Facebook was a useful recruitment strategy for a randomized clinical trial of a lifestyle approach to reverse Metabolic Syndrome

Barbara Lohse, PhD, RD, CDN; Kathrynn Faulring, MPH, CHES; Claire Cook, MPH
Wegmans School of Health and Nutrition, Rochester Institute of Technology

Background

Enhanced Lifestyles for Metabolic Syndrome (ELM) is a multi-site, randomized controlled clinical trial with the aim of reversing metabolic syndrome (MetS). MetS is diagnosed when at least 3 of the following 5 risk factors are present: High blood pressure, high blood sugar, high triglycerides, a large waistline, and low HDL cholesterol. MetS treatments suggest that lifestyle changes can reverse the diagnosis, however the best specific protocol has not been established. Herein, over a period of 2 years, biometrical and behavioral outcomes from an intensive, group-based intervention will be compared to those from an enhanced standard of care approach in persons with MetS diagnosis. The selected medical requirements of the sample prompt attention to non-traditional recruitment methods.

Results

Calculation (n)

Ad Reach
Ad Clicks
7.3
422 / 1,160
3.5
# Phone screen eligible
1,049 (90%)
36.4
41.2
708.57
6.22
21 / 51
352 (1%)
90 (8%)
85 / 1,160
0.61
85 / 422
27.0
85 / 114
21 (2%)
27,836 (84%)
Ratio Calculation (n)

# Unique consenters
51 / 85
33.74

Ratio Definition

Images.

Methodology

A Facebook ad campaign, 14 days in length, was developed utilizing the ELM inclusion and exclusion criteria and Facebook guidelines. The geographic region for the ad was a 20 mile radius around Henrietta, NY. The ad was posted in English. The Facebook ad utilized 11 key phrases to drive page impressions:

• Cholesterol
• Stress management
• Obesityhelp.com
• About stress management
• Body fat percentage
• American Society of Metabolic and Bariatric Surgery
• Acceleration

The Facebook ad included a link to a survey using the Qualtrics platform (Provo, UT) for persons interested in learning more. Respondents to the survey were siphoned from the survey as soon as they failed an eligibility criterion. Eligible persons who indicated further study interest were considered Phone Screen Eligible. Those who then provided details and consented to be contacted for subsequent phone screening were deemed Phone Screen Ready. The study was reviewed and approved by the Human Subjects Review Board of the Rochester Institute of Technology.

The purpose of this project was to investigate the efficiency and cost effectiveness of a Facebook (FB) ad campaign to recruit persons with MetS to participate in a telephone screening protocol to examine eligibility for the ELM study.

Methodology (continued)

Survey data were captured in the Qualtrics platform. Phone screen eligibility and phone screen readiness frequencies were compared to Facebook campaign performance metrics of reach, impressions, and clicks as well as the demographics and costing reports. Results were analyzed and framed using the CHERRIES (Checklist for Reporting Results of Internet E-Surveys) System.

Definitions:

• Market: an estimate of the audience size eligible to see the ad, based on targeting criteria
• Reach: the number of unique Facebook accounts where ad appears over the ad’s lifetime
• Impressions: total number of times the content is displayed on a Facebook page
• Link clicks: number of times the Facebook ad is clicked

Results

The Facebook ad as designed provided a potential MARKET audience of 690,000. The ad appeared 59,449 times with a REACH to 33,243 unique Facebook accounts; ad appearance is also termed IMPRESSIONS. 1,160 unique accounts CLICKED on the ad. CLICK costs were temporally modified based on observed and projected Facebook activity to optimize campaign performance. Ad performance is detailed in Figure 1. Facebook metrics revealed that most respondents were over 45 years of age and female.

Figure 1. Progression of Facebook Ad Respondents (N)

Table 1. Demographic Information of Responders

<table>
<thead>
<tr>
<th>Sex</th>
<th>Ad Reach</th>
<th>Ad Clicks</th>
</tr>
</thead>
<tbody>
<tr>
<td>Male</td>
<td>5,055 (91%)</td>
<td>96 (8%)</td>
</tr>
<tr>
<td>Female</td>
<td>27,836 (84%)</td>
<td>1,049 (97%)</td>
</tr>
<tr>
<td>Not Reported</td>
<td>352 (1%)</td>
<td>21 (2%)</td>
</tr>
</tbody>
</table>

Table 2. Cost Effectiveness of Facebook Ad Campaign

<table>
<thead>
<tr>
<th>Metric</th>
<th>Cost / Click</th>
<th>Cost / Phone Screen Eligible</th>
<th>Cost / Phone Screen Ready</th>
<th>Cost / ELM Phone Screen Completer</th>
</tr>
</thead>
<tbody>
<tr>
<td>Total Cost</td>
<td>708.57</td>
<td>20.1</td>
<td>74.6</td>
<td>41.2</td>
</tr>
<tr>
<td>Cost / Click</td>
<td>0.61</td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>Cost / Phone Screen Eligible</td>
<td>6.22</td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>Cost / Phone Screen Ready</td>
<td>8.34</td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>Cost / ELM Phone Screen Completer</td>
<td>13.89</td>
<td></td>
<td></td>
<td></td>
</tr>
</tbody>
</table>

Table 3. Phone Screen Ready Recruitment Rates

<table>
<thead>
<tr>
<th>Phone Screen Ready rate based on:</th>
<th>Calculation (n) %</th>
</tr>
</thead>
<tbody>
<tr>
<td># Unique Ad Clicks</td>
<td>85 / 1,160, 7.3</td>
</tr>
<tr>
<td># Phone Screen Interested</td>
<td>85 / 422, 20.1</td>
</tr>
<tr>
<td># Phone Screen Ready</td>
<td>85 / 114, 74.6</td>
</tr>
<tr>
<td># Phone Screen Completers</td>
<td>51 / 85, 60</td>
</tr>
<tr>
<td># Eligible for ELM Baseline Screening</td>
<td>21 / 51, 41.2</td>
</tr>
</tbody>
</table>

Table 4. CHERRIES Response Rate Definitions and Outcomes

<table>
<thead>
<tr>
<th>Rates</th>
<th>Ratio Definition</th>
<th>Ratio Calculation (n) %</th>
</tr>
</thead>
<tbody>
<tr>
<td>View</td>
<td># Unique clicks</td>
<td>1,160 / 33,243, 3.5</td>
</tr>
<tr>
<td></td>
<td>Qualtrics survey</td>
<td>visits</td>
</tr>
<tr>
<td>Participation</td>
<td># Unique clicks</td>
<td>422 / 1,160, 36.4</td>
</tr>
<tr>
<td></td>
<td>impressions</td>
<td></td>
</tr>
<tr>
<td>Completion</td>
<td># Phone screen</td>
<td>114 / 422, 27.0</td>
</tr>
<tr>
<td></td>
<td>eligible</td>
<td></td>
</tr>
<tr>
<td></td>
<td># Consensores</td>
<td></td>
</tr>
</tbody>
</table>

Conclusion

Facebook was a cost-effective, efficient strategy to recruit eligible participants to a randomized MetS clinical trial with demanding inclusion and exclusion criteria. Campaign keywords, temporal and geographic control, which enhanced Reach to the target sample in a short time frame, are critical moderators of this recruitment strategy.

Funding

This study was supported by funding from the William G. McGowan Charitable Fund. The authors were not in the design or conduct of the study, the decision to publish the results, or the preparation of the paper. Additional funding provided by the University of Rochester Medical Center.

Reference


Images. Facebook ad, map displaying 20 mile FB ad target area around Henrietta, NY.