A Small Change Approach Delivered via Telephone Promotes Weight Loss in Veterans: Results from the ASPIRE-VA Pilot Study

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Current Statistics in the US & Veterans

- Over 65% of Americans are overweight or obese
- Over 70% of veterans are overweight or obese
- Rates of obesity among active-duty military have doubled in the past 5 years alone
Consequences of Obesity

- Increased risk for morbidity, disability, and overall mortality
- Decreased quality of life & psychosocial functioning
- Increased depression, anxiety, & chronic pain

Therefore, creating effective weight loss treatment programs for veterans is a high priority.
Addressing Obesity in Veterans

• A stepped-care model for treatment (*MOVE!*):
  • Step 1 = phone self-management
  • Step 2 = center-based group programs
  • Step 3 = medication
  • Step 4 = intensive in/out patient
  • Step 5 = surgery

• Challenges to date:
  – Low enrollment overall
    • Distance to centers
  – Focus on the center-based programs
    • Minimal weight loss
    • Regain across time

Is there an alternative approach?
Small Changes as a Big Idea

• 2003: Paradigm shift
  – Efforts should be focused on promoting small lifestyle changes
  – Not on producing weight loss or preventing obesity but on weight gain prevention

(Hill et al, 2003)

• 2008: First small change study to show weight loss
  – Aspiring for Lifelong Health (ASPIRE)

(Lutes et al, 2008)

• 2009: Report of the Joint task force
  – Increasing physical activity
  – Decreasing total energy intake
  – Preventing or reducing excessive weight gain

(Hill, 2009)
“Given the lack of success with other approaches to lifestyle changes, the small-changes approach deserves serious attention.”
THE PRESENT STUDY

• Examine the impact of a 12-week small change program delivered over the phone in a group of veterans: ASPIRE-VA

• 2 main goals:
  1. Would veterans want to participate in a phone-based treatment program?
  2. Would veterans lose weight with a small change program?
The ASPIRE Small Change Approach

- Small changes in diet
- Modest increases in physical activity
- Baseline-driven goal setting by participant

Gradual, Sustainable Weight Loss
Example of a Small Change

2 Cokes a day
155 calories x 2 = 310

Their Small Change is to decrease to 1 coke per day

155 calories saved per day

1085 calories saved per week

56420 calories saved per year/
/3500 calories (1 pound)

-16 Pounds in 1 year!
Intervention

– Weekly phone-call appointments
  • 20-30 minutes
  • Participants wore pedometers
  • Participants monitored food using the stoplight colors

– ASPIRE small change approach:
  • Check in: steps and colors
    – What went well? What was a challenge?
    – Material
    – Goal setting for the upcoming week
Weeks 2-4: Phone calls

Weeks 2-4: Phone calls

Week 5: On Site Assessment

Week 6-11: Phone calls

Week 12: On Site Post Assessment

1 Ineligible

MOVE! Program

Interested in ASPIRE-VA?

n = 29

On Site Baseline Assessment

n = 15

n = 14
Participants

- Recruited from the Ann Arbor VA
  - Services more than 158,000 Veterans from 15 counties

<table>
<thead>
<tr>
<th>Statistic</th>
<th>Value</th>
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<tbody>
<tr>
<td>Mean Age</td>
<td>53.8</td>
</tr>
<tr>
<td>BMI</td>
<td>37.0 (4.2)</td>
</tr>
<tr>
<td>% Male</td>
<td>64%</td>
</tr>
<tr>
<td>% Racial Minority</td>
<td>14%</td>
</tr>
<tr>
<td># of Chronic Conditions</td>
<td>3.8</td>
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</table>
Measures & Analyses

• All outcomes measured at 3 time points
  – Baseline
  – 5 weeks
  – 12 weeks

• Intention-to-treat analyses
  – Baseline & 12 week measures
    • Missing data imputed from most recent data
  – Paired t-tests for differences
Primary & Secondary Outcomes

• **Primary Outcome**
  – Weight (kg) change from baseline

• **Secondary Outcomes**
  – BMI
  – Waist Circumference (inches)
Psychosocial Outcomes

• SF-12 Health Status
  – Physical Component Scale (PCS)
  – Mental Component Scale (MCS)

• Life Satisfaction Measure
  – 5 items
Behavioral Outcomes

• **Average daily step count**
  - Average from last 7 days of wearing pedometer
    - Omron HJ-720IT
    - Stores 42 days of detailed time-stamped step count data
    - Upload data to PC

• **Nutrition Intake**
  - NHIS Food and Nutrition items from the Cancer supplement
  - Fruit & Vegetables (servings/day)¹,²
  - Fiber (grams/day)²

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¹ 1992 USDA Pyramid servings, excluding French fries
² NCI scoring instructions
Primary Outcome: Weight

Graph showing weight (kg) from 0 Months to 3 months, with a downward trend indicating weight loss.
# Secondary Outcomes

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<th>Post-Test Mean</th>
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<td>+2.4</td>
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<td>41.1</td>
<td>42.3</td>
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<td><strong>Life Satisfaction</strong></td>
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<td><strong>Daily Step Count</strong></td>
<td>4471</td>
<td>5257</td>
<td>+786</td>
<td>.25</td>
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<td><strong>Fruits &amp; Vegetables (servings/day)</strong></td>
<td>3.4</td>
<td>5.6</td>
<td>+2.2</td>
<td>.03</td>
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<tr>
<td><strong>Fiber Intake (grams/day)</strong></td>
<td>18.7</td>
<td>22.9</td>
<td>+4.1</td>
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Additional Results

• 1.7 call attempts for each phone call
• Average length of call 29 minutes
• Feedback from a focus group:
  – 93% satisfaction rating with program
  – 100% would refer program to fellow Veterans
  – Main critique: no follow-up program
Discussion

- Results of the ASPIRE-VA pilot study showed that:
  - Veterans were willing to participate in a phone-based weight loss treatment program
  - Veterans lost weight using a small change approach
  - Veterans also showed significant BMI and waist circumference reductions, improved nutrition and life satisfaction
Future Directions

• Participants will be followed up at 6 & 12 months

• Next:
  – ASPIRE-VA Phone
  – ASPIRE-VA Center-based
    vs.
  – MOVE! Level 1 & 2

• Looking at 12 month outcomes
  – With follow-up program
Thank You!

FUNDING ACKNOWLEDGEMENTS

• Department of Veterans Affairs, Health Services Research & Development Services/Diabetes QUERI