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# Maintaining Physical Activity: A Study of Adults Ages 50-70

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# Purpose

- To evaluate the 6-month efficacy of the “Keep Active Minnesota” program
  - a phone and mail-based physical activity maintenance intervention
  - designed for use with adults age 50 to 70 years who have increased their physical activity (PA) within the past year

# Background

- Well known benefits of PA in older adults
- Yet, older adults are particularly sedentary
- Most physicians know the difficulty of sustaining healthy lifestyles
- Flux over time in PA levels is common

# Background

- Intervention programs needed that have broad “reach”
- Most efforts focus on *PA initiation*
- *Maintenance* of increased PA levels is also needed

# Background

- Complementary strategies needed
  - increase *PA initiation* among sedentary
  - help active individuals *maintain PA*



# Specific Aim

- Can our phone- and mail-based intervention help participants maintain their physical activity level at 2 years follow-up relative to usual care?
- We present the primary outcomes at the six-month follow-up point

# Participants

- N=1,049 health plan members ages 50-70
- Currently accumulating  $\geq 30$  minutes of moderate or vigorous PA at least 2 days per week in average week
- Current PA level increased within past 12 months

# Participants

- Health Plan administrative data used to screen/recruit
- Sufficiently healthy to participate in the intervention
- Exclusions:
  - Diagnoses of CHD, CHF, or complicated comorbid conditions
  - Selected heart rhythm disturbances or a cardiac arrest in prior year

# Intervention

- Based primarily on Bandura's Social Cognitive Theory (SCT) and relapse prevention theory
- Intervention self-management strategies:
  - cognitive
  - behavioral and
  - environmental

# Keep Active Minnesota Intervention Elements

- In-person orientation
- Workbook, PA logbook, pedometer
- 7 session phone course
- Monthly phone contact through 1<sup>st</sup> year
- Bi-monthly phone contact for 2<sup>nd</sup> year

# Primary Outcome Measures

- Community Healthy Activities Model Program for Seniors (CHAMPS) questionnaire (Stewart, King, et al) used to derive kilocalorie expenditures (a measure of energy spent)
- Weekly kilocalorie expenditures at baseline and 6 months from:
- Maintenance of PA at 6 months relative to baseline (maintenance)

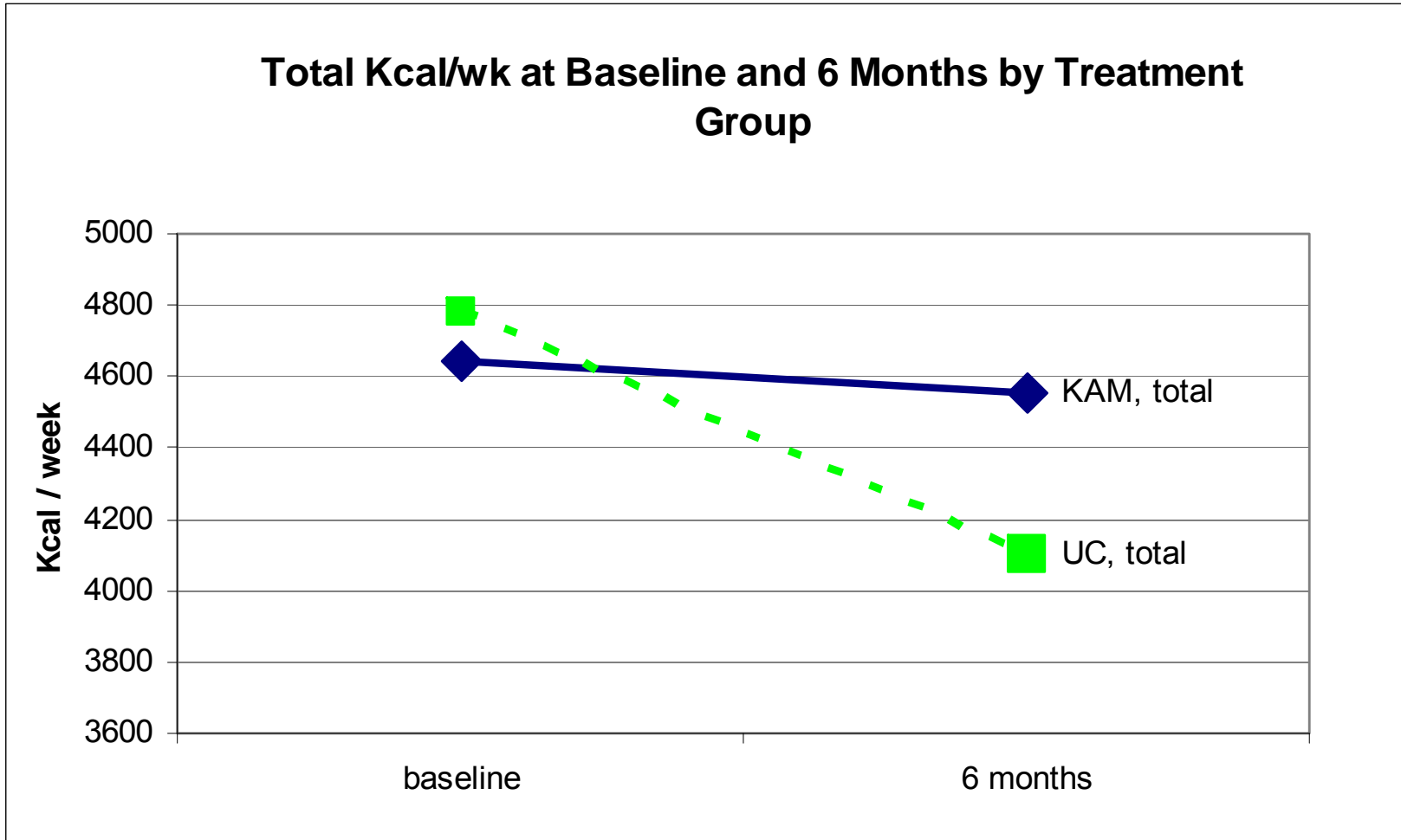
# Hypotheses/Analyses

- **Hypothesis 1:** KAM group would maintain kcal expenditure from baseline to 6 months, relative to a drop in kcal expenditure among the usual care group
- **Hypothesis 2:** PA maintenance at 6 months would be higher among KAM group than usual care group

# Results

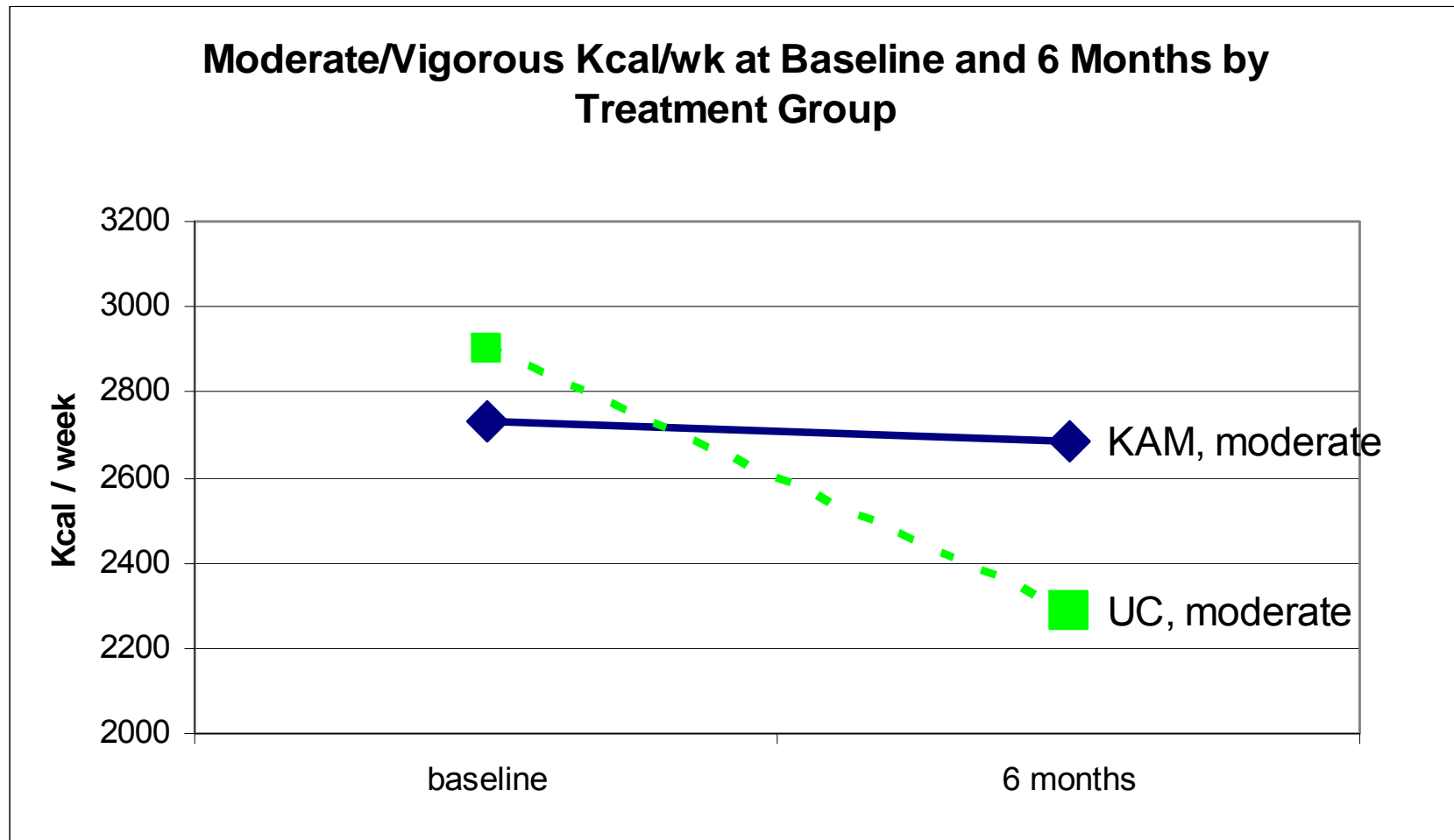
- At baseline - typical participant was
  - 57 years old
  - Female
  - White
  - Overweight (Body Mass Index  $\geq 25$  kg/m<sup>2</sup>)
  - Working full time
  - College educated
  - Good functional health status
- Only observed group difference: fewer in KAM group self-identified as White (95.6 vs. 92.4%,  $p < .05$ )

-KAM group maintains total PA and controls decline (time\*tx p < .002)

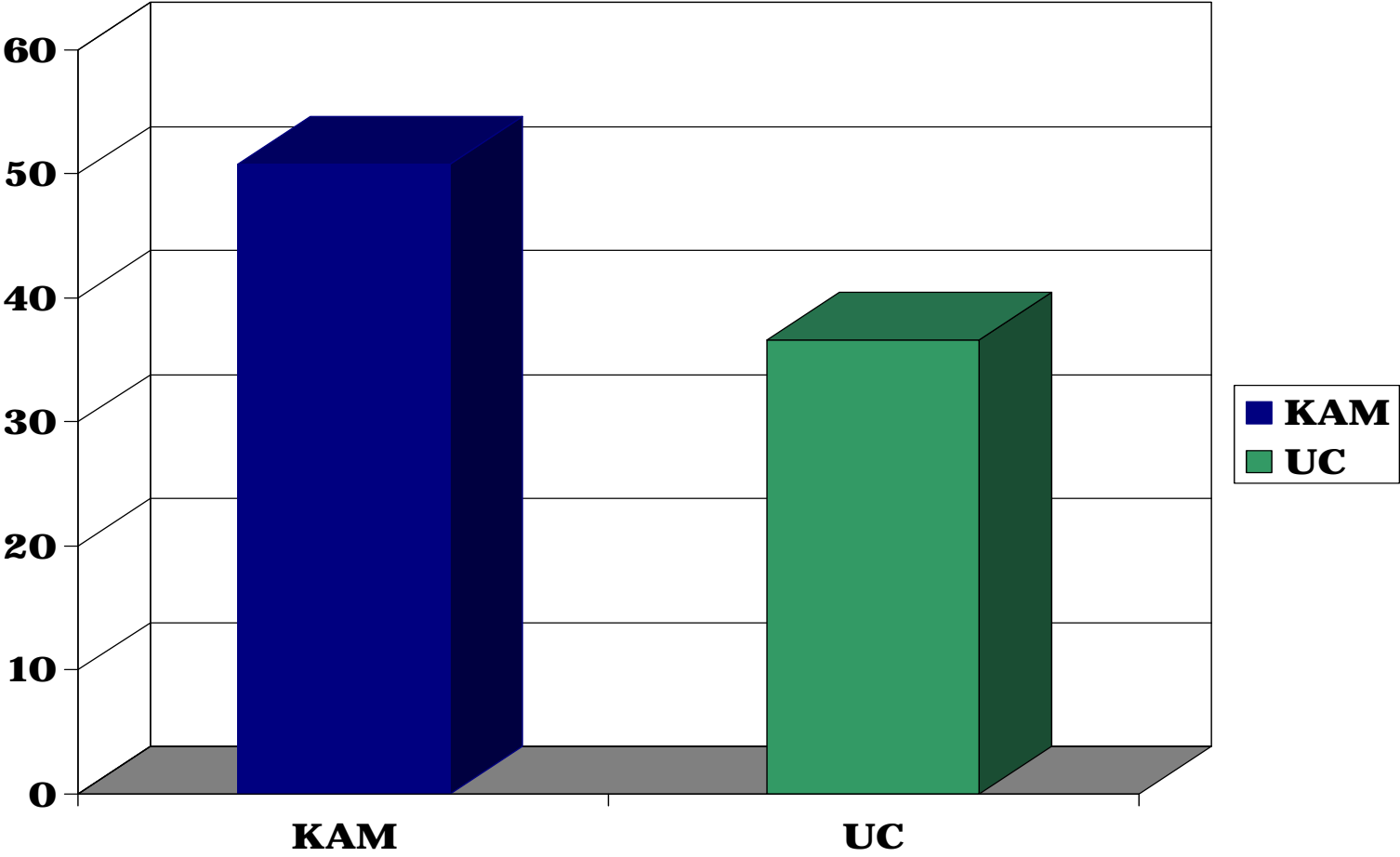


Martinson, Crain, Sherwood, Hayes, Pronk & O'Connor (Under review)

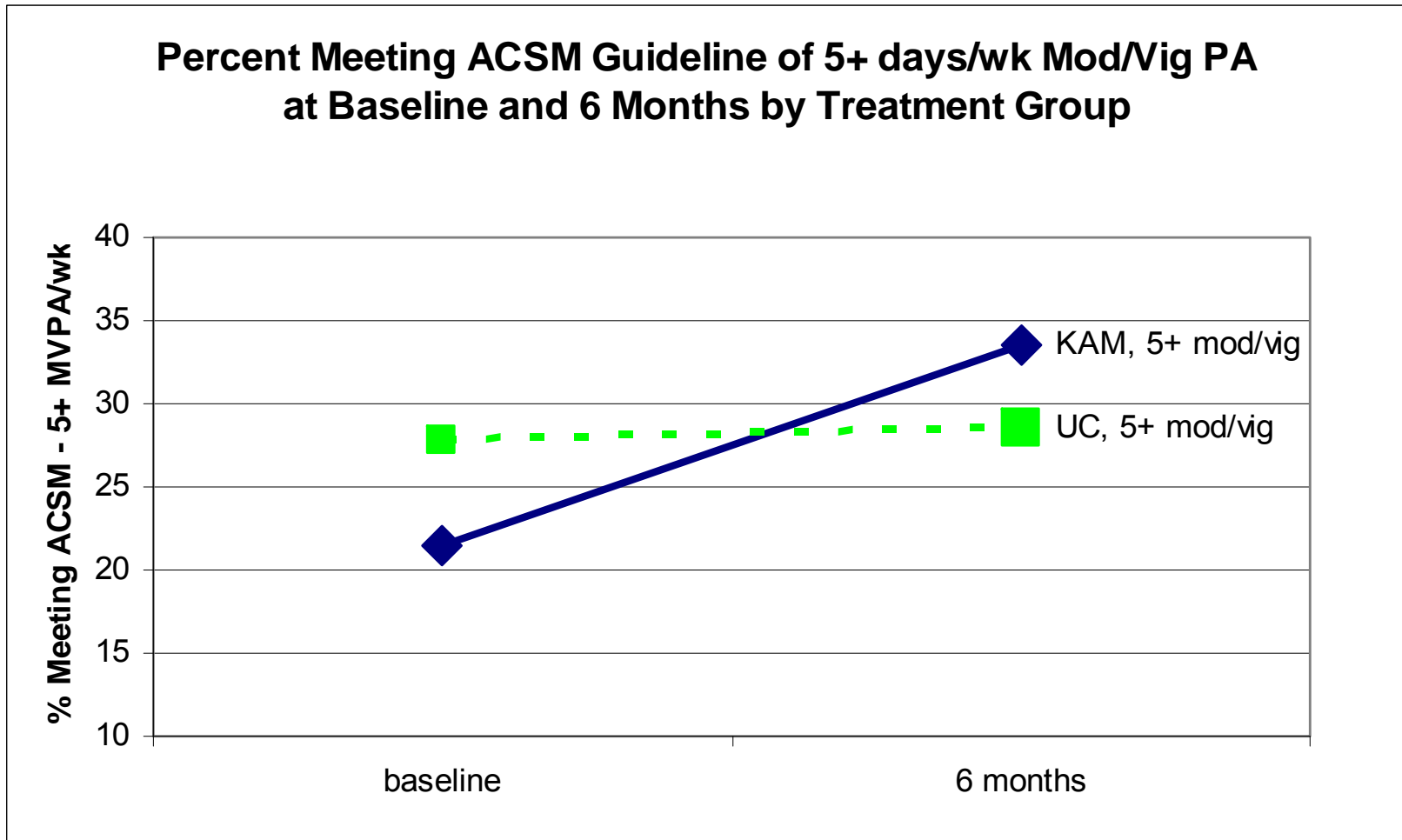
-Also true for moderate/vigorous Kcal expenditure (Time\*Tx p < .001)



-Maintenance significantly higher in KAM group (Treatment p. < .001)



-Percent meeting ACSM guidelines of 5+ days/wk in MVPA increased in KAM but not UC group (Time\*Tx  $p < .004$ )



# Discussion

- This relatively low intensity PA intervention for 50 to 70 year olds is the first to focus exclusively on *PA maintenance*
- Those receiving intervention had significantly higher mean energy expenditures (roughly 450 Kcal/week) 6 months after randomization



# Discussion

- Client satisfaction with the intervention was high at 6 month follow up
- Low dropout in both the intervention (3.4%) and control (4.8%) groups
  - So differences observed unlikely due to differential drop out, and
  - The intervention strategy may have wide appeal to eligible adults

# Limitations

- Evaluation needed over longer follow-up periods  
- now underway
- Self-reported PA should be confirmed objectively  
– also underway
- Generalization to other populations should be done with caution

# Limitations

- Although this was a low-intensity intervention, the costs of it are not negligible
- Affordability should be considered for those identified as potential payers
- Cost-effectiveness analyses are planned for after longer term follow-up data complete

# Conclusions

- At the population level - maintaining PA in those already active may be at least as important as initiating PA among sedentary individuals
- These promising short-term results from KAM may be an important contribution to overall efforts to increase PA in the U.S. population

# Thank you for coming

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