



Stimulating community and local policy action using GIS and field surveys in low-income food environments

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Background

Documenting conditions in poor neighborhoods to accurately convey the food environment is an important strategy for stimulating community action and policies. Since 2006, over 80 low-income* neighborhoods in California have been assessed by 23 funded local health departments using Communities of Excellence in Nutrition Physical Activity and Obesity Prevention (CX³) tools and methods developed by the *Network for a Healthy California (Network)* in the California Department of Public Health. Local CX³ data collection was done a rolling basis depending on the funding cycle of the 23 *Network*-funded local health departments. California has a total of 61 local health departments (58 counties; 3 cities). Training and implementation stretches beyond the *Network* to more than 7 additional health departments funded through other sources in the state.

* Defined as census tracts where 50% or more of residents are below 185% of the Federal Poverty Level.

Objective

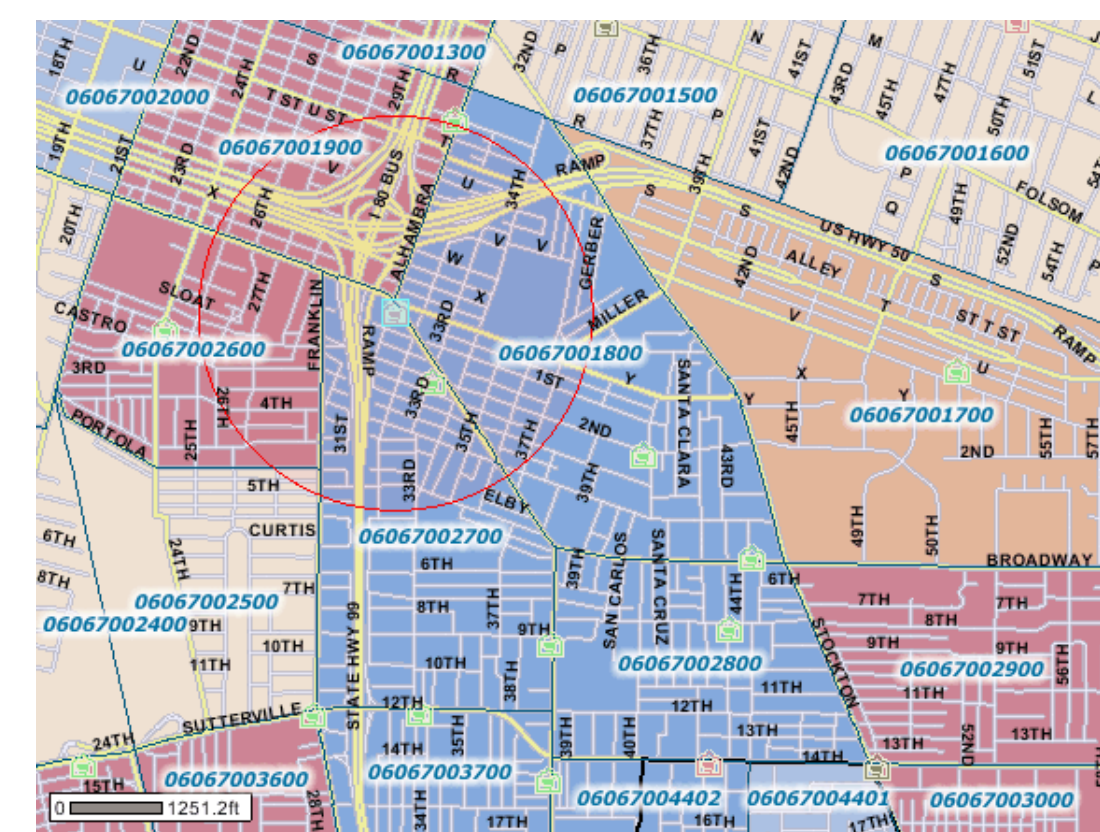
- Gather accurate localized data for:
 - Designing relevant, tailored community nutrition education interventions
 - Inspiring local policy and environmental changes that lead to healthier neighborhoods, by working with consumers and partners

CX³ Tools and Methods

- GIS Mapping followed by on-the-ground Field Surveys
 - Neighborhood-level indicators, rated by experts, define "excellent community"
 - Standardized tools and methods to measure indicators
 - Define neighborhoods using census tracts for boundaries and analysis
 - 3 – 7 neighborhoods surveyed by each local department
 - Types: Urban dense, suburban, rural neighborhoods
 - Training, TA and data interpretation/guidance for local health department staff

GIS Mapping

- Access to Supermarkets
 - Markets with >20 employees
 - 1/2 mile service area
 - Transit to supermarkets
- Markets around schools
- Farmers Markets
- Density of Fast Food



Field Surveys

- Grocery stores and small markets
 - Different types of stores (large to small, c-stores, others)
 - Availability and quality of fruits and vegetables, other healthy foods (new WIC food package)
 - Fruit and vegetable prices
 - Marketing of healthy/unhealthy foods
 - Walkability
- Fast food around schools
 - Availability of healthy options
 - Menu labeling
 - Marketing
- Outdoor marketing around schools
- Food Banks



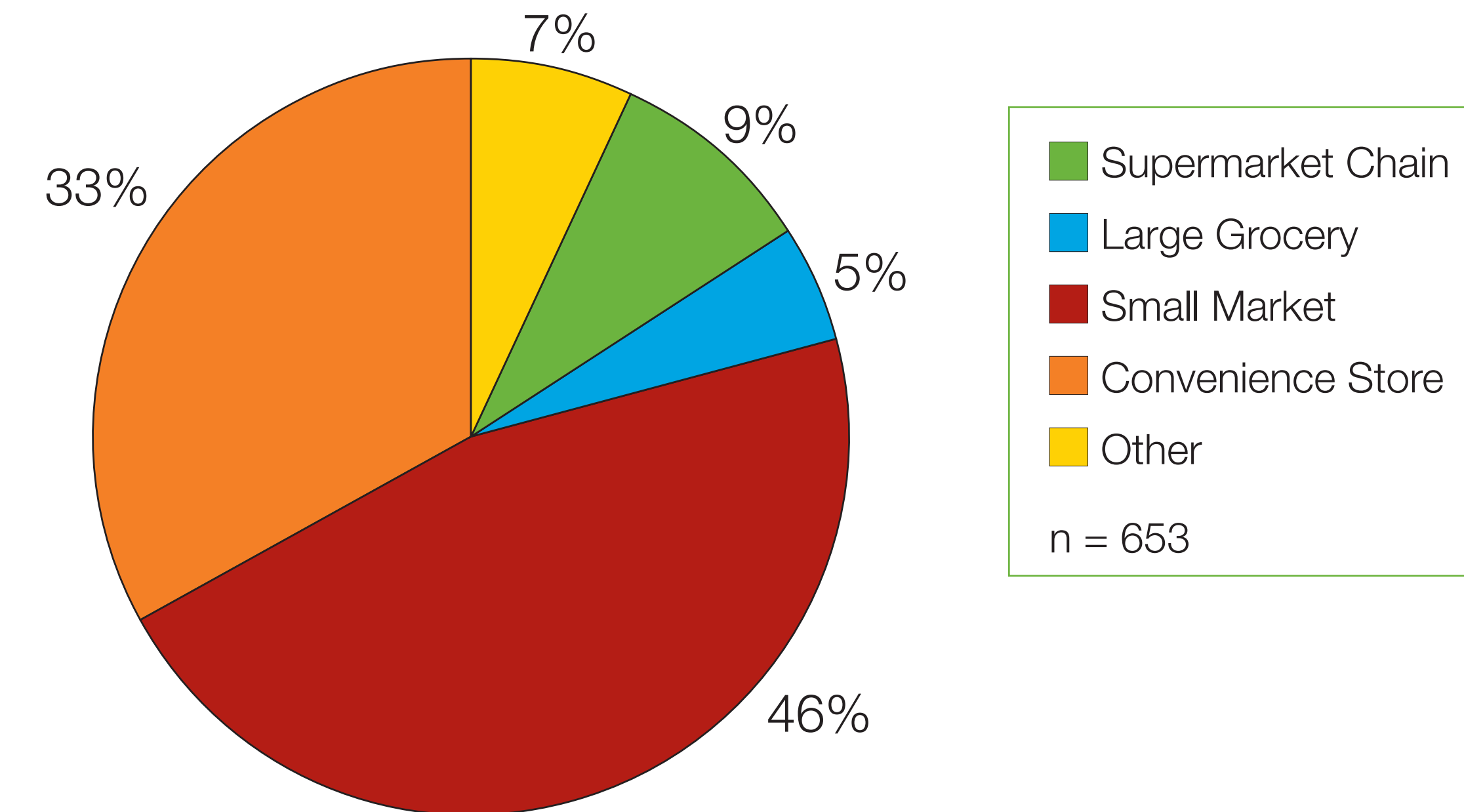
Assessment/Tracking

- Alternative Food Sources
 - Community Supported Agriculture
 - Produce Stands
 - Community Gardens
- Emergency Food Sources
- Local Health Department Infrastructure
- Media Coverage

Overall Perspective

- Combined data for the 81 neighborhoods present a picture of the conditions.
 - 79% of food stores in CX³ neighborhoods are small markets and convenience stores.

CX³ Neighborhoods: Food Store Types



CX³ Neighborhood Food Index*



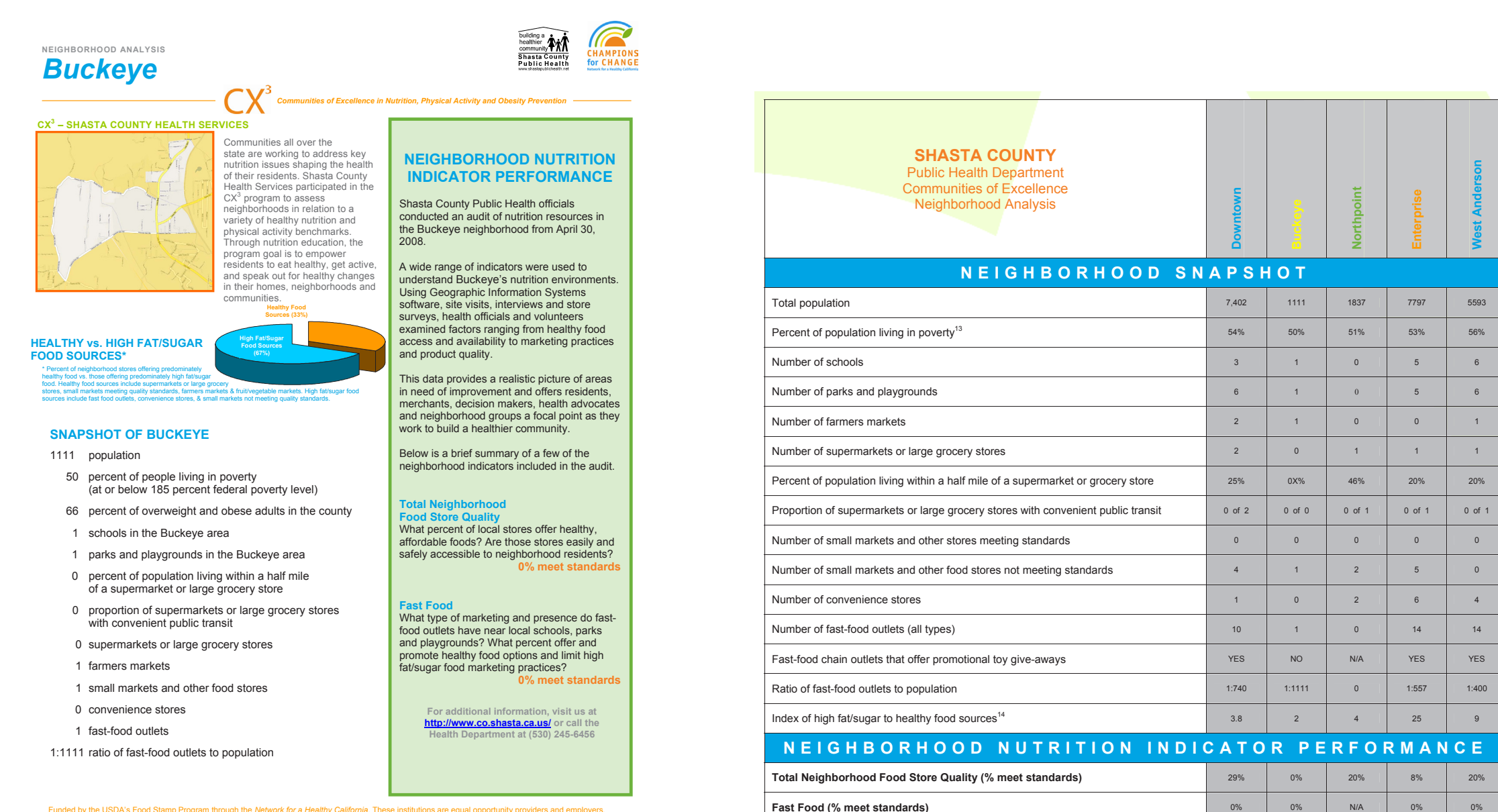
* Adapted from Retail Food Environment Index developed by California Center for Public Health Advocacy

The index shows how "balanced" a neighborhood's food environment is. A lower index is better. Examples: An index of 3 means 3 unhealthy food sources for every 1 healthy food source. Index of 9 means the neighborhood has 9 unhealthy food sources for every 1 healthy food source.

- 32% of neighborhoods have an index between 1 - 5
- 27% of neighborhoods have an index between >5 - 10
- 20% of neighborhoods with an index between 10+ - 25
- 22% of neighborhoods have no healthy food sources

Localized Results Provided:

- In-depth data about each neighborhood
- Snapshot of population and neighborhood infrastructure (number of schools, parks, retail food types)
- Analysis includes scoring criteria assigning weighted values for WIC/Food Stamps, affordable prices for fruits and vegetables, healthy foods, marketing practices, safe and walkable routes to food, etc.



CX³ Evaluation Survey Conducted

- Administered via Survey Monkey to Local Health Departments Participating in CX³
- June 2009
- Quantitative & Qualitative
- Time to complete: 45-60 min
- 96% (22 of 23) *Network* CX³ sites responded
 - 50% have utilized combination of funding

Top 5 Network Interventions:

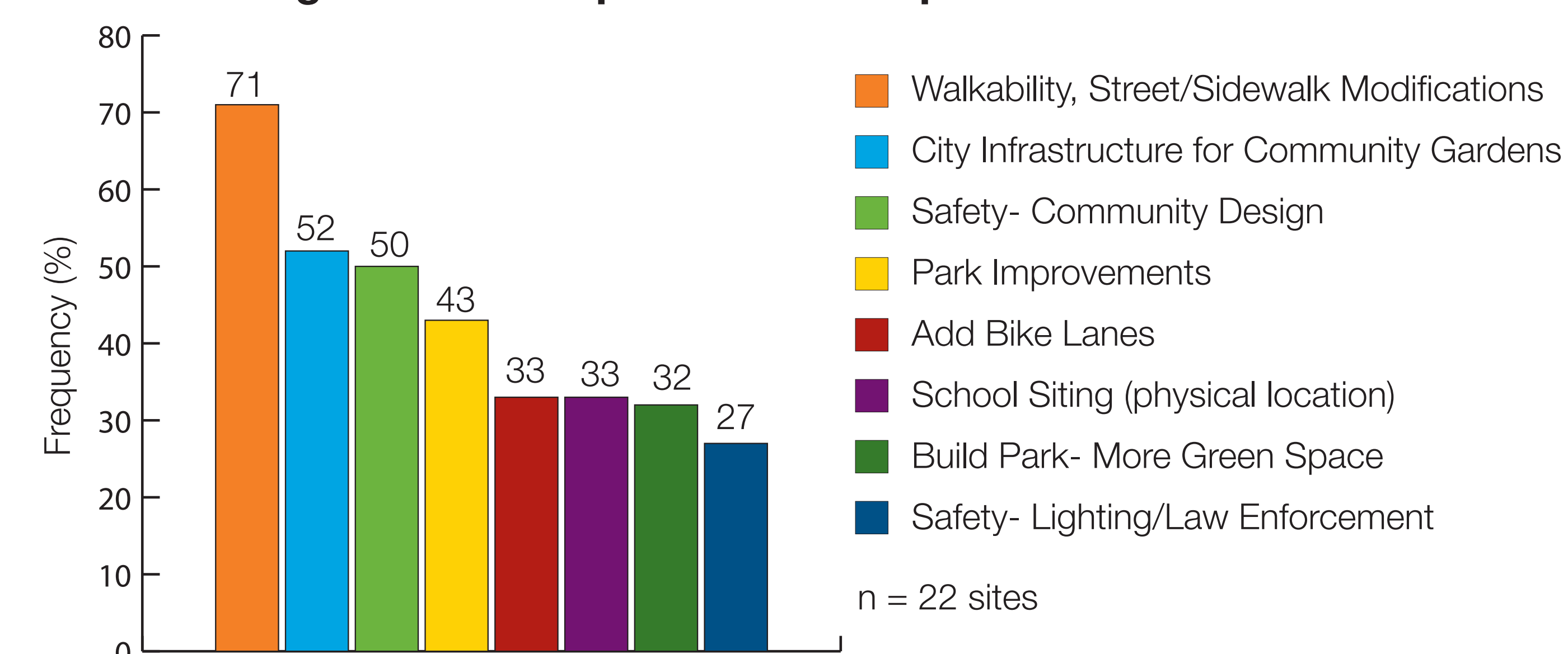
- CX³ data helped identify gaps in consumer-targeted nutrition education
- Network* Retail Program started in some neighborhood stores (73%)
- Compile/provide lists of "where to shop" for healthy food in neighborhood (68%)
- Skill building activities to foster parent or youth "Champions for Change" (68%)
- Food demos in stores, farmers' markets, etc. (68%)
- Corner store activities to promote healthy food options (64%)

n = 22 sites

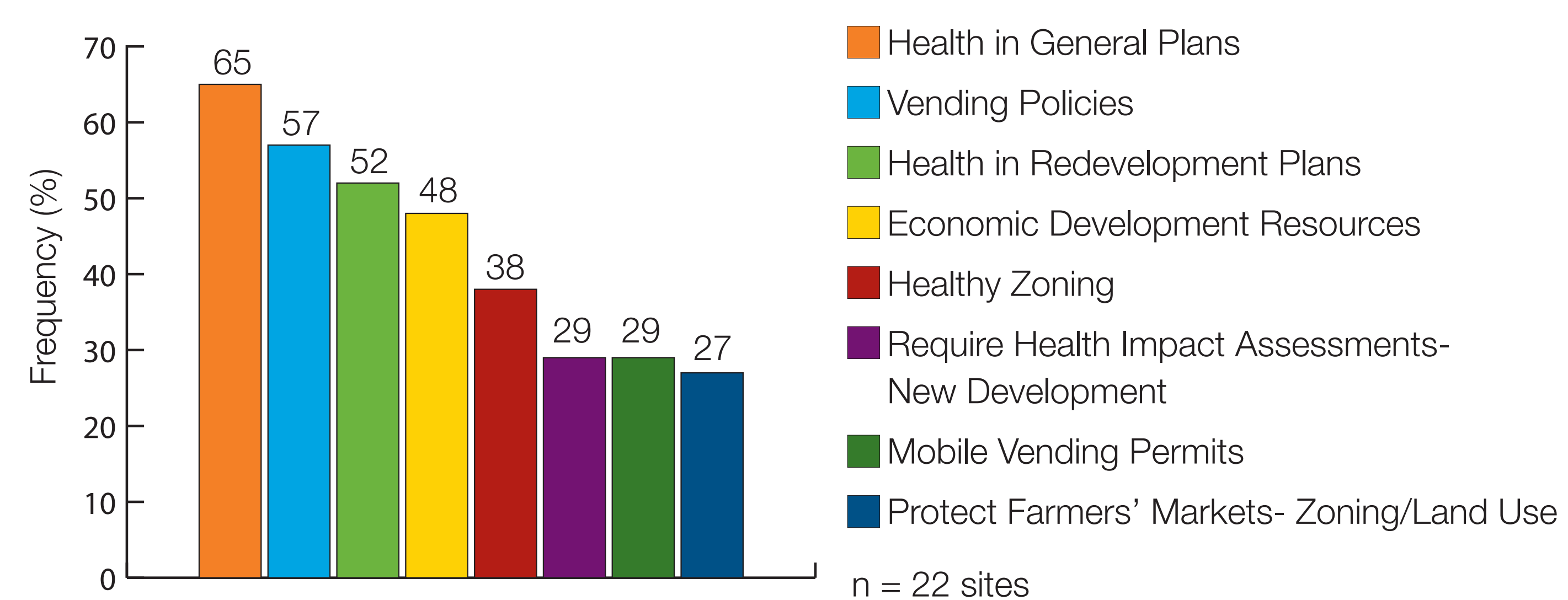
Sites responded as actively implementing or planning to implement

Action with Community Partners

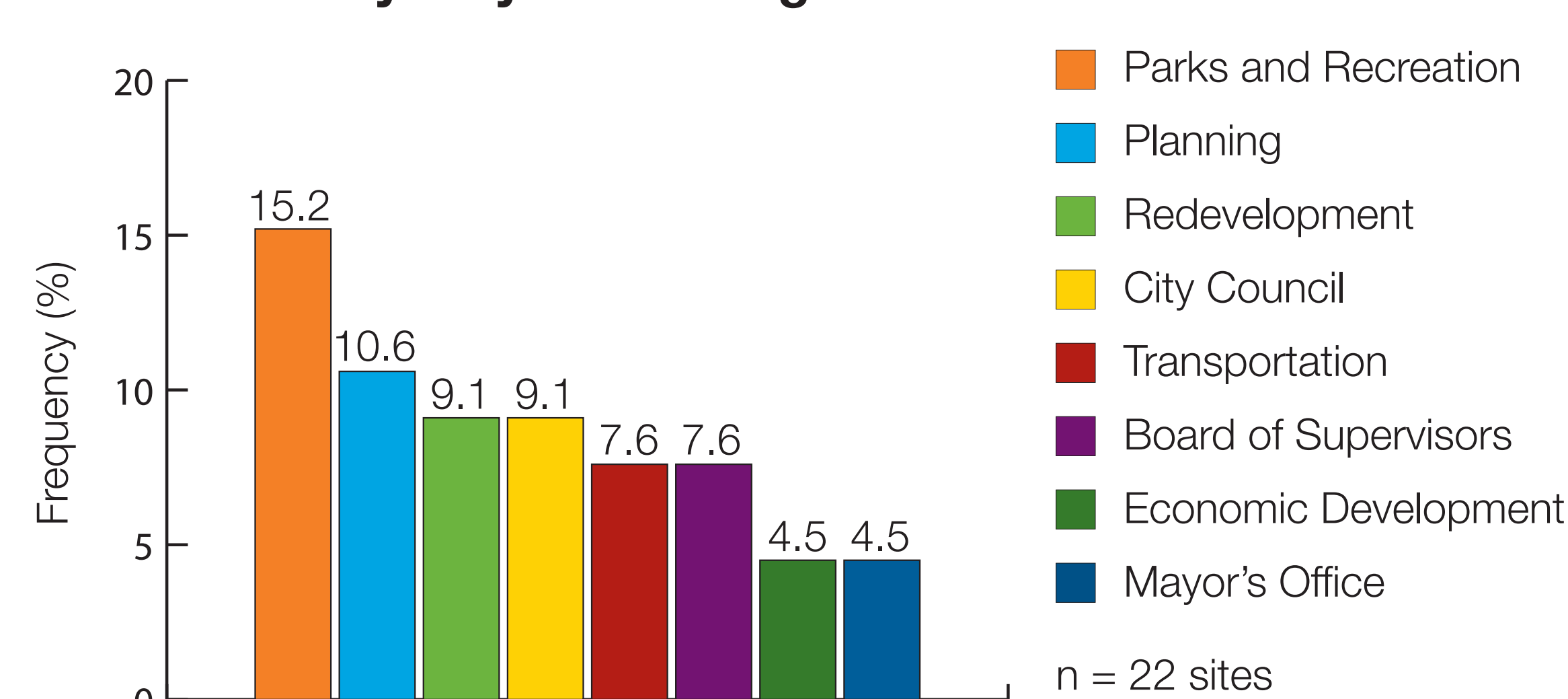
Neighborhood Improvements Reported



Policy Level Approaches



County/City Level Programs Connections



Community Engagement

- Over 80% of the local health departments engaged community members in CX³ process. Benefits noted include:
 - Community more aware of neighborhood conditions
 - Better appreciation for local health department
 - Greater sense of ownership for improving neighborhood

"Working with community members has many rewards because they are the eyes and ears of the community. When they take part and learn CX³ they seemed empowered and much more aware of their environment."

—Local health department staff

Other Findings

- 64% are working with WIC to look at readiness of stores for new WIC food package
- Least common areas being pursued
 - Removal of billboards
 - Store signage elimination/reduction ordinances
 - Store façade improvements
 - Attraction of supermarkets or other healthy retail

Limitations of CX³ Approaches

- Health department sites at different stages of implementation
- Defining neighborhood boundaries using census tracts and census blocks do not always reflect natural neighborhood area
- Lack of neighborhood comparison data (high income) to describe local inequities

Discussion

- Overall, the CX³ real-world neighborhood data appears to be instrumental in changing neighborhood conditions.
 - Local departments pursuing the most policy and environmental changes have multiple funding sources within their agencies.
- The involvement of community members may play a role in stimulating influential city/county level connections, using the neighborhood data to do so.
- Larger vs. smaller local departments: Few differences in community and policy actions being pursued. However, larger health departments found the CX³ data more impactful in fostering changes to improve neighborhood conditions, and provided more opportunities for collaboration and partnerships.



This material was produced by the California Department of Public Health, *Network for a Healthy California*, with funding from the USDA Supplemental Nutrition Assistance Program (formerly the Food Stamp Program). These institutions are equal opportunity providers and employers. In California, food stamps provide assistance to low-income households, and can help buy nutritious foods for better health. For food stamp information, call 877-847-3663. For important nutrition information, visit www.championsforchange.net.