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## Many of California's *Building Healthy Communities* Residents Face Barriers to Healthy Eating

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**M**ore than half of the children and young adults living in *Building Healthy Communities* (BHC) sites drink sugar-sweetened beverages (SSB) at least once per day, and over one-third consume fast food at least twice per week.<sup>1</sup> Consumption of both sugar-sweetened beverages and fast food is linked with higher caloric intake, higher rates of obesity, and an increased risk for type 2 diabetes and other chronic conditions.<sup>2</sup> In addition, a growing body of research suggests that these behaviors are influenced by the local food environment.<sup>3</sup>

There is considerable variation in the consumption of fast food and sugar-sweetened beverages across BHC sites (Exhibit 1). Half of adults in Boyle Heights and the Eastern Coachella Valley regularly consumed fast food (two or more times per week) compared to about one-third of adults in other BHC sites (City Heights, East Salinas and South LA). Similarly, over 65% of adults in the Eastern Coachella Valley, East Salinas and South Los Angeles consumed at least one sugar-sweetened beverage daily. South Los Angeles had the highest proportion of children and teens regularly consuming both fast food (50%) and sugar-sweetened beverages (68%). Boyle Heights also had a high percentage of children and teens drinking at least one sugar-sweetened beverage per day (62%). Overall, 52% of children and teens living

### About *Building Healthy Communities*

*Building Healthy Communities* is a ten year, comprehensive community change initiative sponsored by The California Endowment. In 14 locations across California, residents are working towards transforming their communities through the promotion of health in their neighborhoods and schools. In order to help track and inform the efforts of these communities, the UCLA Center for Health Policy Research measured the health status of residents of BHC sites as part of the 2009 California Health Interview Survey (CHIS 2009). The data collected include more than 500 children, adolescents, parents, and adults age 40 and younger living in each of the 14 BHC sites (approximately 8,400 BHC residents across all 14 sites). This fact sheet utilizes the CHIS 2009 *Building Healthy Communities* oversample data. Additional health information for each of the sites is available through the BHC community health profiles.

## Exhibit 1

## Retail Food Environment Index and Dietary Behaviors in The California Endowment's Building Healthy Communities Initiative Sites, 2009

BHC Site	Retail Food Environment Index	Fast Food 2+ Times per Week	Fast Food 2+ Times per Week	One or More SSB per Day	One or More SSB per Day	Cups of Fruits & Vegetables per Day	Servings of Fruits & Vegetables per Day
	All BHC Respondents	BHC Adults	BHC Children & Teens	BHC Adults	BHC Children & Teens	BHC Adults	BHC Children & Teens
South Kern (Arvin-Lamont)	10.1	43%	43%	61%	73%**	2.5	3.9
Boyle Heights	8.0	51%	48%	51%	62%	2.4	3.6
City Heights	5.2	33%	35%	37%	31%	2.7	3.3
Eastern Coachella Valley	5.8	50%	43%	67%	58%	2.1	3.1
Del Norte County	3.6	34%	20%	59%	45%	2.6	4.0
Southwest/East Merced County	7.6	43%	31%	54%	52%	2.1	3.1
East Oakland	14.0	46%	35%	60%	47%	2.2	3.2
East Salinas	4.9	31%	35%	66%	51%	2.2	3.0
Central/Southeast/Southwest Fresno	13.5	35%	25%**	47%	54%	2.2	2.6
Central/West Long Beach	12.2	42%	29%**	58%	60%**	2.7	4.3
Richmond	16.6	40%	26%	61%	50%	2.9	3.1
Central Santa Ana	9.0	45%	35%	51%	42%	2.8	3.0
South Los Angeles	15.4	31%	50%	68%	65%	2.5	3.0
South Sacramento	9.8	41%	39%	56%	41%	1.9	3.5
<b>All of California</b>	<b>10.3</b>	<b>41%</b>	<b>39%</b>	<b>51%</b>	<b>40%</b>	<b>2.4</b>	<b>3.1</b>
<b>All BHC sites</b>	<b>10.3</b>	<b>41%</b>	<b>36%</b>	<b>56%</b>	<b>52%</b>	<b>2.5</b>	<b>3.3</b>

Data Sources: 2009 California Health Interview Survey full sample and BHC oversample; InfoUSA Business Data

Notes: The CHIS 2009 BHC oversample interviewed the following groups for the BHC initiative: 1) adolescents and children living in BHC sites; 2) adults older than age 40 with children under age 18; and 3) adults age 40 and younger, regardless of whether they have children.

Estimates for California (from the CHIS 2009 full sample) are comparable to the BHC oversample based on the aforementioned eligibility criteria.

The Retail Food Environment Index (RFEI) is an indicator of the density of food outlets that are less likely to carry healthy foods (such as fresh produce) relative to those that are more likely to have such healthy options available. The RFEI is calculated by dividing the number of fast food restaurants, convenience stores (including those in gas stations), liquor stores, chain pharmacies and dollar stores by the number of grocery stores (including supermarkets and warehouse stores), produce stores and farmers markets within a given radius of the household (one mile in urban areas, two miles in smaller cities and suburban areas, and five miles in rural areas). Thus, higher numbers indicate less healthy food environments. The average RFEI of 8.1 across all BHC sites suggests that the average resident targeted by the BHC initiative has more than eight times as many fast food restaurants, convenience stores, liquor stores, dollar stores and pharmacies near home as they do grocery stores, warehouse stores, produce stores and farmers markets.

For adults sugar-sweetened beverages include soda, sports or energy drinks, sweetened fruit drinks and sweetened coffee or tea. For children and adolescents they include soda, sweetened fruit drinks and sports and energy drinks. They do not include diet or sugar-free drinks.

Estimates of fruit and vegetable consumption do not include fried potatoes or 100% fruit juice.

\*\*Unstable estimate

in BHC communities consumed at least one sugar-sweetened beverage per day, compared to 40% of youth in all of California.

The *Dietary Guidelines for Americans* recommends that Americans eat more fruits and vegetables as part of a healthy diet.<sup>4</sup> Nearly everyone needs to eat more fruits and vegetables. Fruit and vegetable consumption among parents and young adults in BHC sites ranged from just 1.9 cups per day in South Sacramento to 2.9 cups in Richmond. Children and teens consumed more servings of fruits and vegetables on average per day, ranging from 2.6 servings in Fresno to 4.3 servings in Long Beach.

Trends in soda, fast food, and fruit and vegetable consumption may be influenced by social, economic and environmental factors, including the availability of various food outlets such as fast food restaurants, convenience stores or grocery stores. Food environments with an abundance of unhealthy options relative to healthier options can adversely impact dietary behaviors and health outcomes.<sup>2</sup> The average resident in BHC communities lives near more than ten times as many stores carrying primarily unhealthy foods as stores that carry a variety of healthier options, which is similar to the California average. However, there is wide variation in food environments across BHC sites. In East Oakland, Richmond and South Los Angeles the ratio of unhealthy to healthy food outlets is greater than or equal to 14 (representing considerably less healthy food environments), but is less than six in City Heights, Coachella, Del Norte County and East Salinas.

## Summary

Many residents of BHC communities live in food environments with an abundance of food outlets that sell primarily unhealthy foods relative to outlets with numerous healthier options. In addition, consumption of fast food and sugar-sweetened beverages is high, and fruit and vegetable consumption could be increased. Evidence linking the food environment with dietary behavior suggests that improving the food environment is a promising strategy for encouraging healthy eating.<sup>3</sup> However, high levels of variation among BHC communities also suggest that there is no single barrier to healthy eating. Helping residents achieve national recommendations to increase consumption of fruits and vegetables and limit consumption of sugary beverages will thus entail community-specific solutions. The challenge for communities is to determine the specific barriers to healthy eating faced by community members and then work to address them. Many communities are already working on plans to address their residents' specific concerns. Local-level data combined with local knowledge about the community can inform these activities.

## Methods

In 2009, the California Health Interview Survey (CHIS 2009) conducted an oversample of The California Endowment's 14 *Building Healthy Communities* (BHC) sites. This fact sheet presents CHIS 2009 data from that sample, which includes the following groups: 1) all adolescents and children living in the BHC sites; 2) adults older than age 40 who have children age 18 and younger; and 3) adults age 40 and younger, regardless of whether they have children. The data include responses from 8,400 residents of these 14 communities – more than 500 at each site. For more information about the sample and data collection, visit <http://healthpolicy.ucla.edu/chis/bhc/Pages/BHC-Data-Collection.aspx>. For a snapshot of health in the BHC sites, visit the BHC Health Profiles: <http://healthpolicy.ucla.edu/chis/bhc/Pages/Get-BHC-Data.aspx>. Using Geographic Information System (GIS) software,

we linked CHIS 2009 data with the locations of retail food outlets from the 2009 InfoUSA business file to construct the Retail Food Environment Index (RFEI). The RFEI is calculated by dividing the number of fast food restaurants, convenience stores (including those in gas stations), liquor stores, chain pharmacies and dollar stores by the number of grocery stores (including supermarkets and warehouse stores), produce stores and farmers markets within a given radius of the household (one mile in urban areas, two miles in smaller cities and suburban areas, and five miles in rural areas). The RFEI is an indicator of the density of food outlets that are less likely to carry healthy foods, such as fresh produce, relative to those that are more likely to have such healthy options available. Although the RFEI can be used to characterize the overall food environment in an area, the food environment varies considerably from neighborhood to neighborhood.

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### References and Notes

- 1 The following groups are the focus of the BHC initiative: 1) all adolescents and children living in the BHC sites; 2) adults older than age 40 who have children age 18 and younger; and 3) adults age 40 and younger, regardless of whether they have children.
- 3 Bowman SA, Gortmaker SL, Ebbeling CB, Pereira MA, Ludwig DS. Effects of fast-food consumption on energy intake and diet quality among children in a national household survey. *Pediatrics*. 2004;113:112-8. Paeratakul S, Ferdinand DP, Champagne CM, Ryan DH, Bray GA. Fast-food consumption among U.S. adults and children: dietary and nutrient intake profile. *Journal of the American Dietetic Association*. 2003;103:1332-8. Babey SH, Jones M, Yu H, Goldstein H. *Bubbling Over: Soda Consumption and Its Link to Obesity in California*. UCLA Center for Health Policy Research and California Center for Public Health Advocacy, 2009. Jacobson MF. (2005). Liquid candy: how soft drinks are harming Americans' health. <http://www.cspinet.org/liquidcandy/>. Accessed April 7, 2011.
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- 4 U.S. Department of Agriculture and U.S. Department of Health and Human Services. *Dietary Guidelines for Americans*, 2010. 7th Edition, Washington, DC: U.S. Government Printing Office, December 2010. <http://www.health.gov/dietaryguidelines/dga2010/DietaryGuidelines2010.pdf>. Accessed August 8, 2013.



This publication contains data from the California Health Interview Survey (CHIS), the nation's largest state health survey. Conducted by the UCLA Center for Health Policy Research, CHIS data give a detailed picture of the health and health care needs of California's large and diverse population. Learn more at: [www.chis.ucla.edu](http://www.chis.ucla.edu)



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