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Applying Social Marketing Principles for Community-based Cancer Screening Programs: Two case studies

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Abstract

Minoritized communities often experience worse health outcomes on the cancer continuum. Mainstream strategies may have limited reach and utility to populations experiencing inequities in real-world settings. Through the combined use of community-based participatory research (CBPR) and social marketing strategies, which highlight community-centered and culturally adapted processes, we provide an approach to inform future intervention research across various health topics that has been successful in engaging minoritized and understudied communities. We present two case studies that used participatory social marketing principles to culturally adapt evidence-based cancer screening programs for two communities in New York City. The first program is a campaign to increase screening and vaccination for hepatitis B among Korean and Chinese American immigrants. The second is a culturally adapted program to increase breast and cervical cancer screening among a multiracial and ethnic population of Muslim women. These case studies illustrate the benefits of integrating social marketing and CBPR approaches as a key strategy when developing public health campaigns to effectively reach and influence health behaviors in partnership with communities that have been socially marginalized and historically underserved.

Introduction

Vast inequities in cancer screening rates exist among racial and ethnic groups across the United States (Zavala et al., 2021). Cancer screening programs specifically adapted for and centering minoritized populations can be instrumental in lessening these inequities.

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Social marketing, the use of commercial marketing principles to impact and change health behaviors through a voluntary process whereby an individual ‘exchanges’ previous unhealthy behaviors for new beneficial ones, has been an effective strategy in changing health behaviors of individuals across different groups, health topics, and settings (Firestone et al., 2017; Gordon et al., 2006; Petrescu et al., 2021). The process is enhanced when social marketers have a deep understanding of the targeted community, enabling tailored messaging for specific populations, moving beyond a “one-size fits all” approach that is typical of many public health campaigns (An et al., 2021; Daniel et al., 2009; Gordon et al., 2006). Programs, strategies, and campaigns that work for mainstream audiences may have limited effectiveness in reaching communities experiencing a high burden of health and social disparities, especially historically minoritized or marginalized groups (Olfert et al., 2018; Villar & Johnson, 2021).

Audience centrality makes social marketing a natural companion to community-based participatory research (CBPR), an approach that requires community engagement and equal participation at all phases of a project, from design to implementation and evaluation (Minkler & Wallerstein, 2008; Suarez-Balcazar et al., 2020; Wallerstein & Duran, 2010). Because CBPR is a process-oriented approach, it takes time to develop, as true community engagement depends on relationship-building and trust. In addition to centering community priorities, which helps to facilitate true engagement and buy-in from the outset, it also identifies community strengths and assets, which can then be leveraged to promote acceptance and build capacity, subsequently creating more effective tailored interventions, which drive true, sustainable social change (Green, 2004; Israel et al., 2006; Minkler & Wallerstein, 2008; Nguyen et al., 2021; Suarez-Balcazar et al., 2020; Wallerstein & Duran, 2010; Wallerstein & Duran, 2006).

This article examines how social marketing and CBPR were used to develop two cancer screening programs: B Free CEED, designed to reduce hepatitis B disparities among Chinese and Korean American immigrants in New York City (NYC), and MARHABA (Muslim Americans Reaching for Health and Building Alliances), designed to improve breast and cervical cancer screening rates among Muslim women living in NYC.

Method

Marketing Approaches

To maximize community engagement and create programs that were culturally and community-focused, B Free CEED and MARHABA both followed a four-step process (Figure 1): 1) community engagement, including partnership development and community advisory board (CAB) engagement; 2) formative research guided by the principles of social marketing, to inform tailored messaging and enhance program reach; 3) development of products and messages which incorporate deep cultural relevance; and 4) dissemination and evaluation.

The 4 Ps of social marketing (product, price, place, and promotion) guided our work for each community (Cheng et al., 2011; Grier & Bryant, 2005). We worked collaboratively with our community-academic partners to define each P: 1) **P**roduct: What are the benefits

of knowing one's hepatitis B or breast or cervical cancer status? 2) **Price**: What are the costs (e.g., financial or social) or barriers (e.g., lack of knowledge) to getting vaccinated and/or screened? 3) **Place**: What are the best places and times to deliver messages or how to most effectively promote cancer screening within the context (place) of a randomized controlled trial (RCT)? and 4) **Promotion**: What are the most effective messages that will promote hepatitis B screening and vaccination or cancer screening and what are the most effective channels to deliver those messages?

Focus groups provided community feedback on the program messages, strategies, and designs. Both programs performed these activities through co-led iterative processes. Program materials (e.g., posters, palm cards, and videos) were translated into multiple languages and working with the community we utilized a transcreation approach (Lee & Kwon, 2022) to ensure that the translations moved beyond the literal to reflect various cultural domains of the specific community while maintaining the underlying intent, tone, and content (Lee & Kwon, 2022). For example, materials should include not only patients but also doctors wearing hijabs. Finally, campaigns were disseminated and evaluations conducted to provide insight into their effectiveness and to inform future work. Research activities were approved by the Institutional Review Board and all participants provided informed consent.

Case Study 1 - B Free CEED

Asian Americans are disproportionately affected by hepatitis B, accounting for more than 50% of those chronically infected (Centers for Disease Control and Prevention, 2020b); and hepatitis B infection rates are higher among foreign-born Asian Americans (Centers for Disease Control and Prevention, 2020b). The high prevalence of the hepatitis B virus (HBV), which is known to cause hepatitis B, has been well documented among Chinese and Korean Americans, with a prevalence as high as 23.2% and 3.8%, respectively (Dang & Chen, 2016; Hyun et al., 2016; Navarro et al., 2014; Pollack et al., 2014; Tang et al., 2018). Hepatitis B is the most common cause of liver cancer (Chang, 2021), accounting for approximately 43% worldwide (Liu et al., 2019). Despite the high prevalence of HBV among Asian Americans, screening is low in high-risk Asian groups, with rates across the United States ranging from 47% to 61.5% (Kue & Thorburn, 2013; Mukhtar et al., 2015; Strong et al., 2012). Low screening and vaccination rates are likely due to a multitude of variables, including limited access to care and need for improved provider knowledge (Hu, 2008; Hyun et al., 2021; Upadhyaya et al., 2010).

Method

B Free CEED Purpose & Coalition: B Free CEED was led by a steering committee made up of community and academic partners as part of a previous program, the Asian American Hepatitis B program/B Free NYC (Trinh-Shevrin et al., 2011). The goal of that program was to raise HBV awareness and increase HBV screening and vaccination behaviors in the Asian American community. The steering committee included Asian American representatives from a community-based organization (CBO) and a community healthcare clinic that both directly serve the Asian American community and was dedicated

to developing a strong formative research, dissemination, and evaluation plan from the outset (VanDevanter et al., 2011). Utilizing a CBPR approach, the aim was to design a social marketing campaign informed by research and data that would not only direct the development of a meaningful message but would also identify dissemination channels that are community-centered and relevant.

Formative Research Plan: The formative research phase included: 1) 989 community surveys using venue-based and street intercept sampling of adults (≥ 18 years) in Chinese and Korean American communities to reach groups underrepresented in population-based assessments; and 2) four focus groups with Chinese American (FG1 n= 9; FG2 n=9; FG3 n=7; FG4 n=8) and three focus groups with Korean (FG1 n=7; FG2 n=10; FG3 n=7) adult community members in their preferred language. Focus groups included individuals 18 to 55 years of age and were conducted in Cantonese, Mandarin, and Korean. Please see Li et al. (2017) for additional information on the community survey methods (Li et al., 2017). Focus group recruitment was led by CBOs using flyers within their community-based centers and focus group guides were developed with guidance from the steering committee and informed by the 4 Ps. Basic descriptive data was derived from the surveys and thematic content analysis was utilized to analyze focus group data, using an iteratively defined codebook. All focus group transcripts were transcribed into English and independently coded by teams of four independent coders representing academic and community partners. Coding discrepancies were presented, discussed, and resolved through consensus in team meetings.

Results

Formative Research Findings/Campaign Development: Formative survey findings have been presented elsewhere (Li et al., 2017) and suggested that barriers to screening and vaccination included routinely not seeing a physician for preventive care if they were feeling well, lack of doctor recommendation for screening and vaccination, lack of awareness of HBV vaccination and screening options, being underinsured, and limited time for preventive care (Li et al., 2017). Focus group findings were used to triangulate survey results. Focus group themes confirmed overall survey findings, specifically that both communities highly trust health information from physicians; however, participants reported not seeing a doctor if they felt healthy. Popular health information channels for both communities were traditional ethnic media sources, which participants confirmed had wide community reach. Focus group participants also shared that widespread misinformation about HBV and reluctance to discuss HBV status existed at the community level.

Formative research findings were discussed among the key partners in bi-weekly meetings and monthly steering group meetings. Agreement on campaign strategies, tone, clarity, and persuasiveness was achieved through an iterative process of consensus building. These insights guided the content and format of the campaign message: 1) highlighting awareness of hepatitis B in the community, while challenging misinformation; 2) encouraging individuals to ask their physicians for screening or to seek out screening opportunities; 3) being positive and empowering, rather than fear-inducing and hopeless; and, 4) presenting in a non-health related context to appeal to groups that had been missed by previous HBV campaigns.

Formative findings and major themes were used by a professional marketing agency with expertise in the NYC Asian American market (APARTNERSHIP, 2023) to develop campaign ads and a 30-second video. Next, we engaged in an iterative process of discussion, feedback, and reconciliation of different stakeholder views. Three concepts were developed and pilot-tested in two additional focus groups (FG1 n=8: Chinese American; FG2 n=8: Korean American). Three messages were created in traditional and simplified Chinese, Korean, and English.

The three message concepts included:

1. *HBV can impact the ability to take care of one's family.* This first message concept has two versions. The first version was based on a photo of a broken rice bowl, and the headline reads: "Hepatitis B can make a crack in your rice bowl, don't ignore it." The second version was based on a photo of a piggy bank and the headline reads, "Hepatitis B can make a dent in your ability to save and provide for your family, don't ignore it!"
2. *High recognition but little action in the community – stop being complacent.* The second message concept featured men and women with their heads in the ground like ostriches. The text reads: "Don't be an ostrich. Face up to hepatitis B! Get up and get tested – a simple blood test is all it takes. Asians are at high risk for hepatitis B infection. Untreated, hepatitis B may lead to liver cancer or other serious liver damage. Protect yourself and your loved ones. It's your health, take control."
3. *HBV is serious and can "strike" anyone.* The third concept featured an Asian man about to step into a manhole held open by a man in a black bodysuit and an Asian woman about to be tripped by a man in a black bodysuit as she walks down steps. The text reads: "Don't let Hepatitis B catch you off guard. Get tested now. A simple blood test is all it takes! Asians are at high risk for hepatitis B infection. Untreated, hepatitis B may lead to liver cancer or other serious liver damage. Protect yourself and your loved ones. Be certain to get tested for hepatitis B!"

Focus group findings revealed the following: 1) the first message concept was not impactful enough and did not convey action; 2) participants liked the second concept but ultimately decided that the concept was too abstract; and 3) participants felt the third concept was the most impactful as it highlighted how pervasive hepatitis B is, how it can strike anyone, and, it conveyed the right tone of urgency. Participants and community partners had no additional edits to the message, but one partner suggested making the video more empowering for the community. The 30-second video follows a man going about his day who is being shadowed by a man in a black body suit, representing HBV. The voice overlay states that HBV is around us and follows us like a shadow, but unless we face it, we could lose what we have. The video was adjusted so that the lead character "strikes back" at hepatitis B, represented by the man in the black body suit. The final message concepts were translated into Korean and Chinese using a transcreation approach (see Figure 2).

Implementation of campaign: The community-based and community-placed dissemination tools and channels utilized for print and video messages were collected from the formative research survey and further discussed and confirmed in the focus groups. Identified channels that were targeted included web-based (e.g., Hey!Korean.com, a Craigslist-like website for the NYC Korean American community, ethnic newspaper websites, CBO partner websites, and the campaign landing page), ethnic media sources (e.g., Korean and Chinese newspapers and television spots), public spaces (e.g., the public library in high-density Asian neighborhoods, cross streets in high foot traffic areas in Asian neighborhoods, and Korean and Chinese American community-serving organizations and businesses, including social services and faith-based organizations, and supermarkets), and Chinatown commuter van lines.

This widespread, web-based dissemination campaign of the video and print ads generated a strong response. The website campaign banner on Hey!Korean.com received 1,585 views over a two-month front-page campaign. The twitter feed [@nycHepB](https://twitter.com/nycHepB) had about 21 re-tweets per week and 16 new followers per month, with over 11,067 reached in less than 10 days. The campaign-landing page included information about hepatitis B, testing sites in NYC, links to national HBV resources and campaigns, and print ads of the campaign, including a QR code. Dissemination efforts reinforced each other as campaign ads referred people to the campaign landing page where they could view the video and download print ads. Dissemination events, where print ads were distributed, included Chinese and Korean heritage parades, community policymaker press events, and other community events. Local community partners and coalitions, local Chinese and Korean American medical associations, and additional national partners and coalitions promoted the HBV testing campaign.

Evaluation of campaign: A short-term 16-item evaluation using street intercept surveys (N=112), which included items on basic demographics, HBV knowledge and stigma, campaign awareness and message understanding, and campaign impact, was conducted across 2 weeks at different time periods in the targeted Asian neighborhood where the campaign was disseminated to assess campaign awareness and whether they understood the message. Approximately half of the respondents reported seeing the campaign (39.5%) or were unsure if they had seen the campaign (12.5%) after being shown the ad. Ninety-six percent of Korean- and 60% of Chinese Americans were “likely” or “very likely” to get tested or urge others to test for HBV after being shown the print ad during the survey, and over 90% of Chinese- and Korean American respondents reported feeling ‘somewhat’ or ‘very comfortable’ discussing HBV.

Case Study 2 - MARHABA

Approximately 3.45 million Muslims live in the United States (World Population Review, 2023). It is projected that the U.S. Muslim population will reach over 8 million by 2050 (Mohamed, 2018). New York State has one of the largest Muslim populations in the United States (World Population Review, 2023), with the highest concentration of Muslims living in NYC (New York Foundation, 2011). Muslim Americans represent a broad diversity of race

and ethnicity, with approximately 58% of adults born outside the United States, from at least 75 countries (Pew Research Center, 2017).

Although data on breast and cervical cancer screening rates among Muslim American women is limited, several studies suggest that Muslim American women are generally less likely to receive timely breast and cervical cancer screening (Centers for Disease Control and Prevention, 2020a; Majeed et al., 2023; Padela et al., 2015; Schwartz et al., 2008; Zorogastua et al., 2017). Studies have also documented various barriers to breast and cervical cancer care and screening among Muslim American women, such as access to healthcare, language barriers, religious discrimination, and cultural and religious beliefs (Matin & LeBaron, 2004; Padela et al., 2012; Padela et al., 2015; Tackett et al., 2018; Vu et al., 2016; Yosef, 2008; Zorogastua et al., 2017). Many documented barriers relate to religious concerns, such as modesty and decency (Majeed et al., 2023; Padela et al., 2012; Yosef, 2008).

Method

MARHABA Purpose & Partners: The purpose of MARHABA was to examine breast and cervical screening behaviors among Muslim American women in NYC; identify barriers and facilitators to screening; develop small media materials, including brochures and palm cards, to promote screenings; and conduct a RCT to evaluate the impact of a community health worker (CHW) and lay health worker (LHW)-led intervention on screening behaviors. Culturally tailored small media materials were developed using the principles of social marketing, CBPR, and message framing.

Utilizing a CBPR approach, MARHABA was led by a CHW and LHWs, who have less formal training than a CHW, from the NYC Muslim American community and community partners to ensure that the diverse perspectives of these groups were represented. NYC Muslim American community partners provided access to venues for recruitment that included mosques, social service agencies, CBOs, Muslim college student organizations, primary care clinics, and hospitals embedded within the NYC Muslim community. They were also deeply engaged in developing the campaign and the qualitative interview guide through an existing CAB consisting of CBOs and institutional partners.

Formative Research Plan: The formative research phase incorporated the 4 Ps of social marketing into the design of the study instruments: 1) 12 key-informant interviews with NYC Muslim community leaders who worked with the Muslim community to understand contextual factors affecting health-seeking behaviors of Muslim women and recommendations for the development of health programs and intervention; 2) 98 in-depth interviews with Muslim women conducted in their preferred language (including Bengali, Arabic, French, Urdu, and Hausa) to understand barriers and facilitators to breast cancer and cervical cancer screening; 3) 98 surveys which included questions on demographics, access to care, and health information sources among the women taking part in the in-depth interviews; and 4) four focus groups, which were used to evaluate and further develop the materials. Recruitment for the in-depth interviews, surveys, and focus groups included outreach at diverse locations serving Muslim individuals, including health fairs and religious

seminars held at mosques and social service agencies, advertisements placed in local ethnic and neighborhood newspapers, and membership lists from mosques and partner agencies.

Results

Formative Research Findings/Campaign Development: Findings from formative research have been presented elsewhere (Islam et al., 2017; Patel, 2018) and emphasized the role of structural and socio-cultural barriers to screening, such as insurance, non-gender concordant physicians, language, modesty, immigration status, gender roles and familiarity with the concept of preventive health behavior.

Religion was a facilitator of screening, primarily due to the importance within Islam of individual health. The formative research provided guidance on what messages would motivate Muslim women to obtain cancer screenings. Community members felt that women lacked awareness about how to access and ask for screenings. It was also noted that effective ads should reflect the Muslim community in terms of language concordance and visual content, such as featuring women in a hijab and highlighting the diversity of the Muslim community. A key theme was the centrality of women in the family, in which ads should reflect that: “Taking care of yourself is important for your family.” Finally, respondents felt that the message spokesperson should be either a healthcare provider or a community member/cancer survivor.

From this formative research, four message concepts were developed:

1. *A home without a mother is just a house.* The print ad features two images: a family eating dinner together and a family portrait. In both images, the mother has cut marks surrounding her with an image of scissors and the text states, “Don’t let cancer cut you out of the picture. Take control of your health, and talk to your doctor about breast and cervical cancer. Routine screening is the best defense.”
2. *A flower blooms.* The print ad features a photo of a beautiful flower with a petal that has a diseased spot on it. The caption states, “Don’t let cancer damage your beautiful life. Breast and cervical cancer can affect anyone, anytime. Routine screening and early diagnosis are the best defense.”
3. *Because we love our Queen Bee.* The print ad features a mother reading a book about the queen bee to her children. The text states, “As the queen bee of your family, you have some responsibilities. Make sure you’re there for your loved ones. With routine screening for breast and cervical cancer, you can safeguard your health – for yourself and your family.”
4. *A journey to hope - a) Famous Muslim woman.* The print ad shows photos of Yasmin, a famous Muslim woman, throughout her day, with text stating, “Take control of your health. A few minutes could save your life. Regular breast and cervical cancer screening and early treatment reduces cancer fatality.” b) *Cancer survivor.* Similar to 4a, this ad features a young Muslim teacher, Nafisa, who has survived breast cancer.

These five print screening messages were previewed by focus groups held with diverse groups of Muslim American women to provide feedback on each message. Four groups were held according to language preference: (FG1 n=11: South Asian; FG 2 n=9: Middle Eastern; FG3 n=10: SE Asian; and FG4 n=7: African American/African immigrant).

The focus groups reviewing the messages found that for the first social marketing message (“A home without a mother is just a house”), the main beneficial aspect was the presentation of the role of the woman in the family, where the mother is central to the functioning of the family. The disadvantages reported were that it appeared chaotic and lacked clarity about the messages (i.e., “unable to understand the message from the photos alone). For concept 2 (“A flower blooms”), some felt the concept was unclear and had to be read to understand. Focus group members felt that concept 3 (“Because we love our queen bee”) was advantageous in the way it portrayed the woman’s role in the family, her centrality to the family, and her responsibility to the family. Some members felt the message was unclear and hard to see how it related to cancer. Focus group members liked campaign 4A (“A journey to hope – Famous Muslim Woman”), as it worked with the benefits of using a celebrity spokesperson and the attention that brings to the ad. They also liked message 4B (“A journey to hope – Cancer Survivor”) because it had a clear link to cancer and that the person who had cancer was now okay: “She is creating consciousness.” Overall, the focus group participants felt that the messages needed a clear and instant link to cancer screening. Campaign 4B was chosen from this work (see Figure 3). This message was then translated into Bengali, Arabic, and Urdu in consultation with community partners using a transcreation approach.

Dissemination/Implementation of the small media materials: Key-informant interviews helped guide the dissemination efforts of the social marketing campaign, which highlighted mosques and religious leaders, as well as ethnic media and CBOs (Islam et al., 2017). Small media materials designed during the formative work were also utilized in the MARHABA RCT intervention study. To be eligible for the study, women had to self-identify as Muslim and be due for breast and/or cervical cancer screening. All women enrolled in the study received an educational seminar led by a CHW where the women were provided with small media education materials. After completion of the seminar, participants were randomized into the control arm (no further contact) or the intervention arm (additional navigation to provide support for screening). Details of the RCT are presented elsewhere (Wyatt et al., 2023).

Evaluation of the message: An analysis of self-reported breast and cervical cancer screening during the MARHABA RCT follow-up survey suggested that the small media materials developed were effective in improving breast and cervical cancer screening among Muslim women living in NYC. Bivariate analyses and chi-square testing found that mammogram screening increased from 16.0% to 49.0% in the intervention arm ($p<0.001$), and from 14.7% to 44.6% in the control arm ($p<0.001$); similarly, cervical cancer screening increased from 17.0% to 43.0% in the intervention arm ($p<0.001$), and from 18.7% to 40.4% in the control arm ($p<0.001$) (Wyatt et al., 2023). The adjusted models found no significant group differences between arms, suggesting that the education seminar and the small media

materials may have helped to successfully improve the uptake of breast and cervical cancer screening among this group of Muslim American women.

Discussion

To create effective and meaningful health promotion programs within diverse populations, we integrated CBPR with social marketing principles to highlight culture- and community-centered strategies to reach communities that have been socially marginalized and historically under-reached. The development and implementation of effective public health campaigns is an important strategy to reduce health disparities and address health inequities for minoritized communities. By utilizing social marketing and CBPR strategies, the B-FREE CEED and MARHABA projects effectively engaged community partners and leveraged community assets to develop relevant, culturally tailored messaging to reach communities who experience language access challenges. The data collection instruments were specifically formulated around the 4 Ps of social marketing. This enabled us to clarify the structure and content of the messages and materials to reach groups that may have been missed in previous outreach efforts, including immigrant and non-English speaking audiences. By working with established community partnerships, both projects incorporated strong community engagement throughout the campaign development process. Through this true co-partnered approach, both programs created messages that strongly resonated across specific populations and led to high levels of understanding and acceptability. Evaluation data from both campaigns confirm that people understood the messaging and had the intention to act, ultimately raising hepatitis B awareness and intention to screen and increasing breast and cervical cancer screening.

For example, B Free CEED was able to obtain detailed information on community-relevant channels to disseminate the campaign. Using the CBPR approach allowed us to identify relevant partners and end users to involve in developing meaningful and relevant messages and materials, as well as informing community-centered dissemination channels and venues. Integrating dissemination planning and weaving dissemination activities throughout the process allowed us to build buy-in from diverse multi-sector partners and end users from the outset.

Our work highlights the importance of true community engagement and the development of culturally competent messaging, which is gaining importance in public health communication. It also aligns with other health messaging campaigns which focus on minoritized communities, such as African Americans (Yelton et al., 2021) and refugees (Feinberg et al., 2021), and frameworks that prioritize community input, such as risk communication and community engagement (Dick et al., 2022; Wieland et al., 2020).

Participatory, community-engaged approaches have been used across diverse racial and ethnic populations and health topics, such as COVID-19, HPV, and PrEP. Findings from these studies reflect our conclusions that myriad reasons exist that inhibit engagement with the health system, including limited English proficiency; however, understanding the local community and having deep community engagement can improve campaign acceptability (Hull et al., 2014; Shah et al., 2023; Shah et al., 2024) and improve reach and awareness

(Shah et al., 2023; Shah et al., 2024). Two studies conducted with Latino immigrant communities have reported that tailoring campaigns to the local context and coupling messages with local service providers can be especially effective (Shah et al., 2023; Shah et al., 2024). This finding further demonstrates the importance of community engagement throughout the entire social marketing process.

The approaches used in these case studies illustrate the benefits of integrating social marketing and CBPR approaches as a key strategy when developing public health campaigns to develop acceptable messages that influence health behaviors in partnership with minoritized communities. This integrative approach of community-based participatory social marketing is a means of utilizing the strengths of both approaches to develop highly tailored messages and materials and identify dissemination communication channels through community partners to disseminate acceptable messages successfully.

The participatory social marketing process described in these two case studies can be used across various populations, settings, and health issues to inform meaningful and culturally relevant campaigns and serves as a model that can inform future interventions across broadly varied health topics. Currently, we are applying this process and lessons learned to inform the *Vaccine Acceptance in Immigrant Youth and Adolescents* (VAIYA) study, which aims to co-develop with community partners culturally tailored evidence-based HPV vaccination messages and materials for Arab American and Mexican American communities in Brooklyn. This approach, as well as other comprehensive approaches, are required for future initiatives to develop acceptable messages that inform behavior change, with the aim of eliminating disparities and achieving health equity, in collaboration with community partners.

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Figure 1.
Community-Centered Participatory Social Marketing



Figure 2.
HBV is serious and can “strike” anyone – “Don’t let Hepatitis B catch you off guard.”

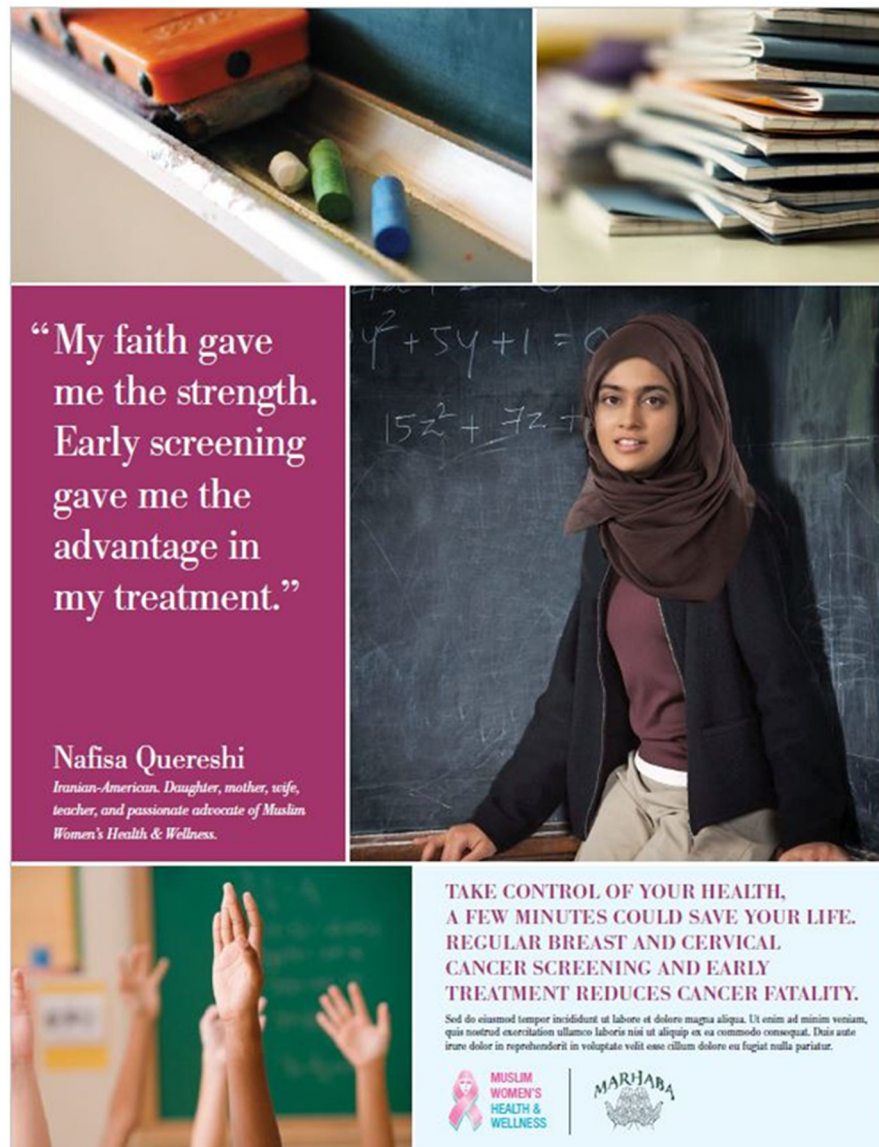


Figure 3:
A journey to hope, Cancer Survivor.