


Health Marketing for the Massachusetts Childhood Obesity Research Demonstration Study: A Case Study

Shaniece Criss, ScD, MPH, MPA¹ 
Rachel E. Blaine, DSc, MPH, RD²
Megan Palamé, MA³
Meghan Perkins, MPH⁴
Kirsten Davison, PhD⁵
Jo-Ann Kwass, MS⁶
Elsie M. Taveras, MD, MPH⁴
The MA-CORD Study Team

Introduction. *This case study describes the Massachusetts Childhood Obesity Research Demonstration Study (MA-CORD) health marketing campaign, examines the strategies used in such campaigns, and offers lessons learned to improve health marketing for future interventions. MA-CORD Health Marketing Components and Implementation. The three main components were an outdoor printed advertisement and texting campaign, social media with a focus on Facebook, and the Summer Passport Program, an event-based initiative in parks for children. The advertisements consisted of billboards, bus advertisements, and handouts. The text messaging component, which required families to actively text a keyword to join, had a low opt-in rate. Facebook page “likes” increased from 1,024 to 1,453 in New Bedford and from 175 to 1,091 in Fitchburg. Fitchburg received technical assistance and paid for ads on Facebook. The Summer Passport participation in parks ranged from 120 to 875 children with participation in the free park lunch program doubling in Fitchburg. Discussion. Key lessons learned are engage communication experts from each community at the beginning of the project, use text messaging components with in-person staff onsite to assist participants in the opt-in process, build momentum for a Facebook presence through purchasing Facebook advertisements, and partner with local park departments for programming.*

Keywords: *media advocacy; advocacy; community intervention; health promotion*

► INTRODUCTION

Childhood obesity remains a significant and persistent problem in communities across the United States. Although there is some evidence that rates of obesity may be slowing, nearly a third of school-aged children in America remain overweight or obese and low-income

¹Furman University, Greenville, SC, USA

²California State University, Long Beach, CA, USA

³MORE Advertising, Inc., Watertown, MA, USA

⁴Massachusetts General Hospital, Boston, MA, USA

⁵Harvard T. H. Chan School of Public Health, Boston, MA, USA

⁶Massachusetts Department of Public Health, Boston, MA, USA

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children of color disproportionately experience obesity and its related health consequences (Flores & Lin, 2013; Ogden, Carroll, Fryar, & Flegal, 2015; Ogden, Carroll, Kit, & Flegal, 2014). A systematic review found declining incidences of childhood obesity with age, so prevention efforts should target younger children (Cheung, Cunningham, Narayan, & Kramer, 2016). Since the problem of obesity is multifaceted due to a confluence of community, family, and individual influences, numerous approaches to engage families in health promotion are warranted (Davison, Lawson, & Coatsworth, 2012). Community-level health mass media campaigns have been shown to both raise awareness of existing health problems and direct community members to available support and resources (Wakefield, Loken, & Hornik, 2010).

Past health marketing campaigns related to obesity prevention have ranged in scope from passive signage offering health messages (billboards, bus signs), to platforms that invite public engagement through social media, to community activities (Boles, Adams, Gredler, & Manhas, 2014; Gase, Montes, Robles, Tyree, & Kuo, 2016). Text messaging campaigns have often been administered in clinical settings to encourage behavior change or increase compliance with medical advice (e.g., asthma treatment, medication adherence; Price et al., 2015; Wei, Hollin, & Kachnowski, 2011), although high drop-off rates have been reported (Poorman, Gazmararian, Parker, Yang, & Elon, 2015). Despite these challenges, text messaging campaigns are encouraged as a strategy to engage parents in childhood obesity prevention by providing educational messaging and connecting them to local resources (Gittelsohn et al., 2014; Price et al., 2015). In addition, social marketing has been used to promote walking in neighborhoods in underserved communities (Wilson et al., 2013) and walking among adolescents (Thompson et al., 2016), which could translate into increased play for children in parks. If successful, such campaigns may offer an important link to existing services and activities administered across communities in worksites; health centers; the Special Supplemental Nutrition Program for Women, Infants, and Children (WIC); schools; and child care centers.

The studies above highlight the power of health marketing as the main focus of the intervention. This article describes the health marketing efforts of the Massachusetts Childhood Obesity Research Demonstration Study (MA-CORD). MA-CORD was a multilevel and multisector community intervention to prevent and reduce obesity among low-income children, aged 2 to 12 years in two communities in Massachusetts. The team used evidence-based interventions for the sectors of health care, early care, education, WIC, schools, after-school programs,

and the broader community. Taveras et al. (2015) provided a detailed description of intervention design, and Davison et al. (2015) described the evaluation plan and baseline results. The overall evaluation of MA-CORD will be measured by children's body mass index, lifestyle behaviors, obesity-related care, and quality of life; therefore, our description of our health marketing efforts are one arm of a holistic intervention. Our work fulfills a gap by incorporating evidence-based health marketing practices within a multilevel and multisector intervention, and it provides a detailed explanation of health marketing components that are helpful to practitioners and policy makers.

The Centers for Disease Control and Prevention (CDC) defines health marketing as "creating, communicating, and delivering health information and interventions using consumer-centered and science-based strategies to protect and promote the health of diverse populations" (Bernhardt, 2006). The theoretical underpinnings consist of social marketing with health communications outreach strategies (CDC, 2011). Specifically, we partnered evidence-based behavioral research with the traditional marketing techniques of defining the market, segmenting the market, and analyzing each segment to produce targeted materials (Wirtz & Lovelock, 2016). In order to explain this process, the aims of this case study are to describe the MA-CORD health marketing strategies in the two communities; critically examine the strategies of advertising, social media, and event-based initiatives; and offer lessons learned to improve health marketing for future interventions.

MA-CORD Overview

The CDC funded MA-CORD as part of a comprehensive approach in several U.S. cities to address childhood obesity (Dooyema, Belay, Foltz, Williams, & Blanck, 2013). Our target communities were Fitchburg with 40,514 residents and New Bedford with 95,502 residents (U.S. Census Bureau, 2015). Across both communities, non-Hispanic White residents are the majority population (68% to 76% of residents) and Hispanics (9% to 21%) were the largest minority group (U.S. Census Bureau, 2015). Both communities had a higher percentage of low-income residents (U.S. Census Bureau, 2010) and children classified as overweight or obese, compared to the statewide average (Massachusetts Department of Public Health [MDPH], 2010).

MA-CORD Communication Team

The objective of the communication efforts was to promote awareness of the MA-CORD goals for children

ages 2 to 12 years (also known as the *5 Ways to Grow Healthy*). The goals were as follows:

1. Switch from sugary drinks (like soda, sports, and fruit drinks) to water.
2. Watch no more than 2 hours of screen time per day (includes TV, smartphones, and handheld video games).
3. Get at least 1 hour of physical activity (including active play) per day.
4. Replace sugary, salty, fried, and fast food with fruits and vegetables.
5. Sleep at least 11 hours per day (2-5 years old). Sleep at least 10 hours per day (6-12 years old).

The MA-CORD communication team consisted of representatives from the study team and the *Mass in Motion* community partnerships. The *Mass in Motion* Municipal Wellness partnerships, *Mass in Motion New Bedford* in New Bedford and *FUN 'n FITchburg* in Fitchburg, were central to the implementation of the community communication efforts. *FUN 'n FITchburg* was housed within the Montachusett Opportunity Council (MOC) and coordinated by that agency's staff with strong links to city government. One of MOC's programs was the Peer Leadership Program for high school students, and MA-CORD provided a stipend for the peer leaders to support community intervention activities.

Initially, the communication efforts consisted of developing posters, booklets, banners, and coloring books displayed in school, after-school, health care, WIC, and community settings, as well as promotional items including stickers, cinch backpacks, and water bottles. In addition, the communication team led a media competition within the school setting to increase awareness of the goals (Criss, Cheung, et al., 2016; Criss, Tran, et al., 2016). To expand the scope of the communication efforts in the community, the MDPH contracted with a full-service advertising agency with experience in cause marketing. The advertising agency reported to MDPH and the MA-CORD communication team. The communication team worked together from January 2013 through September 2014.

► HEALTH MARKETING COMPONENTS AND IMPLEMENTATION

In MA-CORD, health marketing focused on three main activities to increase engagement with the community: (1) an outdoor advertisement and texting campaign, (2) social media with a focus on Facebook,

and (3) an event-based initiative in parks for children called the Summer Passport Program. The health marketing activities included materials in English and Spanish. Table 1 shows the MA-CORD Health Marketing Activity Process Data.

“How to Grow Healthy Kids” Outdoor Advertisement and Texting Campaign

The campaign consisted of outdoor advertisements called “How to Grow Healthy Kids” about MA-CORD (known as *Mass in Motion Kids* in the community), which included a call-to-action for parents/guardians to join a free texting service to receive weekly tips on healthy behaviors and respond to self-monitoring questions. The campaign aimed to target parents/guardians in the community with the objectives of increasing (1) efficacy on how to help kids grow healthy, (2) intention to help their kids grow healthy, and (3) awareness of MA-CORD. The advertisement and texting campaign ran August to November 2013.

Billboards. The MA-CORD billboards featured the phrase, “How to Grow Healthy Kids,” with diverse cartoon children demonstrating the campaign goals and a keyword to text for more information. Fitchburg had six “30-sheet” billboards (4 in English and 2 in Spanish) with a corresponding handout and a press release. New Bedford had six “30 sheet” billboards (three in English and three in Spanish), and the campaign was publicized in a press release, on a local public access television show, and through the *Mass in Motion New Bedford's* website and Facebook page. In addition, New Bedford had a highly used transit bus system; therefore, the study team purchased 13 exterior bus ads, 90 interior bus ads, and three bus shelters with a third of all transit ads appearing in Spanish. The total media placement cost of the billboards in both communities and the transit ads in New Bedford was \$30,000. In both communities, each “30-sheet” billboard had an estimated 40,000 to 100,000 impressions per week. Each city also had handouts (2,250 English and 650 Spanish) distributed in the community (see Figure 1).

Texting. The outdoor advertisements included a texting component to reinforce the five MA-CORD behavioral goals. The intent was to allow parents to assess their child's behavior and receive a tip for improving that behavior. The messages included yes/no questions regarding attitude, intention, and behaviors, and outbound tips on health behaviors. Participants received three to four messages per week, including a weekly message about a fruit/veggie special from a local grocery

TABLE 1
MA-CORD Health Marketing Activity Process Data

| <i>Activity</i> | <i>Location</i> | <i>Process Data</i> |
|---|-----------------|--|
| “How to Grow Healthy Kids” outdoor printed advertisement and texting campaign | Fitchburg | <ul style="list-style-type: none"> • 6 Billboards (estimated 40,000-100,000 impressions per week for each billboard, summer and fall 2013) • 2,250 English and 650 Spanish handouts distributed in the community • 1 Press release • Text message (English): 29 opt-ins, 9 opt-outs, (Spanish): 0 opt-ins • Facebook page |
| | New Bedford | <ul style="list-style-type: none"> • 6 Billboards (estimated 40,000-100,000 impressions per week for each billboard, summer and fall 2013) • 13 Exterior bus ads • 90 Interior bus ads • 3 Bus shelters • 2,250 English and 650 Spanish handouts distributed in the community • 1 Press release • Publicity on a local public access television show • <i>Mass in Motion New Bedford</i> website • Facebook page • Text message (English): 44 opt-ins, 12 opt-outs, (Spanish): 7 opt-ins, 0 opt-outs |
| Social media: Facebook | Fitchburg | <ul style="list-style-type: none"> • Ran 2 weeks of advertisements on Facebook • Increased “Likes” from 175 to 1,091 on Facebook |
| | New Bedford | <ul style="list-style-type: none"> • Increased “Likes” from 1,025 to 1,453 on Facebook |
| Summer passport program | Fitchburg | <ul style="list-style-type: none"> • 443 Children used a summer passport in high-traffic parks (2013) • 120 Children used a summer passport in low-traffic parks (2014) |
| | New Bedford | <ul style="list-style-type: none"> • 875 Children used a summer passport in parks (2013) • 860 Children used a summer passport in parks (2014) |

NOTE: MA-CORD = Massachusetts Childhood Obesity Research Demonstration.

store or information on a local event. The text messages were developed by the MA-CORD team, based on the MA-CORD goals, and designed to be community-based, friendly, cost-conscious, and encouraging. The study team contracted with a mobile technology vendor that offers a Web-based platform to support text messaging programs.

Parents learned about the texting option through the billboards and handouts. For instance, the advertisements included the subheadline “Text KEYWORD to 877-877 for Tips on Raising Healthy Kids.” The opt-in KEYWORD varied by city and by channel (i.e., billboard, handout, transit). Once a participant opted in, the first text message explained the campaign, asked if the respondent had children 12 or younger to find out if the target audience was reached, and gave them instructions on how to opt out. The message also explained that message/data rates may apply based on their phone service. Messages were scheduled after

first opt-in for up to 8 weeks. Messages were spaced out by 2 to 4 days unless there was a direct response to a question. Texts were available in English and Spanish and limited to 160 characters including spaces. Table 2 shows the MA-CORD health marketing text messaging examples.

In addition, local grocery store specials for fruits and vegetable were included in texts once a week (e.g., “2 for 1 blueberries at Stop & Shop this week”), and questions about attitudes, intentions, and behaviors were collected and de-identified. Using the text messaging service, the MA-CORD team assessed how many people opted in, how they opted in, and if they opted out.

Social Media: Facebook

The MA-CORD *Mass in Motion* partnerships in Fitchburg and New Bedford used social media, specifically Facebook, to increase visibility of their programs,

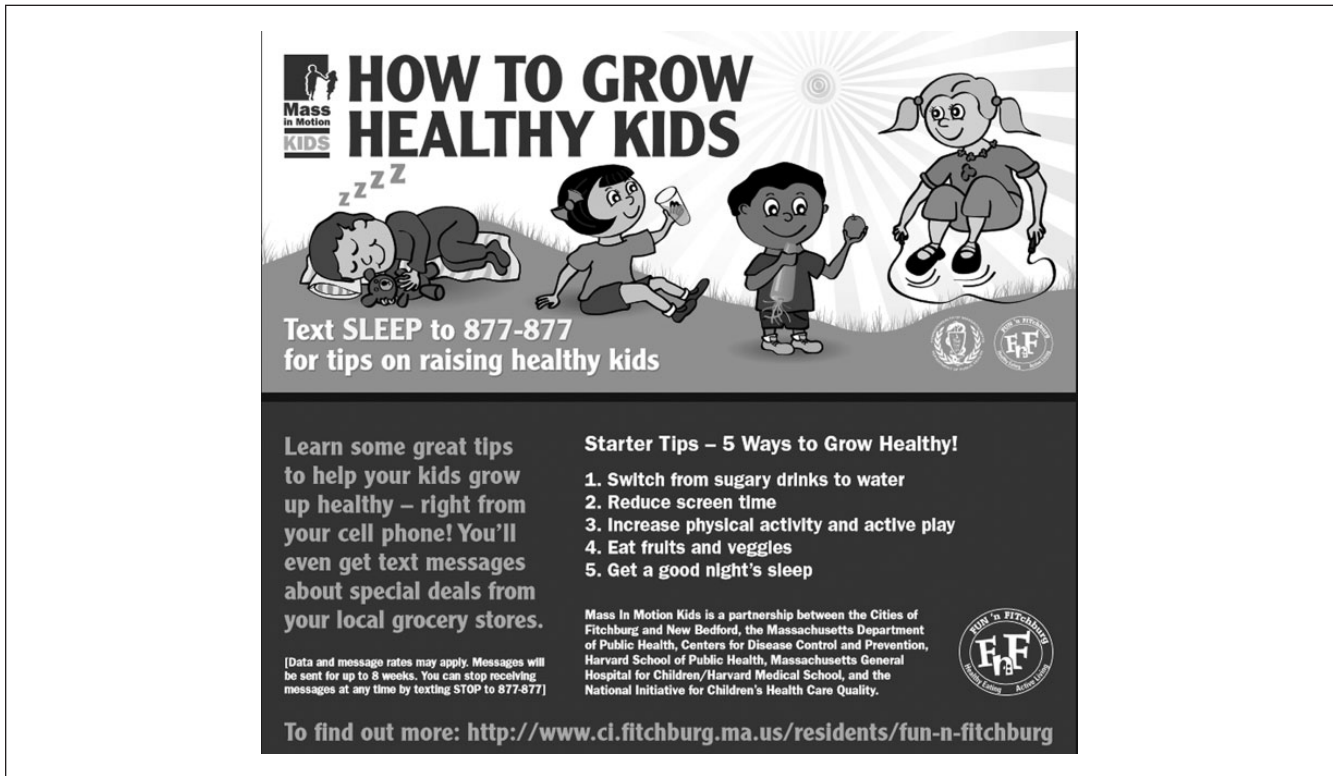


FIGURE 1 “How to Grow Healthy Kids” Handout

TABLE 2
MA-CORD Health Marketing Text Messaging Examples

- Here’s our 1st tip. Water is the best thing for your kids to drink. Do you try to get your kids to drink water instead of sugary drinks? Text Y or N
 - [If text Y.] Thanks! We’ll send a tip soon that might make it easier
 - [If text N.] Thanks! We’ll send a tip soon in case you’d like to try.
- It’s hard to get kids to choose water over sugary drinks like soda and fruit drinks. Make it seem more fun by adding lemon or berries to sparkling H₂O.
- Snack time! Instead of chips or candy try cut up fruit, celery, carrots, or whole-grain crackers. They’ll still get that crunch but in a healthier way.
- Sleeping in a quiet room helps their bodies and brains rest. Remove any TVs from their bedroom to make sleeping easier.

promote local events and activities, and share news articles. Each community coalition managed their Facebook page. At the start of the communication efforts, New Bedford’s Facebook page (<https://www.facebook.com/massinmotionnewbedford>) had 1,025 likes and by the end of the health marketing efforts had 1,453 likes. Fitchburg’s page (<https://www.facebook.com/funnfitchburg>) had 175 likes at the start and reached 1,091 by the end of the health marketing efforts.

The advertising agency provided social media technical assistance to *FUN ‘n FITchburg*. First, the advertising agency trained six MOC peer leaders on how to create and moderate the social media presence for MA-CORD. The training consisted of two sessions approximately 2.5 hours each that covered the topics of social media management (e.g., Hootsuite), using Facebook metrics for evaluation and improvement, and creating videos with a purpose through digital

storytelling. MOC presented a digital storytelling video during a local municipal meeting to advocate for Complete Streets in the community and then posted it on their Facebook page. The Complete Streets concept encourages sidewalk and bike lane improvements to increase opportunities for residents to be active. The advertising agency also provided a presentation at a well-attended community partnership meeting with the mayor and other leaders about engaging community members with social media efforts. *Mass in Motion New Bedford* did not request technical assistance because it had already built a social media presence.

FUN 'n FITchburg had a goal to increase the following on their Facebook page quickly and efficiently; therefore, the advertising agency designed Facebook ads to encourage Fitchburg residents to like the Facebook page. The campaign message, *Let's get Fun 'n FIT in 2014*, asked people to follow the page to stay updated on local events and activities on healthy eating and active living. The campaign was paired with a gift card contest where three people who "liked" the page were randomly selected to receive a \$20 gift card to a local grocery store. The ads ran from December 11, 2013, to December 24, 2013, and January 24, 2014, to January 31, 2014, and cost \$215 total. From December 2013 to January 2014, the Facebook page likes increased from under 200 to almost 800 likes, with spikes during the paid advertisement period. During the first paid period, 377 new people liked the page, and 869 unique users engaged with the page. During the second, shorter paid period, 230 new people liked the page, and 553 unique users engaged with the page. The Facebook page had 1,091 likes at the end of the health marketing period.

In addition, *FUN 'n FITchburg* paid for online and print ads in the local news outlet, *Fitchburg Sentinel*, to promote their Facebook page. The ads ran for 1 month to correspond with the Facebook ads, which included online banner impressions and two 2 × 3 print ads in the newspaper. The services cost \$700. All the newspaper ads directed readers to like the Facebook page. The Facebook metrics indicated that only a few likes came from outside sources.

Summer Passport Program

In summer 2013 and 2014, MA-CORD worked with the Fitchburg and New Bedford partnerships and the Parks and Recreation Departments to implement the Summer Passport Program. Children in preschool, elementary, and middle school were invited to the local parks and completed activities to earn prizes that

exhibited the MA-CORD goals, known as the *5 Ways to Grow Healthy*. In 2013, prizes were wristbands that incorporated healthy messaging such as Eat Fruits and Veggies, Move More, Cut Screen Time, Drink Water, and Get a Good Night's Sleep, as well as the overall brand of *Mass in Motion Kids*. In 2014, the prizes were water bottles and temporary tattoos in Fitchburg, and sunglasses and wristbands in New Bedford. Passports were printed in English and Spanish and were available online in Portuguese.

The *My Fitchburg Parks Days Passport* (see Figure 2) was created in close collaboration with Fitchburg's Parks and Recreation program and *FUN 'n FITchburg's* Parks Days. Parks Days were a series of events throughout the summer that promoted various park locations and activities, encouraged healthy eating and drinking habits, and provided free lunches through the U.S. Department of Agriculture's Summer Food Service Program. Fliers were distributed throughout the community (including WIC and health care) to encourage children and their families to attend Parks Days. In 2013, Park Days were hosted at high-traffic parks and had 443 children use a Summer Passport. In 2014, Park Days were hosted at low-traffic parks to increase visibility and had 120 children use a Summer Passport, which nearly doubled the number of children that typically attended those parks for the summer food program.

After the passport program, community partnership members realized that community members could benefit from a resource to identify parks in the area. The MA-CORD communication team created a Fitchburg Parks and Playgrounds Map, which featured a colorful, printed map that included both active and passive parks. In October 2014, 2,000 copies of the map were distributed at events and at the Parks and Recreation office.

The *My New Bedford Summer Passport* was developed with the New Bedford Parks, Recreation and Beaches Department's Play 'n the Parks and Summer Food Service Program sites. Each site is led by a group of trained youth. The Department's Director provided the youth with a training on the purpose of the program and encouraged the youth to share the *5 Ways to Grow Healthy* with children. These activities encouraged children to drink water, eat fruits and vegetables, play outside, and have fun. Any child who attended a site could work on completing their passport. Passports were made available throughout the community (including WIC and health care) to encourage children and their families to attend the Play 'n the Parks program. In 2013, 875 children used a passport, and 860 used a passport in 2014.

MY FITCHBURG Parks Days Passport

PARKS DAYS ATTENDED



Color the circles in for each Parks Day

Get Up, Get Out, and Let's Move!

.....
Last Name

.....
First Name

.....
Birthday

.....
I got my parks passport at

1. Visit any **Parks Day** from 11:30 a.m. – 4:00 p.m. and participate in free family activities. Free lunch is served from 11:30 a.m. – 12:00 p.m.
2. Pick up a prize for attending each Parks Day!
3. You'll also be entered in a raffle.



FOR MORE INFORMATION Visit a Parks Days event, go to <http://www.ci.fitchburg.ma.us>, or check out Fun 'n FITchburg on Facebook!

**1 KICK-OFF AT CIVICS DAYS!
SUNDAY, JUNE 29
RIVERFRONT PARK**

I've been to this park before Y N

STAMP HERE

**5 WEDNESDAY, AUGUST 6
SALEM STREET PARK**

I've been to this park before Y N

STAMP HERE

**2 WEDNESDAY, JULY 16
CROCKER PARK**

I've been to this park before Y N

STAMP HERE

**6 WEDNESDAY, AUGUST 13
COGGSHALL PARK**

I've been to this park before Y N

STAMP HERE

**3 WEDNESDAY, JULY 23
GREEN STREET PARK**

I've been to this park before Y N

STAMP HERE

**4 WEDNESDAY, JULY 30
PHILIPS PARK**

I've been to this park before Y N

STAMP HERE

**MASS IN MOTION KIDS
5 WAYS TO GROW HEALTHY**

- 1 **Drink Water**
- 2 **Cut Screen Time**
- 3 **Move More**
- 4 **Eat Fruits & Veggies**
- 5 **Get a Good Night's Sleep**

FIGURE 2 Parks Days Passport

► DISCUSSION

The health marketing component of MA-CORD had the complex task of communicating five behavioral messages: (1) switch from sugary drinks to water, (2) reduce screen time, (3) increase moderate and vigorous physical activity, (4) replace calorically dense foods with fruits and vegetables, and (5) increase sleep duration. The communications team used diverse, interactive health marketing activities to engage the community in various capacities. The outdoor printed advertisements were in high-visibility areas, but the text messaging component had low uptake. One community's Facebook page had a substantial increase in "likes" based on technical assistance and paid advertisements on the social media site. The parks were highlighted through health marketing of the Summer Passport Program, which had activities that focused on the behavioral goals.

Many health marketing campaigns focus on one behavioral goal and have shown positive effects in addressing obesity. A literature review examining health promotion campaigns and mass media found that programs promoting physical activity increased knowledge and improved beliefs about its advantages (Quattrin, Filiputti, & Brusafarro, 2015). In the VERB campaign, the majority of children 9 to 13 years of age had campaign awareness and segments of the group increased free-time physical activity (Huhman, Bauman, & Bowles, 2008; Huhman et al., 2005). The Los Angeles County Department of Public Health used paid outdoor media on transit, billboards, and social media to promote reducing sugar-sweetened beverages (SSBs), and Barragan et al. (2014) suggested their health marketing efforts had the potential to increase knowledge, support favorable recognition of health messages, and increase self-reported intention to reduce SSB consumption. Boles et al. (2014) found that 80% of people who were aware of the SSB media campaign in Multnomah County (Portland) said they intended to reduce SSBs they offered to a child as a result of the campaign ads. Since MA-CORD focused on five goals, the health marketing efforts had to include interactive components in order to reinforce the messaging.

Text messaging, as a component of clinic-initiated in-person intervention activities, has been found effective in reducing behaviors related to childhood obesity. The Healthy Habits, Happy Homes intervention, which included home-based motivation coaching, educational materials, and text messages, found that intervention participants had increased sleep, less screen time, and decreased body mass index (Haines et al., 2013). Another intervention focused on computerized

decision support tools in the electronic health records and included a component of health coaches texting messages to provide behavior change support (Taveras et al., 2013). There was a high level of engagement with the text messaging intervention with nearly two thirds responding to most of the questions from the text messages (Price et al., 2015). It is possible that the text message uptake in MA-CORD was low because it was more of a "cold call" for community involvement versus a more targeted request for a specific subgroup to be recruited to participate in the text messaging component. Since submitting a cellular number to an unknown source may be suspicious for some people, community members may need a trusted source, or person, to explain the details of the service and walk them through the opt-in directions. Also, there should have been an indication that it was free on the billboards and transit ads with fine print that says that message/data rates may apply based on their phone service.

Close proximity to safe play areas (Tappe, Glanz, Sallis, Zhou, & Saelens, 2013) along with training on outreach and marketing as components of park initiatives (Cohen et al., 2013) can increase children's physical activity. Therefore, the Summer Passport Program was designed to encourage use of neighborhood resources for physical activity and to promote the other MA-CORD behavioral goals. Partnerships with existing park programs served to bolster the intervention messages. In addition, the Summer Passport Program increased community participation in physical activity and attendance of summer food lunch programs, which could reduce food insecurity and childhood obesity. It can be a model for partnering across sectors to increase awareness and offer a mechanism for change for more people in the community.

Lessons Learned

The MA-CORD study team benefited from the specialized services provided by the contracted advertising agency. Given the complexity of MA-CORD as a multi-sector, multisite project, engaging advertising expertise in the design stage of the project would have allowed for the development a comprehensive communication plan that incorporated the needs of each sector. In addition, the efforts would have benefitted from having an in-house communication lead from each community that was dedicated to the project. This would enable the advertising agency to have a direct communication liaison to the community. Expertise in each community can increase community capacity and accountability.

The study team would suggest the use of text messaging components with in-person staff onsite to assist

participants in the opt-in process, as billboard campaigns alone may not be the most appropriate initiation point. The health marketing on Facebook had more participation than the texting. Offering technical assistance about developing and maintaining an active Facebook page is useful in enhancing community capacity and awareness about key messages. If there is a limited budget, it seems that purchasing ads through Facebook is more effective than other online newspaper sources, particularly if the target audience is parents. Contests with prizes like gift certificates can bring added attention to a program's Facebook page as well.

Conclusion

This case study provided a detailed outline of the steps and lessons learned from the health marketing efforts. It highlights the need for technical assistance and communication expertise for multilevel, multisector community interventions. The outcome data of MA-CORD were measured on the community level so the insights from this case study add context to the intervention results.

ORCID iD

Shaniece Criss  <https://orcid.org/0000-0002-2470-5377>

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