baseline (pre-intervention)
 - 24 weeks post-baseline (end of active intervention)
 - 48 weeks post-baseline (end of maintenance intervention)
 - 2 to 4 years post-baseline (long-term maintenance)

ANALYSIS: Timing of Assessments



Key: Black = Assessments Grey = Intervention

METHODS: Sites



-3 community health centers

-3 community hospitals

Inclusion

- ◆ Female
- ◆ African American
- ◆ Sedentary
- ◆ Aged 40 to 65 years
- ◆ Without disabilities that would prevent regular participation in physical activity

Exclusion

- ◆ Major signs or symptoms suggestive of pulmonary or cardiovascular disease
- ◆ Blood pressure $\geq 160/100$ mmHg
- ◆ Self-reported history of myocardial infarction, stroke, $\text{HbA}_{1c} \geq 9$

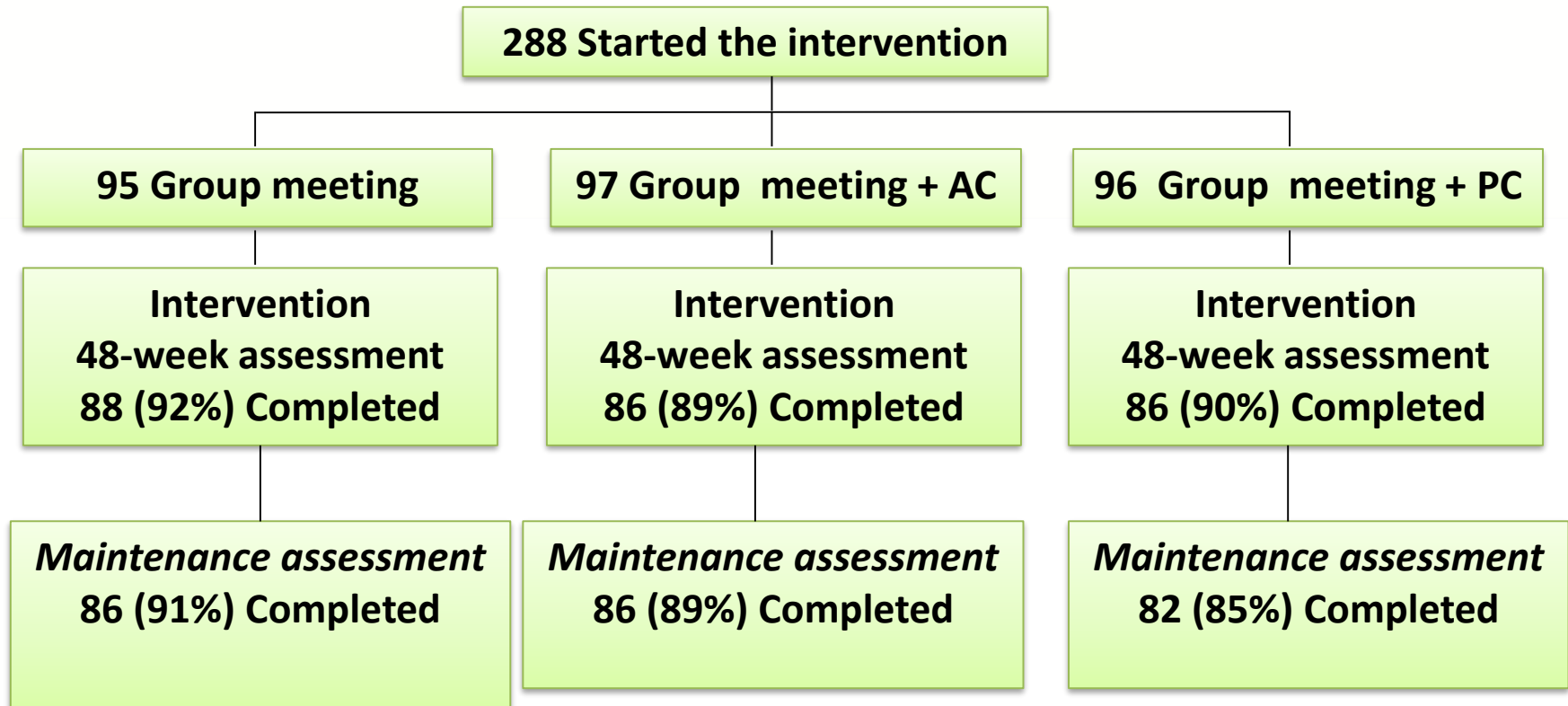
Adherence to lifestyle physical activity

Community Healthy Activities Model Program (CHAMPS)

- Overall moderate leisure time and household activities (30 items)
- Retrospective past two weeks
- Duration and MET value
- Calculated minutes per week spent in:
 - Overall moderate-to-vigorous physical activity
 - Leisure time moderate-to-vigorous physical activity
 - Walking

- During the active and maintenance intervention phases physical activity questionnaires were (baseline, 24 weeks, 48 weeks) were completed at the sites
- During the long-term maintenance phase, follow-up questionnaires were mailed to women following Dillman

RESULTS: Consort Sheet



RESULTS: Completion Of Long-term Follow-up

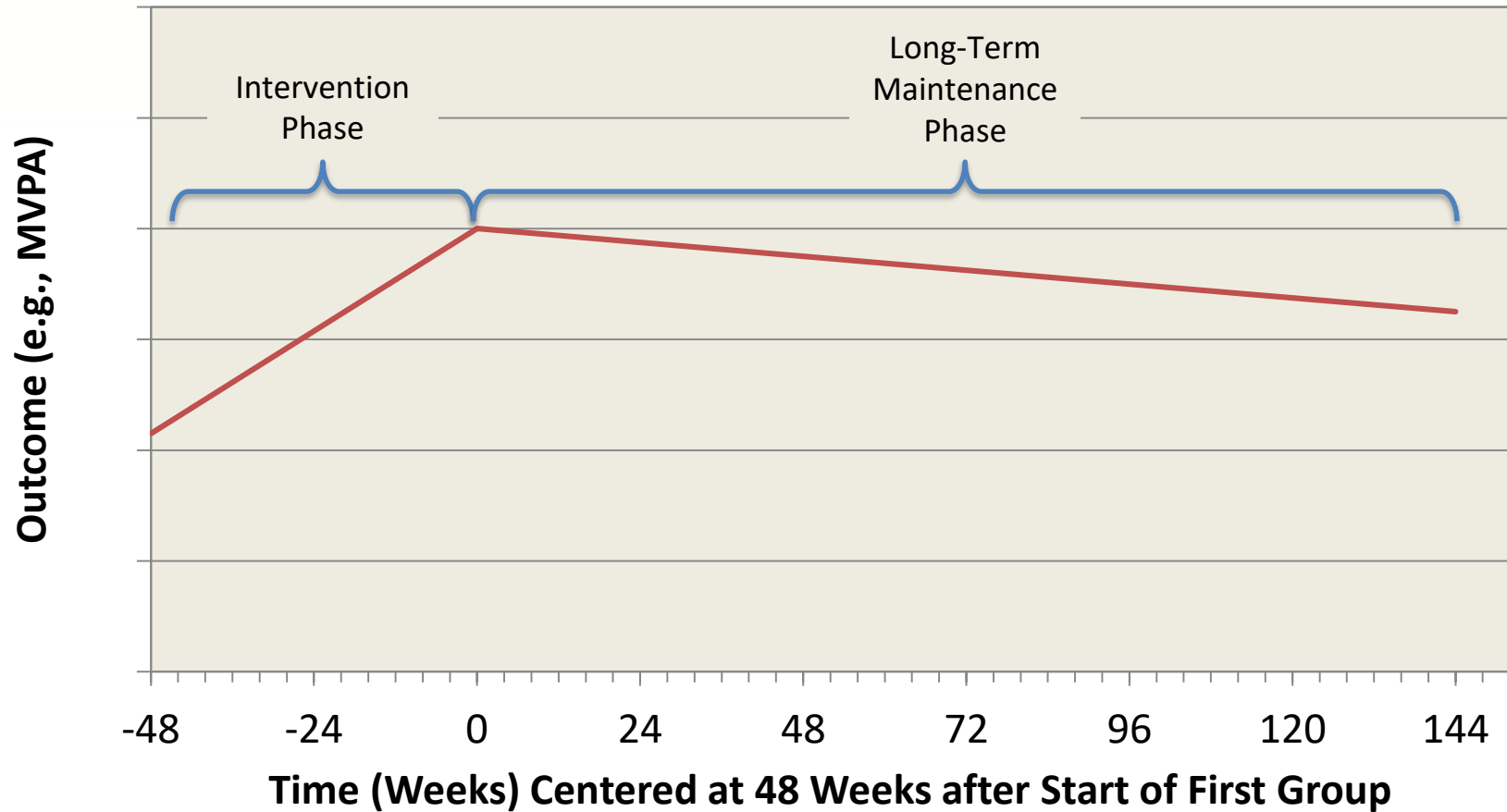
Demographic Variables		Completed (n=254; 88.2%)	Not Completed (n=34; 11.8%)
Age, years M(SD)**		53.5 (6.5)	49.8 (5.9)
Education, college graduate or higher (%)*	Yes	92.3	7.7
	No	84.1	15.9
Income (%)	<\$40,000	86.4	13.6
	≥\$40,000	89.4	10.6
Employed (%)	Yes	89.2	10.8
	No	85.1	14.9
Married/living with partner (%)	Yes	89.1	10.9
	No	87.6	12.4
Children under 18 in household (%)	Yes	84.9	15.1
	No	90.1	9.9

* $p < .05$ ** $p < .01$

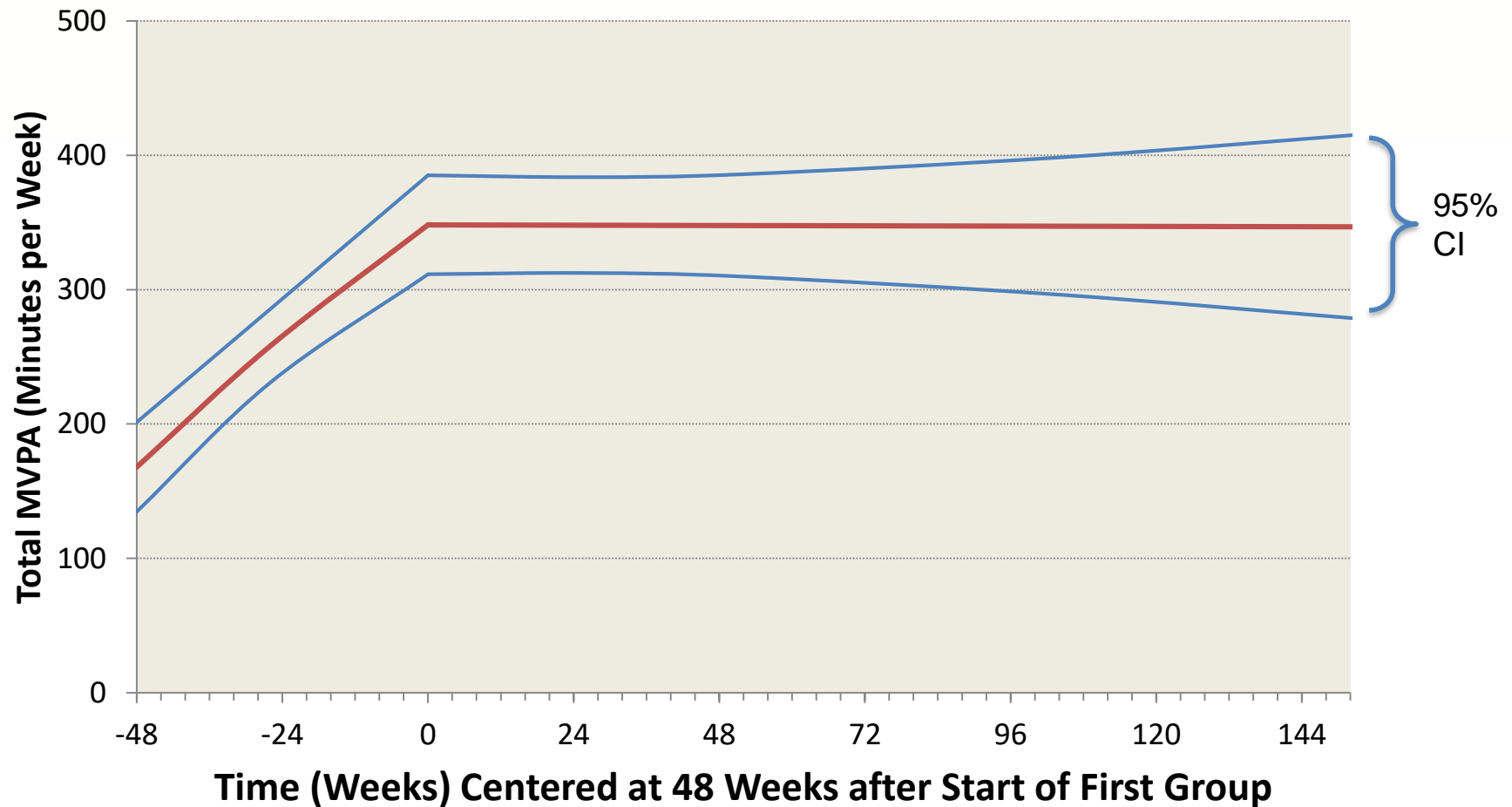
RESULTS: Completion Of Long-term Follow-up

Design Factor		Completed (n=254; 88.2%)	Not Completed (n=34; 11.8%)
Condition (%)	Group Only	90.5	9.5
	Group+PC	85.4	14.6
	Group+AC	88.7	11.3
Wave (%)**	1	81.4	18.6
	2	86.5	13.5
	3	96.8	3.2
Site (%)	1	87.2	12.8
	2	80.7	9.3
	3	93.2	6.8
	4	88.9	11.1
	5	87.2	12.8
	6	82.0	18.0
Sessions Attended M(SD)**		4.8 (1.3)	3.3 (1.6)
**$p < .01$			

ANALYSIS: Discontinuous Growth



RESULTS: Total Moderate-Vigorous Physical Activity

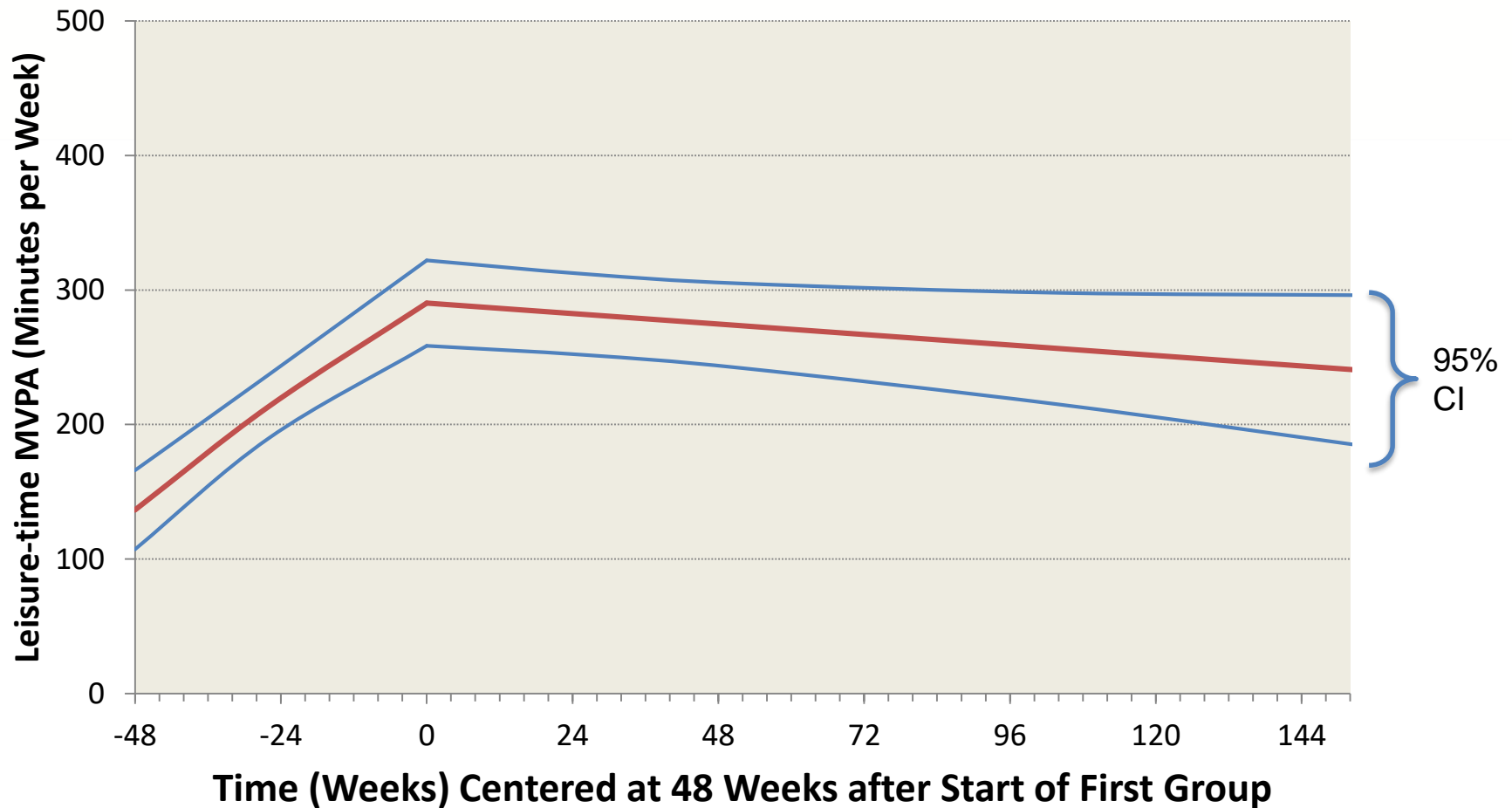


Intervention Slope: 3.74, $p < .001$

Maintenance Slope: -0.01, $p = .967$

No differences by condition

RESULTS: Leisure-time Moderate-Vigorous Physical Activity

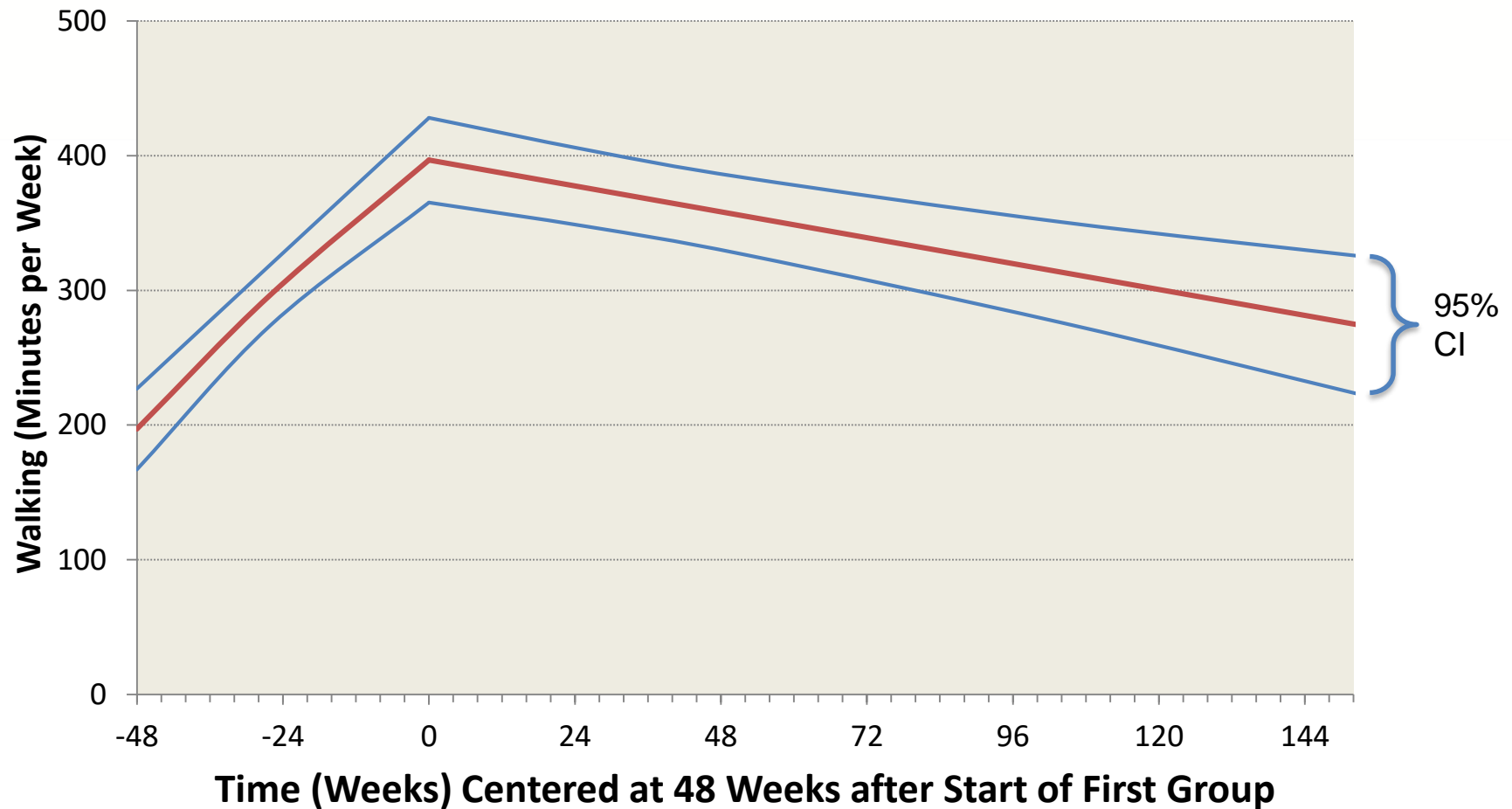


Intervention Slope: 3.19, $p < .001$

Maintenance Slope: -1.71, $p = .087$

No differences by condition

RESULTS: Walking



Intervention Slope: 4.14, $p < .001$

Long-term Maintenance Slope: -0.80, $p < .001$

No differences by condition

- First study to look at the natural course of long-term maintenance following a maintenance intervention.
- Findings suggest long-term sustained effectiveness of the Women's Life Style Physical Activity Program.
- Strength of intervention: strategies based on concepts from SCT associated with maintenance.
- Limitations
 - Reliance on self-report measures of physical activity.
 - Analyses limited by a follow-up design that included only a single assessment of women at varying times.

ACKNOWLEDGEMENTS



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METHODS: Design

	Sites & order of delivering condition					
Wave	1	2	3	4	5	6
1	group meeting	group meeting	group meeting + PC	group meeting + PC	group meeting +AC	group meeting + AC
2	group meeting +AC	group meeting + PC	group meeting + AC	group meeting	group meeting	group meeting + PC
3	group meeting + PC	group meeting + AC	group meeting	group meeting + AC	group meeting + PC	group meeting