

## **Healthy Bodegas (HB)** **A Program of the New York City Department of Health & Mental Hygiene (DOHMH)**

### **CEO INTERNAL PROGRAM REVIEW SUMMARY**

This overview of the New York City Department of Health & Mental Hygiene's (DOHMH) Healthy Bodega is based on an internal program review conducted by the NYC Center for Economic Opportunity (CEO). The data were collected between August and October 2008 through interviews with DOHMH staff, and a review of program documents, monthly reports and management reports from DOHMH.

**Sponsoring Agency:** New York City Department of Health & Mental Hygiene (DOHMH)

**Provider Agency:** Not applicable.

**Start Date:** July 2007

**CEO Budget:** \$180,000 FY09

**Target Population:** Bodegas and residents in high-poverty District Public Health Office<sup>1</sup> areas (East/Central Harlem, the South Bronx and Central Brooklyn).

**Statement of Need:** DOHMH studies have shown that low-income NYC communities have greater difficulty accessing healthy food due to more limited availability of nutritious foods carried in local stores. In the targeted neighborhoods, bodegas represent more than 80% of food sources, but healthy food options are much less available in bodegas in comparison to supermarkets. Only 33% of bodegas sell reduced-fat milk, compared with 90% of supermarkets. About 28% of bodegas carry apples, oranges, and bananas, compared with 91% of supermarkets. Similarly, leafy green vegetables are only found in roughly 10% of all bodegas.

**Goals and Services:** The goal of the Healthy Bodegas Initiative is to promote healthy eating by increasing the availability, quality, and variety of healthy foods in bodegas in the target neighborhoods. The program works with bodega owners to improve provision of low-fat milk and fresh fruits and vegetables, and works with community groups to increase consumer demand for these products.

**Eligibility Criteria:** Bodegas that serve milk and fruits and vegetables in the target communities are eligible to participate. Community groups in target areas are partners in the effort to promote nutrition education.

**Targets/Outcomes:** This initiative has two major campaigns- one focused on increasing the amount of low-fat milk carried in bodegas, and one focused on increasing the amount of fruits and vegetables carried in bodegas. The program's target is to work with 1,000 bodegas in the milk campaign, and of these 516 to also participate in the produce campaign.

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<sup>1</sup> According to DOHMH, the mission of the District Public Health Offices (DPHOs) is to reduce health inequalities across New York City by targeting resources, programs, and attention to high-need neighborhoods in the South Bronx, East and Central Harlem, and North and Central Brooklyn. They further this mission by administering programs on priority health issues; focusing and coordinating the work of central DOHMH programs; informing, developing, and advocating for policy change; conducting research and disseminating public health information; and supporting and assisting community residents and organizations.

## Selected Key Findings

**Fidelity to Model.** As no existing models matched the scope and scale of this initiative, DOHMH piloted two interventions to determine the feasibility of the Healthy Bodegas (HB) intervention and to learn best practices. Throughout, HB maintained fidelity to its articulated strategy, implementing all aspects of the program design. The program utilized lessons learned for the full program launch. While an intervention with bodegas of this scale has never previously been done, HB maintained fidelity to its articulated strategy, implementing all aspects of the program. HB is in line with CEO's mission, and staff effectively reached its target population of bodegas in three key high poverty neighborhoods that also had high levels of diet-related health problems.

**Service Delivery.** 1,002 bodegas were successfully recruited to participate in the milk initiative, and 520 of those were also recruited for the fresh fruits and vegetables campaign, exceeding both targets. The HB Initiative also conducted 211 workshops in the community with over 145 Community Based Organizations and business partners including non-profits, schools, Women, Infant and Children (WIC) centers, WIC vendor management organizations, youth groups, beauty parlors, health centers and churches.

**Agency Management.** Staff were hired in mid-July 2007 to start developing an outreach and evaluation plan for the project. CEO funds support a Program Coordinator, an Evaluator, and three Outreach staff (one based out of each District Public Health Office) to engage bodegas and the communities. Each of the outreach team members is bilingual and works only in their assigned target borough. The 5-member team working on the HB campaign appears to be very invested in the program, and provides strong oversight of service delivery. The DOHMH effectively uses staff resources to reach a large number of bodegas. By conducting small pilot versions of the initiatives before bringing them to scale, they were able to learn important lessons and avoid potential pitfalls, which has led to a relatively smooth implementation of the program. Strong monitoring and evaluation strategies are in place by the agency.

### Early Outcomes.

- Bodega owners reported both an increased demand for and sales of 1% milk. Forty-five percent (332 out of 742) of bodega managers reported an increase in low-fat milk sales during the campaign period, and after the intervention 21% (88) of those bodegas who previously sold no low-fat milk had begun stocking low-fat milk.<sup>2</sup> Seventy percent of bodegas reported that their customers had started asking for low-fat milk.<sup>3</sup>
- Bodega owners demonstrated greater knowledge of the health benefits of switching to 1% milk. At follow-up, bodega managers were more likely to say that low-fat milk is the healthiest compared with other milk types (52%, 365 at baseline, and 80%, 554 at follow-up).<sup>4</sup> Forty-five percent of bodega staff also reported an increase in low fat milk sales during the campaign period.<sup>5</sup>
- Bodega owners reported an increase in produce sales: 32% of bodegas reported an increase in fruit sales, 26% reported an increase in vegetable sales.
- Fifty-three percent of bodega owners increased the variety of fruits and/or vegetables offered in their stores and 46% increased their quantity of fruit and/or vegetables they carried.

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<sup>2</sup> A total of 828 bodegas had both baseline and follow up information on quantity of low-fat milk stocked. Of the 828, 428 had no low-fat milk at baseline.

<sup>3</sup> "Healthy Bodegas Initiative: Project Summary and Proposal," DOHMH Report, Sept. 2008

<sup>4</sup> This response is limited to people who answered the question at both baseline and follow up (696). Overall, numbers are 433 out of 870 (50%) at baseline and 634 out of 800 (79%) at follow up.

<sup>5</sup> "Healthy Bodegas Initiative: Project Summary and Proposal," DOHMH Report, Sept. 2008

### **Conclusions and Recommendations**

This review suggests that the Healthy Bodegas initiative is in alignment with the CEO mission of serving residents of high poverty community districts. HB has successfully met recruitment targets for its first two major initiatives. Data suggest that it is making good progress toward meeting its overall goal of promoting access to and demand for healthy foods, specifically low-fat milk and fresh fruits and vegetables in targeted bodegas. Program staff have effectively developed linkages with a wide array of diverse community organizations, businesses and schools in order to promote healthy eating. Overall, bodegas have shown a high level of willingness to engage with the DOHMH staff, as evidenced by the high percentage of bodegas that agreed to participate. The HB initiative is also currently serving as a national example to others working to improve offerings in corner stores, and HB staff serve on a variety of committees and coalitions and have offered assistance to organizations and agencies across the country. Review of lessons learned from earlier campaigns and consultation with DOHMH staff suggest that working more intensively with fewer bodegas would allow HB to tailor interventions to the specific needs of each bodega, providing an increased number of sessions with bodega staff, and promoting sustainable long-term measurable change.

# Healthy Bodegas Initiative

## A Program of the Department of Health and Mental Hygiene (DOHMH)

### CEO INTERNAL PROGRAM REVIEW REPORT

#### 1. Introduction

The Center for Economic Opportunity (CEO) has funded approximately 40 initiatives across some 20 sponsoring agencies aimed at reducing the number of working poor, young adults, and children living in poverty in New York City. CEO is committed to evaluating its programs and policies and is developing a specific evaluation plan for each of its initiatives. For example, several major new initiatives will implement random assignment evaluations or other rigorous designs. Some programs are slated to receive implementation and outcome evaluations, while others may be evaluated using readily available administrative data. This differentiated approach reflects the varied scale of the CEO interventions, data and evaluation opportunities, and finite program and evaluation resources. Westat and Metis Associates are evaluating many of these programs on behalf of CEO. The purposes of the evaluations are to collect and report data on the implementation, progress, and outcomes of the programs in the CEO initiative to inform policy and program decision-making within CEO and the agencies that sponsor the programs.

This Program Review Report provides an overview and assessment of the Healthy Bodegas Initiative on several dimensions, including its goals, fidelity to the program model, target population, program services, agency management, and early outcomes.

The Healthy Bodegas Initiative was developed by the NYC Department of Health and Mental Hygiene's (DOHMH) Physical Activity and Nutrition Program, in their Bureau of Chronic Disease Prevention and Control. Its program staff works with neighborhood stores and bodegas to increase the availability of healthier foods, and also with community organizations and residents to increase demand for these foods.

#### 2. Program Overview

The Healthy Bodegas Initiative is an effort to increase healthier food access in bodegas and to encourage residents to demand healthier food at these neighborhood stores. This program fits into the larger framework of the City's healthy food access expansion efforts led by the Food Policy Task Force and the Office of the Food Policy Coordinator in the Office of the Deputy Mayor for Health and Human Services. The initiative works in some of the City's poorest communities- East/Central Harlem, the South Bronx and Central Brooklyn- neighborhoods whose residents also have disproportionately poor overall health rates and low access to healthy food. To date, the initiative has implemented two campaigns: "Mooove to 1% Milk" and "Move to Fruits and Vegetables." The former encourages bodega owners to increase inventory of 1% milk. The latter, which built on the successes of the milk campaign, assists bodegas in marketing and selling fresh fruits and vegetables. Both campaigns seek to make an impact by reducing diet-related health problems including diabetes, high-blood pressure, and heart disease.

#### Program Goals

The goal of the Healthy Bodegas initiative is to promote community health by increasing the availability, quality, and variety of healthy foods in bodegas. It also aims to educate and empower communities to choose and demand healthier food options in their local retail settings in order to prevent and reduce the epidemic of obesity and chronic diseases in NYC.

**Logic Model**

The Healthy Bodegas program model is displayed in a logic model—or theory of action—format on the following page. The logic model includes the program’s context, assumptions, and resources. Each activity is linked to the number of individuals targeted to participate in the different activities (outputs), as well as short- and long-term outcomes.



## Need & Target Population

The Healthy Bodegas Initiative (HB), started by the NYC Department of Health and Mental Hygiene (DOHMH) in 2006, was created following its surveys on the availability of healthy foods in their District Public Health Offices (DPHOs)- Central Brooklyn, the South Bronx and East/Central Harlem (areas that have high poverty rates and high life-style related health problems).<sup>1</sup> The studies concluded that residents in these low-income NYC communities have great difficulty locating healthy food in their own neighborhoods due to poor availability.

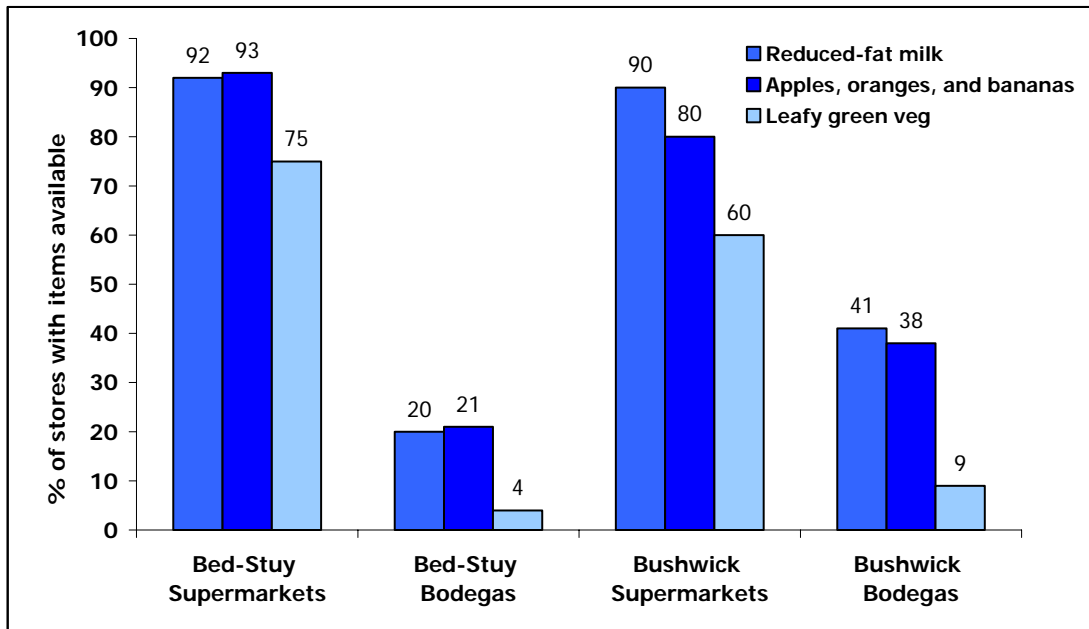
In the HB targeted neighborhoods, bodegas represent more than 80% of food sources. Healthy food options (as shown by the example below with data from North and Central Brooklyn) are much less available in bodegas in comparison to supermarkets. While offering convenient locations and hours, bodegas carry a narrower range of products at higher prices than supermarkets and other stores. Only 33% of bodegas sell reduced-fat milk, compared with 90% supermarkets. About 28% of bodegas carry apples, oranges, and bananas, compared with 91% of supermarkets. Similarly, leafy green vegetables are available at few bodegas (about 10%).<sup>2</sup> Only 33% of bodegas in Central Brooklyn sell reduced-fat milk and other healthier foods like fresh fruits. Only 25% of bodegas in East Harlem sell apples, oranges, and bananas. Leafy green vegetables are available in only 4% of East Harlem bodegas and 2% of Central Harlem bodegas. Comparing data from Harlem with that from the Upper East Side shows that Harlem bodegas are about half as likely as those on the Upper East Side to sell low-fat dairy products (milk, yogurt and cottage cheese). Only 4% of corner stores in Harlem sell leafy green vegetables compared to 20% on the Upper East Side.

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<sup>1</sup> According to DOHMH, the mission of the District Public Health Offices (DPHOs) is to reduce health inequalities across New York City by targeting resources, programs, and attention to high-need neighborhoods in the South Bronx, East and Central Harlem, and North and Central Brooklyn. The DPHOs work to ensure that conditions for good health - available, sustainable, high-quality services and efficient, effective systems - flourish in these neighborhoods. They further this mission by administering programs on priority health issues; focusing and coordinating the work of central DOHMH programs; informing, developing, and advocating for policy change; conducting research and disseminating public health information; and supporting and assisting community residents and organizations.

<sup>2</sup> Graham, R. et al. "Eating in, eating out, eating well: Access to healthy food in North and Central Brooklyn." New York, N.Y.: Department of Health and Mental Hygiene, 2006.

**Chart 1. Bodegas in North and Central Brooklyn offer fewer healthy food options than supermarkets.<sup>3</sup>**



DOHMH research has found that there is a strong correlation between lack of access to healthy foods and increased health risks, including obesity. Bodegas generally sell less healthy food than supermarkets and people are more likely to eat healthy food when it is readily available. In the low-income target neighborhoods however, fast food and bodegas are more prevalent, as are diet-related health problems. In terms of access to healthy food for example, one in six restaurants (16%) in East and Central Harlem is a fast-food restaurant compared to only 4% on the Upper East Side. Diet-related health problems show a similar dynamic- for example more than one in four residents of Harlem and South Bronx is obese, compared to one in five citywide. Approximately 31% of adults in East Harlem and 27% in Central Harlem are obese, compared to only 9% of adults on the Upper East Side.<sup>4</sup> Similarly, the rate of diagnosed diabetes in these neighborhoods is more than 50% higher than the citywide average (about 14% vs. 9%, according to the Health Department's 2004 Community Health Survey).

The targeted zip codes are all within the catchment areas of the DOHMH District Public Health Offices (DPHO), which serve the City's poorest and most underserved communities. The HB program has two arms- one that targets the bodegas, and a second smaller arm, that targets residents in these high poverty areas with information to increase demand for healthy food options (described in greater detail in the Outreach section of this report). The same number of bodegas was targeted in each of the three DPHO, despite differences in the size of the catchment areas. In Harlem, due to the relatively small number of bodegas, every bodega was approached to participate in order to reach targeted outcomes.

<sup>3</sup> Graham, R. et al. "Eating in, eating out, eating well: Access to healthy food in North and Central Brooklyn." New York, N.Y.: Department of Health and Mental Hygiene, 2006.

<sup>4</sup> Gordon, C. et al. "Eating Well in Harlem: How Available is Healthy Food?" New York, N.Y.: Department of Health & Mental Hygiene, 2007.



The targeted zip codes are:

- 1) Brooklyn: Brownsville (CD 16) and East New York (CD 4): 11233; 11212; 11207; 11208; 11239
- 2) Bronx: South Bronx - 60 bodegas in each CD (1-6): 10451; 10452; 10453; 10454; 10455; 10456; 10457; 10459; 10460; 10474
- 3) Harlem: Central Harlem (CD 10) and East Harlem (CD11): 10026; 10027; 10029; 10030; 10035; 10037; 10039

### 3. Fidelity to the Program Model

This intervention is innovative for its scope and scale as an approach to changing the environment and improving access to healthy food, as opposed to only targeting individuals. According to an interview with DOHMH Physical Activity and Nutrition program staff, when the DOHMH initially began brainstorming about creating a program that would increase the availability of healthy food in small corner stores several years ago, they were unable to find existing programs at the national level to use as a model. There were a few examples of cities tackling one or two cornerstones, but nothing large-scale or in the model that New York City was hoping to create. As such, DOHMH piloted two interventions to determine the feasibility of a Healthy Bodegas intervention and to develop best practices. Based on discussions of the lessons learned from the pilots (described below), CEO staff conclude that the current Healthy Bodegas program is clearly in line with the intent of a structural intervention that improves access to healthy food, and that it is based on the experiences and lessons learned through pilot efforts.

### 4. Program Description

DOHMH staff decided to focus on low-fat milk for their first bodega campaign for several reasons. First, the targeted communities already consumed milk, so the change being sought amongst residents in purchasing and consumption patterns was smaller and therefore seemed more feasible than working with stores that did not already sell any milk at all. Secondly, while bodegas tended to carry some form of milk, the low-fat kind wasn't widely available, so there was a clear need and a designated distribution system for milk already in place. Lastly, anecdotal evidence suggested that many residents already bought 1% milk at grocery stores where it was available, and were unable to do so when shopping at more local and convenient bodegas because that was the only option available at those stores.<sup>5</sup>

#### Move to 1% Milk Pilot Program:



Since its inception, the Mooove to 1% Milk campaign went through three phases: a 15-site pilot, an initial expansion to approximately 180 sites, and the larger growth to over 1,000 sites in the CEO-funded phase. All programs were based out of the three District Public Health Office neighborhoods described above.

Fifteen bodegas (five per DPHO catchment area) were recruited to participate in the first pilot stage which began in January 2006. Participating bodegas agreed to increase their orders of 1% milk,

<sup>5</sup> NYC Department of Health & Mental Hygiene (DOHMH), meeting with the Center for Economic Opportunity (CEO). September 2008.

run a discount on 1% milk for a full month, share inventory receipts and promote 1% milk using DOHMH materials. In exchange, the DOHMH staff promised to work with the community to increase demand for 1% milk. During this first pilot program, participating bodegas received a financial incentive from DOHMH to encourage participation, and offset the costs of offering a discount on milk and additional tracking efforts of inventory receipts.<sup>6</sup>

Of the 15 pilot bodegas, some store owners were reluctant to stock 1% milk because of lack of sales in the past. Two-thirds of participating bodegas did not carry any 1% milk prior to the program inception. During the pilot, all bodegas experienced an increase in low-fat milk sales, especially during the discount period. All participating bodegas expressed to DOHMH staff that they made enough profit on 1% milk during the pilot to continue stocking it for the foreseeable future.<sup>7</sup>

After the pilot was complete, HB staff visited and additional 183 bodegas to offer them promotional materials (such as the poster displayed above) and encourage them to increase their orders of 1% milk. Because of lack of available funds, the monetary incentive to bodegas for participating could not be offered, and thus the expansion of the pilot did not involve the promotional sales discount. This expansion also did not involve collecting inventory receipts and relied on bodega manager self-report to measure impact.

Results from this expansion were also positive. Of those who previously did not stock 1% milk, almost half reported ordering 1% milk and more than a third reported an increase in sales of the product. Of bodegas who already stocked 1% milk at baseline, half reported increasing their purchase of 1% milk and more than half reported an increase in sales of 1% milk. The intervention appears to have been effective in encouraging some bodegas to begin selling 1% milk, and even more effective in helping existing sellers increase sales of it.<sup>8</sup>

The Healthy Bodegas initiative began receiving CEO funds in July 2007, allowing them to set an expanded target of reaching 1,000 bodegas. Due to the large target number, each bodega would be reached with a simple intervention with relatively minimal “hand-holding” and follow-up. The CEO-funded milk campaign took place from August 2007 to March 2008.<sup>9</sup>

In this program, each bodega received three visits: an initial visit, where DOHMH took inventory of the store’s supply of low-fat milk, conducted a survey of the bodega manager’s understanding of the importance of low-fat milk, and gave an education presentation to highlight the important of low-fat milk; and two follow-up visits to assist with any implementation challenges, answer questions and monitor progress. As of fall 2008, DOHMH is still conducting the third follow up visit to ensure compliance and to distribute additional promotional materials as needed.

In addition to their work directly with the businesses, HB staff also works with community groups to increase demand for healthier food. This is an essential component of the initiative, as bodega owners are only willing to make changes in their inventory if they quickly see additional profit, or, at the very least, do not see a decline in sales.

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<sup>6</sup> A \$500 incentive was provided: \$250 at the beginning to participating bodegas, \$250 at the end of the intervention.

<sup>7</sup> DOHMH, meeting with CEO. September 2008.

<sup>8</sup> Baronberg, S. E-mail to CEO. November 2008.

<sup>9</sup> Some of the final follow-up visits continued until October 2008. In addition, many of the milk initiative bodegas continued to stay connected to DOHMH staff by participating in the Fruits and Vegetables campaign.

### Move to Fruits and Vegetables Pilot:



In December 2006, DOHMH conducted a pilot intervention with approximately 60 bodegas in East Harlem and the South Bronx to test the Move to Fruits and Vegetables campaign. For this effort, DOHMH worked with the New York State Department of Agriculture and Markets and the Bodega Association of the United States to bring New York State produce to New York City bodegas. Participating bodegas received two free boxes of pre-packaged New York State grown apple slices and baby carrots to distribute at their stores,

and were asked to sell the packages as “buy one get one free” deals to the customer, with each pack priced at 50 cents. Owners were also required to promote fruits and vegetables using DOHMH materials (such as the poster image in this section). Overall, bodegas that had the resources and the motivation to sell the apples and carrots did well and sold out during the first week. These bodegas included those that already sold some produce and were versed in produce handling and marketing. Bodega success also depended on their understanding of the intervention—many were unclear on how to distribute the giveaway product. DOHMH staff reported that the distribution mechanism from farm to bodega was flawed, with too few bodegas to allow a profit margin for the distributor (who had to drive in from upstate NY to deliver 60 boxes of apples and carrots).

Many lessons were learned through the pilot initiative, the main being that DOHMH is not in the position to develop a distribution network from farm to bodega without major infrastructure in place. In addition, DOHMH learned:

- Distribution: Bodegas that already stock fresh produce have their own distribution mechanisms. Their primary issues were poor quality, high prices, and low demand.
- Space: Many bodegas that do not sell fresh fruits and vegetables do not have the space, (refrigerated or otherwise), to introduce a new and perishable product, posing a large infrastructure issue. DOHMH staff determined that it would therefore have more impact by working directly with bodegas that already have a distribution mechanism and already stock some produce to improve the quality, quantity, and affordability.
- Bodega staff need technical support and training on how to best store, sell, and promote fruits and vegetables.

CEO funds supported a scale-up of the campaign in April 2008, utilizing lessons during the pilot phase. Most notably, DOHMH decided to focus staff resources on bodegas that already sell produce rather than target those that have no experience with these product sales and do not have a distribution mechanism in place as they would require much more extensive assistance, including capital expenses in some cases.

Scaling up the initiative involved research about the communities and the bodega owners. DOHMH staff conducted a consumer survey in the three DPHO areas in March 2008. A total of 90 surveys were conducted through one-on-one interviews on designated street corners in the three target areas. The

purpose of the survey was to gain a greater understanding of community residents' consumption and shopping behaviors in regards to fruits, vegetables and 1% milk. The survey also assessed the barriers and opportunities to greater consumption. Specifically the surveys showed that the majority of people purchase their fresh fruits and vegetables at a supermarket which is where they find the highest-quality produce in their neighborhoods. Most reported that it is somewhat or very easy to get affordable produce in their neighborhoods, but just under half (46%) report that it is somewhat or very difficult to find good-quality produce. Nearly half of the respondents (49%) never shopped at bodegas for fresh fruit and vegetables, the main reason being out of concern for the quality/freshness of the produce (68% report the quality as fair or poor). For those that do shop at bodegas, most shop there because it is convenient to their home or work. Just over half of the respondents say they would purchase prepared, ready to eat fruits and vegetables at bodegas if available.<sup>10</sup> This information was used to inform community outreach and education efforts during the Move to Fruits and Vegetables Campaign.

To best address business needs, and set appropriate targets for the bodega-focused work, DOHMH staff pursued a strategy that allowed the bodega owners to direct the type of assistance they would receive. Participating bodega owners were given a list of opportunities on how to improve their produce quality as well as their sales through better storage, display and marketing techniques. At baseline, some of the target changes agreed to by participating bodegas included: selling prepared, ready to eat fruits and vegetables (46%), selling a greater variety of produce (38%), stocking canned fruit in lite syrup rather than heavy syrup (31%), and considering getting a stoop permit to sell their fruits and vegetables outside (29%).<sup>11</sup>

As with the milk campaign, the Healthy Bodegas team is working with community groups and organizations to increase consumer demand for these healthy foods with strategies including nutrition education, taste tests, and the adopt a bodega program.

## **5. Program Service Delivery Strategies**

### **Outreach and Recruitment**

*Staffing:* Staff were hired in mid-July 2007 to develop an outreach and evaluation plan for the project. CEO funds support a Program Coordinator, an Evaluator, and three Outreach staff (one based out of each DPHO) to engage bodegas and the communities. Each of the outreach team members is bilingual and works only in their assigned target borough. The 5-member team working on the Healthy Bodegas campaign appears to be very invested in the program, and provides strong oversight into service delivery.

Travel time for the outreach workers to the bodega, coupled with the fact that sometimes several return visits are necessary to reach the appropriate person in charge, means that staff time can be significant.<sup>12</sup>

CEO funds support staff salaries, and the HB initiative leverages in-kind support from the DOHMH to cover the expenses of the toolkits and promotional materials.<sup>13</sup> Staff members suggested additional

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<sup>10</sup> Summary of survey results provided by DOHMH, October 2008.

<sup>11</sup> NYC Department of Health & Mental Hygiene. "The Healthy Bodega Initiative: Project Summary and Proposal." September 2008.

<sup>12</sup> DOHMH, meeting with CEO. September 2008.

<sup>13</sup> Other public funds, including state funding, also support the initiative.

funds would allow them to offer more incentives and promotions to the bodega owners to encourage their participation and would also fund marketing materials and other promotional strategies such as taste tests, recipe giveaways, trainings on produce handling, etc.

### Bodega Outreach

Outreach to bodegas for the CEO-funded phase of Healthy Bodegas began on August 27, 2007. Each successful initial visit included a baseline survey (interview with bodega staff and observation), nutrition education, and toolkit distribution.<sup>14</sup> Targeted areas were determined based on location (must be in DPHO catchment area) and existence of community sites such as Women, Infant and Children (WIC) Centers and public schools. Outreach workers targeted bodegas separated into three groups to ensure that follow up occurs within 6 weeks of baseline.

With a wide array of small stores in these neighborhoods, DOHMH staff began by refining the target by creating standard definitions of bodegas. For the purposes of this initiative, a target bodega is defined as having the following characteristics:

- Less than 4,000 square feet
- Has no more than 2 registers
- Non-specialty – does not specialize in one main item (e.g. bake goods, meats, etc.)
- Majority of inventory is food
- Must already sell milk (of any fat content)

Through experience in the field during the pilot initiatives, DOHMH staff learned that there are different types of bodegas (bodegas that serve different functions within a community) that meet the above classification. As a team they came up with six different bodega classifications, each with specific categorization criterion.<sup>15</sup> DOHMH began classifying bodegas for research purposes during the Move to Fruits and Vegetables Campaign. To date, they have not used this classification specifically to target bodegas, but DOHMH staff believe this information can be used for future initiatives to factor into targeting strategies.<sup>16</sup>

DOHMH staff conducted approximately 75 follow-up visits (25 per DPHO) per week. The overall outreach strategy for HB involved research and targeting of bodegas, followed by an initial visit by the outreach worker (workers are bilingual in English and Spanish).

The specific outreach and service delivery process involved:

- DOHMH staff obtained a list of all food retail outlets in NYC from the NYS Department of Agriculture and Markets. They then applied their definition of bodega to the list, narrowing it down to focus on stores less than 4000 square feet.
- Healthy Bodegas staff worked with staff at the DPHO offices to select priority neighborhoods within the DPHO areas. They then went into the field with maps of targeted bodegas and used their definition (as described above) to determine if this store was actually a bodega.
- Staff approached the bodegas to introduce the campaign, and those who expressed a willingness and interest received a brief educational session using a flip chart and a toolkit and the baseline survey was conducted. The first meeting with the bodega owner ranged from 20-50 minutes

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<sup>14</sup> Toolkits consist of a letter of introduction from the President of the Bodega Association of the United States in English, Spanish, and Arabic (three most commonly spoken languages of bodega owners), campaign promotional window decals, promotional postcards, posters for hanging in the store, and a one campaign t-shirt.

<sup>15</sup> These included: Beer/Cigarette/Lotto Bodegas (not targeted); Deli/Sandwich/Lunch Bodegas; Mini-mart Bodegas; Small Grocery Stores; Fruit and Vegetable Bodegas; Meat Bodegas.

<sup>16</sup> DOHMH. Email to CEO. 9 September 2008.

depending on their interest, with follow-up visits tended to be shorter. Outreach staff made efforts to avoid peak hours of the store in order to minimize any disruption to their business.

- Only bodegas that expressed a willingness to work with the program on goals (i.e. agree to stock or increase their inventory of 1% milk) were considered “recruited” and given a toolkit.

When the milk campaign was winding down and the focus shifted to the Fruits and Vegetables effort, the outreach strategy was refined further:

- Healthy Bodegas staff targeted only those bodegas that participated in the Milk Campaign and that already stocked at least one variety of fresh fruits and vegetables.
- Targeted bodegas received an introduction to the new campaign and a new educational flipchart was used.
- As with the milk campaign, only bodegas that were willing to make at least one change (from a menu of options) to their fruit and vegetable procurement, storage, display and/or marketing strategies were considered “recruited.”

### Community Demand-Focused Work

DOHMH staff recognized from their pilot efforts that bodega owners are willing to stock the suggested items when they know people will purchase them. Thus work on the demand side is a key component for the success of the campaign.<sup>17</sup> To meet this need, HB works with community groups and residents to increase demand to ensure that bodega owners make a profit on healthier foods. Over 200 community outreach events were held in just over a year of the campaign.

**Table 1. Healthy Bodegas Initiative: Summary of Community Outreach\***

	Material Distribution	Presentation/ Workshop	Event	Total Outreach Activities
<b>Mooove to 1% Milk</b>				
Harlem	36	6	4	46
Brooklyn	10	4	1	15
Bronx	49	7	3	59
<b>Subtotal - Milk</b>	<b>95</b>	<b>17</b>	<b>8</b>	<b>120</b>
<b>Move to Fruits &amp; Vegetables</b>				
Harlem	7	0	0	7
Brooklyn	5	4	1	10
Bronx	51	3	0	54
<b>Subtotal - F&amp;V</b>	<b>63</b>	<b>7</b>	<b>1</b>	<b>71</b>
<b>Move to Fruits and Vegetables AND Milk</b>				
Harlem	3	6	3	12
Brooklyn	0	1	2	3
Bronx	0	3	2	5
<b>Subtotal - F&amp;V</b>	<b>3</b>	<b>10</b>	<b>7</b>	<b>20</b>
<b>Grand Total</b>	<b>161</b>	<b>34</b>	<b>16</b>	<b>211</b>

\* As of September 23, 2009

<sup>17</sup> DOHMH, meeting with CEO. September 2008.

In this component of the program, outreach coordinators educate community groups on the importance of healthy eating and of increasing availability of these foods in their neighborhoods in order to empower residents to work toward change in their neighborhood, and inform community members of strategies to work with local bodegas to increase availability of healthier items. In order to saturate the DPHO neighborhoods with the campaign's messages, DOHMH works with community based organizations, faith based organizations, WIC centers, daycare centers, schools, and other sites. The three Outreach Coordinators (one based in each of the three DPHOs) visit these sites directly, distributing posters, postcards, and decals promoting milk and fruit and vegetables campaigns and offering nutrition education and support.<sup>18</sup>

The HB Initiative has worked with over 145 CBO and business partners including non-profits, schools, WIC centers, WIC vendor management organizations, youth groups, beauty parlors, health centers and churches.<sup>19</sup> Table 2, above, shows the numbers of community groups reached for each campaign in each of the DPHO areas. CBO partners receive educational workshops, and hang signs or distribute literature promoting the campaign to their constituents.<sup>20</sup>

Two recent examples of their outreach work include conducting a youth-focused presentation with the East New York Farmers Market Youth Group to encourage them to start asking for healthier options at the bodegas they frequent and conducting a presentation for Brooklyn's High Blood Pressure Faith-Based Taskforce on strategies for improving neighborhood access to healthy foods and offering clear action steps to adopt neighborhood bodegas. In the latter example, participants were given the chance to role-play how they intend to request healthier items from their neighborhood stores. They also brainstormed ways to engage their church congregations and create relationships between the church and the neighborhood bodega.<sup>21</sup>

As part of the demand-side work with community sites, DOHMH established the "*Adopt-a-Bodega*" campaign. This effort works with community groups and residents to promote visits to one specific local bodega in order to encourage the availability of 1% milk and fruits and vegetables. During the visit, residents request these items to bodega staff when they are not readily available at the store. Cards specifically requesting low fat milk and/or fresh produce are handed to bodega owners as a reminder that there is community demand and the potential for profit.

In addition to working with bodegas and community sites/organizations, DOHMH conducted initial outreach with supermarkets and milk distributors to promote 1% milk and fresh produce across the board. Many supermarket chains (including Pathmark, C-Town, Bravo, Pioneer and Met) expressed interest in working with DOHMH to promote 1% milk and fresh produce and committed to using DOHMH promotional materials and offering discounts on 1% milk during various stages of the campaign.

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<sup>18</sup> DOHMH, meeting with CEO Staff. September 2008

<sup>19</sup> See Appendix 2 for a full list of community groups and businesses reached by HB Staff.

<sup>20</sup> DOHMH, meeting with CEO Staff. September 2008

<sup>21</sup> See Center for Economic Opportunity. "CEO Monthly Report: Healthy Bodegas." A monthly report by the Department of Health & Mental Hygiene. August 2008.

## 6. Outputs and Outcomes

The Milk campaign was completed in March 2008, while the Fruit and Vegetable Campaign is on-going at the time of this program review (November 2008) and thus does not have outcome information available.

### Milk Findings

The chart below illustrates the success of the recruitment efforts for the milk campaign, demonstrating that the initiative met and exceeded its target of reaching 1000 bodegas.

**Table 2. Moovoo to 1% Milk Campaign Participation\***

<b>Territory</b>	<b>Total # of Bodegas Reached - Milk Campaign (Recruited + Refused)</b>	<b>Total # of Bodegas Recruited - Milk Campaign</b>	<b>Total # of Bodegas Refused - Milk Campaign</b>	<b>Total # of Follow-Up Visits to Bodegas - Milk Campaign</b>	<b>Total # of Visits to Bodegas (Recruited + Refused + Follow-up)</b>
Bronx	364	340	24	328	692
Harlem	354	329	25	289	643
Brooklyn	358	333	25	259	617
<b>Report Totals</b>	<b>1,076</b>	<b>1,002</b>	<b>74</b>	<b>876</b>	<b>1,952</b>

\*Between August 2007 and March 2008

The campaign also demonstrated success in reaching outcomes. Bodega owners reported:

- Increased demand and increased sales of 1% milk. 45% (332 out of 742) of bodega managers reported an increase in low-fat milk sales during the campaign period and after the intervention 21% (88) of those bodegas who previously sold no low-fat milk had begun stocking low fat milk.<sup>22</sup> 70% of bodegas reported that their customers had started asking for low-fat milk.<sup>23</sup>
- Bodega owners showed greater knowledge of the health benefits of switching to 1% milk. At follow-up, bodega managers were more likely to say that low-fat milk is the healthiest compared with other milk types (52%, 365 at baseline, and 80%, 554 at follow-up).<sup>24</sup> At follow-up, 45% of bodega staff reported an increase in low fat milk sales during the campaign period.<sup>25</sup>

DOHMH has recently begun to implement the third Move to 1% Milk visit for those bodegas not participating in the Move to Fruits and Vegetables Campaign (those stores that do not stock any fresh produce).<sup>26</sup> The third milk visits have been encouraging to DOHMH staff- bodega owners are still making an effort to stock low-fat milk in their stores.

<sup>22</sup> A total of 828 bodegas had both baseline and follow up information on quantity of low-fat milk stocked. Of the 828, 428 had no low-fat milk at baseline.

<sup>23</sup> NYC Department of Health & Mental Hygiene. "The Healthy Bodega Initiative: Project Summary and Proposal." September 2008.

<sup>24</sup> This response is limited to people who answered the question at both baseline and follow up (696). Overall, numbers are 433 out of 870 (50%) at baseline and 634 out of 800 (79%) at follow up.

<sup>25</sup> NYC Department of Health & Mental Hygiene. "The Healthy Bodega Initiative: Project Summary and Proposal." September 2008.

<sup>26</sup> Only bodegas that participated in the milk campaign were invited to participate in the second campaign focusing on fresh produce.



Anecdotal success stories provide an additional perspective on the success of this initiative in creating change in businesses and communities. In Harlem for example, one bodega owner was wearing his Mooove to 1% Milk t-shirt when the Outreach Intern conducted the visit. The bodega owner said he was awaiting his first delivery of low-fat milk to give it a try in his shop. Another bodega owner said she switched to low-fat milk in her home since the HB outreach visited and now her whole family is drinking it too.<sup>27</sup>

Documenting some of the key outcomes of this initiative has posed a challenge for HB staff, particularly in regard to documenting the change in sales of products. This is due to poor record keeping of sales in the majority of bodegas, making it difficult to document customer purchases. While it is possible to collect delivery receipts to document inventory changes, trying to do this in over 1000 bodegas would require additional staff resources.

To estimate reach, DOHMH visited a random sample of 30-40 bodegas to inquire how many people they typically serve. However, bodega owners were unable to even make a guess about how many people they typically serve in a day. DOHMH is working with the head epidemiologist for its Bureau of Chronic Disease to come up with a more effective measurement strategy.<sup>28</sup>

The HB staff have created a variety of solutions to track increases in stock (self reported and observed) and collect self-reported data on increase in sales.<sup>29</sup> HB staff initially attempted to document sales by counting units of milk on the shelves, but found this onerous and unreliable since inventory can change by the minute. In addition, since this was the first time doing an intervention of this type on such a large scale, it was difficult to estimate targets. Store owners are asked at follow-up visits to self-report data on sales- specifically whether they experienced an increase in the past month. Other challenges in data collection included reliability (of self-report) and accuracy (of unit observation). Long term outcome monitoring efforts for this initiative are limited by available resources. With the large number of bodegas targeted by such a small staff, on-going site visits to provide additional support and monitoring is not feasible.

#### Fruit and Vegetable (F&V) Campaign Early Results:

The Move to Fruits and Vegetables campaign targets were set as follows:

- Target # of Unique Bodegas Reached: 660 Bodegas
- Target Recruitment: 516 Bodegas
- Target Follow-up: 100% (516 Bodegas)

As of August 2008 DOHMH completed the final phase of bodega recruitment for the Move to Fruits and Vegetables Campaign and exceeded the target recruitment goal. 520 bodegas were recruited to participate (target 516). Each of these bodegas has selected at least one goal to improve how they procure, store, display, and or market their fresh fruits and vegetables. Follow-up visits for the newly recruited bodegas began mid-August and were completed in November 2008.<sup>30</sup>

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<sup>27</sup> Center for Economic Opportunity. "CEO Monthly Report: Healthy Bodegas." A monthly report by the Department of Health & Mental Hygiene. August 2008.

<sup>28</sup> DOHMH. E-mail to CEO. 10 September 2008.

<sup>29</sup> DOHMH. E-mail to CEO. 10 September 2008.

<sup>30</sup> Center for Economic Opportunity. "CEO Monthly Report: Healthy Bodegas." A monthly report by the Department of Health & Mental Hygiene. August 2008.

**Table 3. Healthy Bodegas Initiative: Move to Fruits and Vegetables**

<b>Territory</b>	<b>Total # of Bodegas Reached - F&amp;V Campaign (Recruited + Refused)</b>	<b>Total # of Bodegas Recruited - F&amp;V Campaign</b>	<b>Total # of Bodegas Refused - F&amp;V Campaign</b>	<b>Total # of Follow-Up Visits to Bodegas - F&amp;V Campaign</b>	<b>Total # of Visits to Bodegas (Recruited + Refused + Follow-up)</b>
<b>Phase 1 (April - June 2008)</b>					
Bronx	99	97	2	85	184
Harlem	97	95	2	57	154
Brooklyn	100	88	12	85	185
<b>Subtotal (Phase 1)</b>	<b>296</b>	<b>280</b>	<b>16</b>	<b>227</b>	<b>523</b>
<b>Phase 2 (July - October 2008)</b>					
Bronx	104	99	5	64	168
Harlem	82	75	7	86	168
Brooklyn	81	66	15	60	141
<b>Subtotal (Phase 2)</b>	<b>267</b>	<b>240</b>	<b>27</b>	<b>210</b>	<b>477</b>
<b>Report Totals</b>	<b>563</b>	<b>520</b>	<b>43</b>	<b>437</b>	<b>1,000</b>
Targets	660	516	N/A	520	1050

\* As of October 10, 2008

As the above table illustrates, the HB staff exceeded their target for recruitment of participating bodegas. Some bodegas initially recruited were lost to follow-up, thus the initiative did not reach its target of conducting follow-up visits with 100% of bodegas. Of the 83 bodegas lost to follow-up, the following reasons were given by HB staff:

- 61 bodegas – Owner Not Present – Outreach Coordinators made multiple visits to the store
- 13 bodegas –Bodega no longer in business
- 9 bodegas – Owner refused to complete the survey at follow-up<sup>31</sup>

The campaign has demonstrated success in reaching outcomes. Bodega owners reported:

1. Increase in produce sales: 32% of bodegas reported an increase in fruit sales, 26% reported an increase in vegetable sales;
2. 53% increased their variety of fruits and/or vegetables;
3. 46% increased their quantity of fruit and/or vegetables.

Anecdotal evidence also suggests success. In Harlem, one store reported that their customers began requesting additional fresh fruits and vegetables and the bodega owner responded by increasing their variety of produce. They now stock corn, papaya and squash, in addition to the other varieties they already stocked. In Brooklyn, one bodega owner was interested in improving his fruit and vegetable marketing strategy by offering a lunch “combo” where he would offer a piece of fresh fruit with a sandwich as part of a lunch special. At the initial visit he was skeptical that the strategy would work, but at follow-up he reported success. He said “you know, not everybody gets it, but some do...” and reported that he will keep offering it to his customers. In the Bronx, one store owner placed a 6.5 foot tall display case with fruits and vegetables next to the store’s entrance, thus making products very visible from the outside without actually having to use his stoop. In addition, he placed a tub filled with

<sup>31</sup> DOHMH email to CEO staff. 3 December 2008.

ice and fruit salad containers next to the display (mango, pineapple, melons). The owner reports he had done this as a low-cost way to give his store a fresh look, and that the strategy has brought him a lot more business.<sup>32</sup>

## **7. Overall lessons learned from both campaigns**

Staff documented key lessons learned from the initiatives that they are using to design the next stage of their campaign. These lessons were:

- Forging deeper relationships with more frequent visits to bodegas and their staff is key to promoting and retaining desired change in healthier food access.
- The demand for change needs to come from the community, therefore it is important to continue to strengthen community outreach and partnerships with new organizations.
- Increasing healthy food access does not require every bodega on a block to stock healthy items, but only that every resident should have easy access (within walking distance) to at least one healthy bodega.
- Working with target stores and the specific schools and community groups surrounding those stores can make the campaign more successful and strategically increase supply and demand simultaneously.

## **8. Future Planning**

The Healthy Bodegas team, in coordination with the Office of the Food Policy Coordinator and the Food Policy Task Force, has spent the past several months planning for their next campaign. One initiative the HB staff are exploring is the “Farm to Bodega” Initiative- a small pilot of which was recently launched as a collaboration between three farmer’s markets and ten bodegas. The goal is to increase the availability of fresh, local, high quality produce in bodegas by supporting bodega owners to purchase produce from farmer’s markets at wholesale prices. The ten stores were selected based on their proximity to participating markets and the owner’s level of motivation. At present 3 bodega owners are buying regularly from the farmers market and one store in Brooklyn is even designating 2 shelves for “farm fresh” produce. The program faced several challenges, the largest being the structure and rigidity of the ordering system involved with wholesale procurement from farmers markets. In order for store owners to purchase wholesale they must place orders and pick-up the produce on specified days, which is something store owners are not accustomed to doing. In September DOHMH staff hand-delivered samples of fresh farmers market produce to the bodega owners, to demonstrate the quality and benefits of purchasing local. DOHMH also plans to work with the farmers and bodega owners to develop a more flexible procurement system. This process will resume next growing season.<sup>33</sup>

HB also explored several ideas including the promotion of low-calorie beverages or healthy sandwiches/prepared foods, but ultimately concluded that they could have the greatest positive impact by working more intensively with a smaller number of bodegas whose management were very open to improvements. This would allow a more tailored approach specific to the needs of each participating bodega. This would also allow for increased visits, increased participation by community sites, and increased potential for monitoring and evaluation. Their experiences with the prior two campaigns

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<sup>32</sup> Center for Economic Opportunity. “CEO Monthly Report: Healthy Bodegas.” A monthly report by the Department of Health & Mental Hygiene. August 2008.

<sup>33</sup> Center for Economic Opportunity. “CEO Monthly Report: Healthy Bodegas.” A monthly report by the Department of Health & Mental Hygiene. August 2008.

demonstrated that each bodega has unique challenges and needs in relation to changes needed.

HB staff have developed a plan called “Star Bodegas,” which would target around 120 (40 per DPHO) bodegas (over 1 year) in the most high need neighborhoods<sup>34</sup> in each DPHO. These chosen bodegas would receive continued and consistent assistance from DOHMH and the Healthy Bodegas team would dedicate greater time and resources to increasing community demand. By focusing on a smaller number of bodegas, DOHMH will be able to report on many more outcomes and improve on the quality of their evaluation.

## 9. Conclusions

Present findings suggest that HB is in alignment with the CEO mission in serving residents of high poverty community districts. The Healthy Bodegas initiative has successfully met outreach and recruitment targets for its first two major initiatives. Data suggest that it is making good progress toward meeting its overall goal of increasing availability of healthy foods in targeted areas. Program staff have also effectively developed linkages with a wide array of diverse community organizations, businesses and schools in order to promote healthy eating. Overall, bodegas have shown a high level of willingness to engage with the DOHMH staff, as evidenced by the high percentage of bodegas that agreed to participate.

The DOHMH effectively uses staff resources to reach a large number of bodegas. By conducting small pilot versions of the initiatives before bringing them to scale, they were able to learn important lessons and avoid potential pitfalls, which has led to relatively smooth implementation of this program. Despite this, the high number of bodegas targeted with only a small staff made it difficult to have deep or long-term interventions with the stores. While each bodega participating in the milk campaign had two follow-up visits after the initial intervention, it is impossible to know now the extent to which change is maintained after those visits.

In conducting the low-fat milk campaign first, DOHMH was able to learn a great deal about bodega operations and their customers. The knowledge gained and the relationships formed were not only used to inform the Fruit and Vegetables campaign, but to enhance other DOHMH initiatives.

While outcome data related to product sales or changes in consumption patterns would be useful, there are significant barriers to collecting this data. For example the initiative is community, rather than individually, focused. It is therefore a challenge to document even the number of community members directly impacted by the program. By targeting a smaller area and a smaller number of stores, this data could be collected, monitored, and evaluated.

The DOHMH’s Healthy Bodegas Initiative is currently serving as a national example to others working to improve offerings in corner stores, and staff serve on a variety of committees and coalitions and have offered assistance to organizations and agencies across the country. Staff have also presented about their work at several national conferences.

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<sup>34</sup> Neighborhoods that have been defined as “food deserts” by the DPHOs and as such have the lowest concentration of supermarkets and “healthy” bodegas (bodegas that stock 7 or more varieties of fresh fruits and vegetables and stock low-fat milk) and the highest concentration of fast food restaurants.

## 10. Programmatic Recommendations

1. Review of lessons learned from earlier campaigns and consultation with DOHMH staff suggest that working with fewer bodegas would allow HB to tailor interventions to the specific needs of each bodega, allowing for increased number of sessions with bodega staff and promoting sustainable long-term change.
2. HB staff should devote additional time to working with community groups to increase community demand for healthy food, and work with DOHMH epidemiology staff to strategize around methodologies to better document outcomes of these efforts.
3. HB staff could assist bodega owners by connecting them with services from the Department of Small Business Services (SBS) that assist small businesses, and can approach the bodega owners needs from a business development perspective.
4. Should additional resources become available, funds for incentives to bodegas to improve their offerings or infrastructure (ie- produce display cases) and to assist them in developing a system to track the sale of healthy food could promote more robust results in recruitment of bodegas and maintenance of change over the long-term.