

The impacts of neighbourhood food choices and acculturation on immigrant diets

Ren Thomas
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University of British Columbia
School of Community and Regional Planning

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Dr. Larry Frank

Introduction

Evidence shows that poor diet is a risk factor for chronic diseases, including obesity, diabetes, and hypertension. While diet is to some extent dependent upon individual choice, some researchers believe that the built environment is also a factor in the food choices people make. There has been some research showing that stores selling food are not equally distributed in urban areas; supermarkets are generally located in high-income neighbourhoods while convenience stores are more often located in low-income neighbourhoods. Supermarkets sell a greater variety of healthy foods, including fresh fruit and vegetables, while smaller stores tend to sell only long shelf-life foods such as cookies, soft drinks and chips. There is growing concern that neighbourhoods without supermarkets may not have easy access to healthy food choices. Several municipalities have done in-depth studies of food retail locations in their cities, and have uncovered the factors that may influence the location of supermarkets. These include tight profit margins in the food retail industry and consumer trends, which have led to the dominance of large, full-service grocery stores at the expense of smaller neighbourhood green grocers. Some cities, such as Madison, Dallas, Rochester, and Baltimore have made efforts to attract grocery stores to key neighbourhoods, showing that planners can help influence food choices.

In Canada, where immigration accounts for 70% of our population growth, the food choices of new immigrants should be a concern. As immigrants settle into their new lives, they go through a process of acculturation to Western diets. Studies show that acculturation to the US is associated with shifts from traditional ethnic diets featuring vegetables and whole grains to the more processed, high-fat and high-sugar foods that are popular and easily available in the US (Unger et al, 2004, p468). As a result, second- and third-generation immigrants are at greater risk for obesity, heart disease and hypertension. Adolescents show a higher prevalence of overweight, poor eating habits and low physical activity. Researchers, mainly in the fields of sociology and health, have proposed several possible explanations for dietary acculturation, including the desire of new immigrants to fit into the American culture and the lack of availability of traditional foods. As yet, there has been no research linking the diet of immigrants to the food choices available in their neighbourhoods. Canadian cities might be ideal places in which to explore this relationship because of the unique patterns of immigration seen in our three major cities. In Canada, the vast majority of immigrants settle in Vancouver, Toronto, and Montreal.

Historically, ethnic food stores in these cities have provided a means for new immigrants to buy their traditional foods within their own neighbourhoods. The variety and location of ethnic food stores in Canada's three largest cities may influence immigrants' diets.

This paper explores the link between diet and neighbourhood food choices, including the location of grocery stores and ethnic food stores. Research of dietary acculturation in Canada shows that availability of ethnic foods results in dietary modification, often with negative impacts on health (Koc and Welsh, 2001, p4). The policies of several municipalities to encourage the establishment of local grocery stores highlights the planner's role in protecting a variety of food choices. The extension of these policies to support local ethnic stores could help new immigrants to access their own traditional foods more easily, supporting public health goals.

Diet and health

There are many factors influencing diet, including cultural preferences, nutrition knowledge, lifestyle and the media. There is a definite link between diet and chronic diseases.

Researchers in the sociology and health fields have done considerable work relating poor diet to poor health. Diet-related disease results in 120,000 premature deaths annually for those aged 55-74 (Finke and Huston, 2003, p292). Diets limited to a few food categories are associated with an increased risk of mortality (Spindler and Schultz, 1996, p65). With today's busy lifestyles, many people rely on pre-packaged, takeout or restaurant meals. Food prepared away from home makes up 32% of the total calories consumed by Americans (Unger et al, 2004, p468). Yet meals and snacks consumed away from home typically contain more calories and a higher percentage of fat. In particular, snacks chosen by teens tend to be high-sugar or high-fat, and teens eat at least a third of their away-from-home meals at fast-food restaurants (Story and Moe, 2000, p468). Children who eat dinner with their families consume more fruits and vegetables, fewer fried foods, and less soda than children who do not eat dinner with their families (Dietz and Gortmaker, 2002, p343). The two-income household, increased commuting time, and changing priorities may contribute to changes in meal preparation.

In addition to eating out more often and eating more processed foods, there have been changes in the way people shop for their groceries in order to prepare meals at home. Planners have

become increasingly concerned about the ability of people to buy healthy food in their own neighbourhoods.

Food retail trends



Changes in food retail in the past twenty-five years have led to fewer grocery stores and an increased average size (Rex and Blair, 2003, p459).

Figure 1
Typical big-box grocery store. Image: City of Madison, 2004.

The City of Madison, Wisconsin did a study of grocery stores in their city neighbourhoods. They found that tight profit margins in the food retail industry make it difficult for businesses to survive without efficient distribution networks and large stores (2004, p8). Food chains with sufficient capital often own and control their own shipping and distribution systems to cut down on profit loss, so that the large chains can save the most money. Edge-of-town or out-of-town stores take advantage of economies of scale and freeway transportation, reducing labour costs and prices to stay in business (p14). In low-income areas, on the other hand, there are few full-service grocery stores:

With costs and revenues spread throughout regions, or internationally, it is not at all rare for corporate grocery store chains to close less profitable stores and focus operation in higher profit areas. (p9)

Consumer trends indicate that people in the US expect cheap food; supported by federal subsidies for oil, water and large-scale agricultural production, US citizens pay less for food compared to income levels than consumers in other countries (p9). Consumers are used to one-stop shopping; a 2002 survey showed that shoppers spend an average of 47 minutes per trip inside the grocery store (p13). Consumers will take more time out to seek value, and even supermarkets face increased competition from warehouse stores and natural food stores. In the US, a handful of corporations now operate the vast majority of food retail; the largest food retailer in the US is Wal-Mart (p14).

In this quest for cheaper food, small independently-owned neighbourhood grocery stores are the losers. Small grocery stores must buy and sell things at higher rates and can't tap into mainstream food distribution system (p15). Small stores with high quality of specialty foods often struggle but persist in middle-to-high-income areas, where they gain enough revenue to pay high rents (p8). Small food stores are disproportionately located in central-city and low-income neighbourhoods (Kaufman et al, 1997, p6). A study in Sandwell, UK (Rex and Blair, 2003) used GIS mapping to show that most residents didn't have access to healthy food within walking distance (p461).

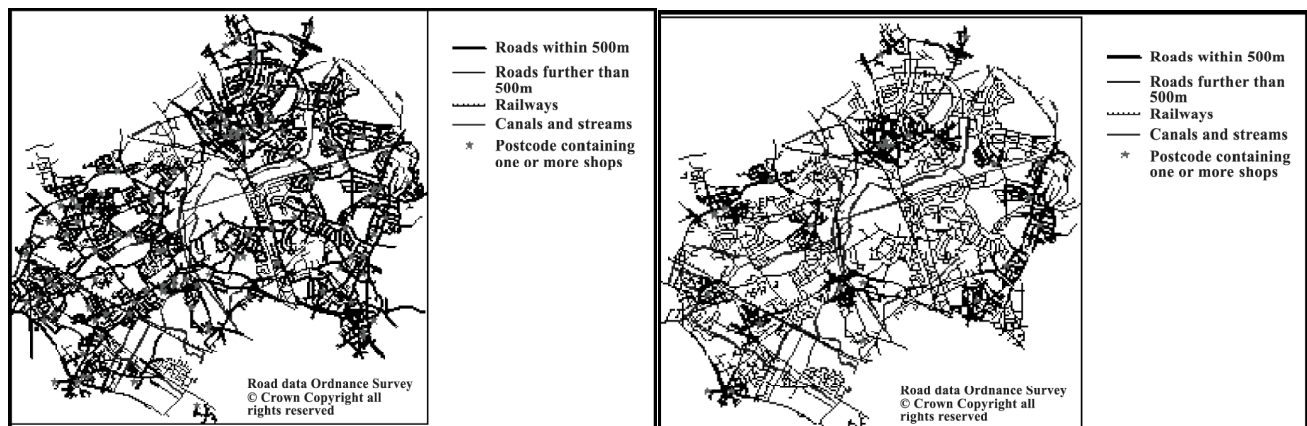


Figure 2
Roads within 500m of a postcode containing one or more shops selling food (left) and those containing one or more shops where food is reasonably priced and which sell more than eight kinds of vegetables (right). Image: Rex and Blair, 2003.

Most of the smaller shops they found specialized in long shelf-life foods such as cookies, soft drinks and chips. Interviews with retailers showed that the main reason why fruit and vegetables weren't stocked was because they are highly perishable, difficult to manage and generate little income for the shelf space. The researchers also noted that "the internal and external appearances of many of the shops was such that many shoppers would be reluctant to buy this kind of food in this kind of shop" (p461). Local residents were likely used to going to the corner store for candy or snacks, not for apples or bananas.

The researchers felt that the loss of eight independent retail stores per day in Sandwell (from 1986-1997) was a cause for concern. They write, "In areas where car ownership is low, the loss of small shops is serious, as rural areas are sometimes left with no shops at all or only those

selling long shelf-life foods” (p456). People in rural areas would then be unable to buy fresh fruits and vegetables at all, unless they borrowed or rented a car.

Low-income neighbourhoods are frequently left with only convenience stores. Often these are the most viable option for those without a car (City of Madison, 2004, p8). In the US, the pattern of supermarket locations has been mapped using GIS:

In large cities across the US such as Detroit, Los Angeles and Philadelphia, statistical patterns and maps show significantly fewer supermarkets in areas with a high percentage of low-income and minority residents (p10).

Everyone is affected by these inequalities in food choices. New immigrants are no exception; in fact they may face particular disadvantage in accessing their traditional foods.

Acculturation

Acculturation is defined as an exchange of cultural habits that results when groups come into continuous contact: both cultures change, but each group remains distinct. Acculturation allows acceptance or rejection of aspects of both the ‘old’ and ‘new’ cultures, while assimilation implies total enculturation to the new, dominant culture (Kraft, 2005; Spindler and Schultz, 1996, p65). Several studies have looked at the health effects of dietary acculturation on the health of immigrant populations. Number of years of residence in the US is linked to higher Body Mass Index (BMI) after ten years (Kraft, 2005, p1). One of the reasons for this is the incorporation of western foods and eating habits into the lifestyles of immigrants.

There is recent evidence that acculturation to western diets is detrimental to the health of immigrants. Some researchers claim that US culture itself “has been implicated as a risk factor for unhealthy behaviours among adolescents” (Unger et al, 2004, p268). Research shows a strong correlation between acculturation and obesity (Gray et al, 2005, p3351). Overweight is especially prevalent among some ethnic minority and immigrant groups in the US, including Hispanics and African Americans. Asian-Americans have a low prevalence of overweight compared to other ethnic groups, but their risk of overweight increases with acculturation to the US (Unger et al, 2004, p468). A University of North Carolina-Chapel Hill study showed all Asian immigrant groups except Chinese and Filipino doubled their proportion of obese children during

the transition from first-generation to second-generation residency (Koc and Welsh, 2002, p6). Those born overseas were half as likely to be overweight as those born in the US.

Dietary acculturation may simply be an attempt to fit into the new culture, particularly for children and adolescents who want to be accepted by their American peers. In a study of three generations of Japanese Americans, significant differences were found in diet. The Issei, or first generation of Japanese immigrants to the US, ate more traditional Japanese foods, such as fish, soy products, tofu, and vegetables. Their grandchildren, the Sansei, consumed more cheese, salty snacks, soft drinks and alcohol. They also had different meal patterns; while the Issei usually ate three meals a day, the Sansei frequently skipped meals, relied on takeout foods more often and ate out more frequently (Kudo et al, 2000, p667). A study of Hispanic acculturation in Mississippi noted that the traditional Hispanic diet is healthy and includes many complex carbohydrates and vegetables. Hispanics in the US eat more simple sugars, fat, white sliced bread, mayonnaise, flour (instead of corn) tortillas, sweetened beverages, snacks, sweets and meats (Gray et al, 2005, p352). They consume less beans and fresh fruit drinks. They bought fast food more often in the US than they had in their home countries, where people rarely ate fast food. Staple foods such as rice, eggs and potatoes showed the most stability pre- and post-immigration, while 'American foods' like hamburgers and pizza showed the greatest increase. Processed foods were associated with a degree of status among certain audiences, and children particularly wanted to be a part of the new food culture. Parents, however, voiced concerns about the foods consumed at school, such as pizza and burgers. On the whole, participants exhibited a strong tie to their national dishes and appreciated foods prepared from scratch, considered it important to pass on the preparation of traditional dishes to their offspring (p358).

Dietary acculturation is also linked to the availability of ethnic foods. New immigrants may find it difficult to find their traditional foods in North American supermarkets or grocery stores. A study of three ethnic groups in Toronto (francophone African, Somalian, and Vietnamese) found that new immigrants were "often faced with unavailability or high costs of foods used in traditional diets" (Koc and Welsh, 2001, p4). Statistics show that people living in Canada for less than ten years were at significantly greater nutritional risk than Canadian-born or those that immigrated ten years ago (p5). The researchers summarized,

As immigrants pick up mainstream “North-American” ways of eating while retaining certain features of their traditional diets, they are plagued by overconsumption, obesity, diabetes, hypertension, and the other chronic diseases associated with western diets. (p5)

Participants in the study found that local ethnic stores and supermarkets (in certain neighbourhoods where there was a significant ethnic population) carried specialty and ethnic foods. However, there was a significant variation in ethnic foods from supermarket to supermarket, and immigrants still relied on ethnic food retailers for more specialized foods (eg. halal meats, p7). Another complaint among new immigrants was,

...the quality of the food items they find in Canada. Especially for those who are used to shopping for fresh produce, baked goods and meat on a daily basis, the typical supermarket is not considered ideal despite the wider selection of products it offers. High fat content, difficulty in getting fresh and ripe fruits and vegetables, and quality of meat, poultry and fish were major sources of complaint. (p7)

A study of Chinese restaurants in Atlanta had a similar theme; most restaurants in the survey used ‘American vegetables’ such as carrots, snow peas, green peppers, broccoli and mushrooms in the preparation of meals rather than traditional fresh bamboo shoots, hotbed chives, garlic bolt and wax gourd. Some of the Chinese vegetables were available in Atlanta but were expensive (Lu and Fine, 1995, p541).

Acculturation has an effect on North American diets; not only are new immigrants exposed to North American foods, but North Americans enjoy eating foods from different parts of the globe. However, many ethnic restaurants adjust their dishes to account for western tastes, or omit certain dishes that are not as acceptable to western thinking. The Atlanta study of Chinese restaurants showed that the owners modified their dishes both because of the high cost of traditional Chinese vegetables and because American tastes are different. They dry-fried chow mein noodles, added more sugar to their sauces, and chopped noodles into shorter lengths so they could be eaten easier with forks. Certain dishes, such as those that included fresh steamed fish, were omitted altogether because they were unsuitable to American tastes. The restaurants also adapted to western meal habits, serving food buffet-style and with quick service. While Chinese people enjoy talking over a meal and do not mind waiting up to an hour for food, Americans prefer fast service (Lu and Fine, 1995, p542). But as the authors were quick to point out, authenticity is in continual flux. Ethnic food changes over time as foods are incorporated and migration, technological change, food shortages, and trends have their effects on national diets (p538).

The ethnic neighbourhoods that have historically arisen in many Canadian and American cities were often anchored by a variety of shops, restaurants and services owned by new immigrants. Often, the owners of these stores are first-generation immigrants:

Historically, food retailing, catering or restaurant businesses have constituted a typical entry-level economic activity in Canada. Requiring limited capital investment, these labour intensive businesses offered alternatives to those who preferred to be “their own bosses.” From credit to supply, from access to labour to consumers, ethnic networks become vital for the success of these enterprises. This in return creates a tendency for ethnic occupational concentration. (Koc and Welsh, 2001, p7)

With independently owned stores, entry-level and management-level job opportunities are accessible to people of various ages and backgrounds (City of Madison, 2004, p13). Grocery stores “typically serve as important community spaces and “anchor businesses” to help to catalyze further economic development in neighbourhoods (p13). Considering the importance of ethnic grocery stores to the physical and economic health of ethnic neighbourhoods, perhaps we should consider policy alternatives that support these stores.

Travel patterns and food shopping

Immigrants may follow different travel patterns to buy their food than native-born North Americans. Most North Americans buy their food at supermarkets, which are often car-oriented. Vast parking lots, main doors facing the parking lots instead of the street, and bus stops that require a long walk across a parking lot to enter the store are typical characteristics. A study of a Des Moines, Iowa neighbourhood found that 75% of the participants drove to get their groceries while only 3% walked (Morton et al, 2003, p10). 32.1% travelled only 1-5 minutes to get to the grocery store, 26.6% travelled 6-10 minutes and only 17% travelled more than 20 minutes. 29% said it was not easy to get to a grocery store. Most people bought their groceries once a week. Herein lies the crux of the situation; North Americans have become used to stocking up groceries once a week with a car trip to the supermarket. Most would never think of stopping by a smaller store on the way home to pick up a few things, something that could easily be done in conjunction with transit or non-motorized travel modes.

Rex and Blair (2003) felt that local shops within walking distance provide a motivation to incorporate physical activity into our lifestyle and decrease social isolation (p462). But they admit,

Weekly shopping by public transport is heavy and difficult. If a family of four follows health recommendations to eat five portions of fruit and vegetables a day and makes a weekly shopping trip, they will need to carry [14 pounds] simply in fruits and vegetables (p463).

They write that people with freezers and cars can restrict their shopping trips to a weekly supermarket visit while people who rely on transit are limited by their capacity to carry food (p462). In a sense, the dominance of supermarkets at the expense of smaller, neighbourhood grocery stores has only benefited car-owners in high-income neighbourhoods.

Local shops within walking distance allow people to pick up only what they need for the next day or two. This pattern of shopping, while rare in North America today, is still common in other countries as it was here up until the predominance of supermarkets. Proximity of food retailers to residents can drastically reduce the numbers of vehicle trips used to buy groceries (City of Madison, 2004, p10).

Two points here are relevant to food choices for immigrants. First, as Koc and Welsh (2001) point out, many new immigrants may be used to buying produce and meats daily:

Freshness was a recurring theme among many different groups. It ranged from an unfamiliarity with frozen foods, a longing for the tastier and fresher fruits and vegetables of their home country, and the desire to have freshly caught fish (p8).

In the Mississippi study of Hispanic immigrants, participants commented that “food in the US is artificial in taste” and “not as fresh” as they were used to (Gray et al, 2005, p357). One participant commented, “Fruits in the US do not have flavor or aroma. Milk and butter here are not milk and butter.” Several said they had to get used to using canned foods in their cooking (p356). Small grocery stores in neighbourhoods would allow the purchase of fruits and vegetables on a daily basis. The proliferation of such shops in Vancouver’s Lower Mainland ensures quick turnover and fresh, good quality produce.

Secondly, immigrants may be less likely to drive to grocery stores. A Canadian study of 1996 and 2001 census data showed that new immigrants used transit more than Canadian-born individuals, even after controlling for demographic characteristics, income, commute distance and residential distance from the city centre (Heisz and Schellenberg, 2001, p1). In Toronto, over one-third of recent immigrants (36.3%) usually commute by transit, while only one-fifth of

Canadian-born persons do so (20.7%). In Montreal, the share of recent immigrants who usually commute to work on public transit (at 48.6%) is more than twice that of Canadian-born persons (at 20.9%) (p3).

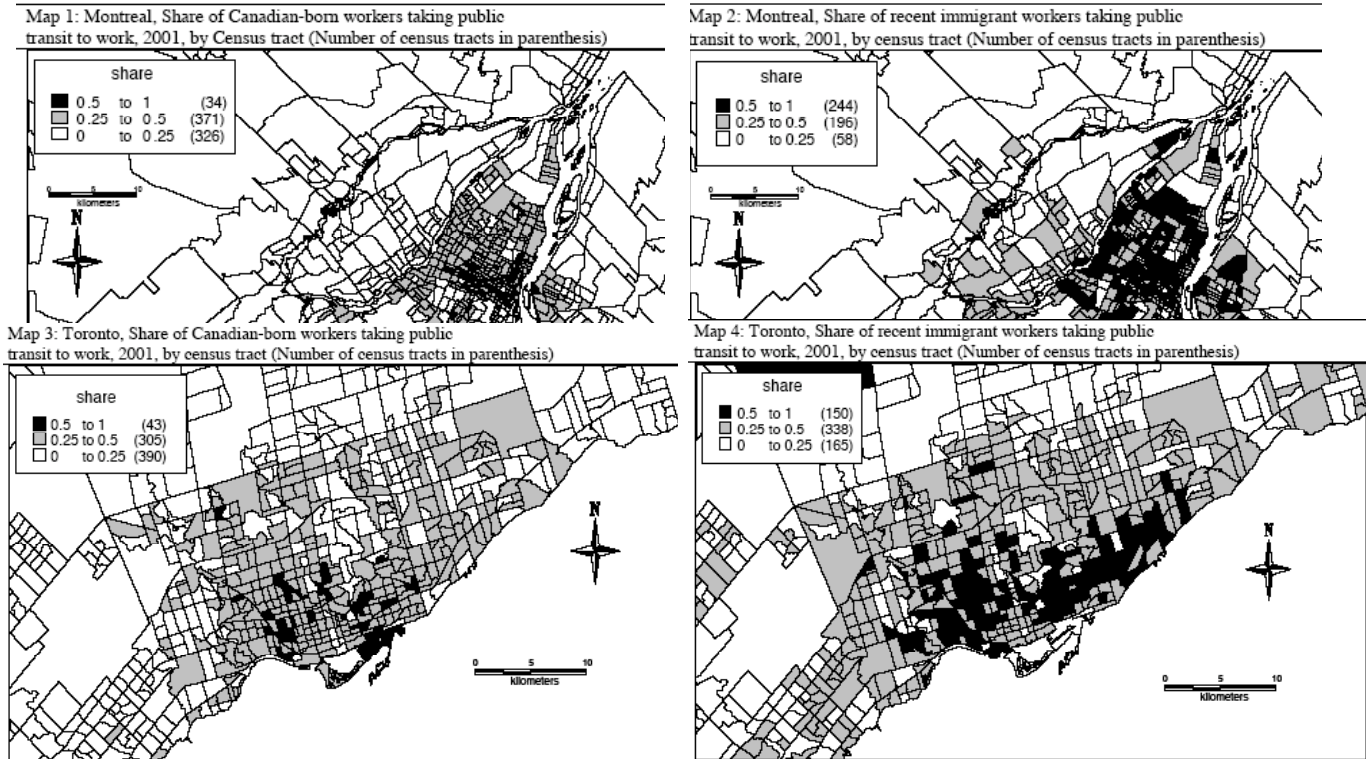


Figure 3
 Montreal's share of Canadian-born workers taking transportation to work, 2001, by census tract (top left) and share of immigrant workers taking transportation to work (top right). Toronto's share of Canadian-born workers taking transportation to work, 2001, by census tract (bottom left) and share of immigrant workers taking transportation to work (bottom right). Black indicates census tracts where over 50% of residents use transit to commute, and grey indicates 25-50% use transit. Image: Heisz and Schellenberg, 2004.

The study also showed that newer cohorts of immigrants have higher rates of transit use than earlier cohorts (p15). This is despite the fact that earlier cohorts initially settled in the downtown areas of CMAs while many immigrants in the 1980s and 1990s tended to settle directly in suburban areas. Less frequent transit service in suburban communities may play a less important role in immigrant communities.

While this study only looked at travel to work data, there are implications for non-work travel, including trips to the grocery store. If immigrants use transit at such high levels for commuting, an investigation into their non-work travel patterns could show a similar trend. A study of transit access provided to grocery stores, particularly in ethnic neighbourhoods, is crucial.

Policies to attract and preserve food retailers

Several cities have created initiatives to attract grocery stores to underserved neighbourhoods or to protect existing neighbourhood stores. These policies could be extended to ethnic food stores, as their presence in ethnic neighbourhoods helps immigrants find their traditional foods. In the interests of public health, planners could map ethnic food retail locations and develop strategies for their protection.

The City of Madison, Wisconsin continues to support citizen-led initiatives and aid in negotiations to promote grocery stores on a site-by-site basis. Their draft report on grocery stores in city neighbourhoods set the following goals for Madison (2004, p28):

- 1) Retain a diversity of food buying options and preserve maximum access to nutritious, affordable, and culturally appropriate food choices for all Madison residents.
- 2) Encourage the development of small and medium sized grocery stores in developing and re-developing neighborhoods to provide food-purchasing options within proximity to residents in neighborhoods across the City of Madison.
- 3) Encourage food related entrepreneurial & employment opportunities that support one or both of the above goals.
- 4) Support Madison-owned grocery stores to the extent possible.

Their policy framework (p29-31) includes:

- Specific language in their Comprehensive Plan
- Considering possibilities for food retail in proposed mixed-use developments within commercial zones
- Initiating shared parking negotiations between potential grocers and nearby businesses
- Setting aside a percentage of funds from their Community Development Block Grant and Capital Revolving Loan Programs each year to ensure that among all small businesses, applicants from food retail businesses providing entrepreneurial and employment opportunities are identified and supported in Madison neighborhoods
- Using tax-increment financing to encourage grocery stores in specific areas
- Giving Neighbourhood Planning Grants to neighbourhood associations for market research to aid in the recruitment of grocery stores
- Using municipal bonds to support improvements to “blighted” areas to attract grocery stores

Three potential opportunities related to transportation were to support a focused campaign to inform citizens of existing Metro transit options to and from grocery stores; to evaluate the transportation needs of senior citizens and those without vehicles in Madison, and expand public transportation options to grocery stores or support food delivery programs accordingly; and to explore opportunities to work with taxi companies to provide free or reduced rates to full-service grocery stores for those that meet a particular set of criteria, such as participants in the Women, Infants, and Children (WIC) program or food stamp recipients (p32).

The City of Madison report also includes examples from other cities such as Dallas, Texas and Rochester, New York. After little success encouraging leading area food retailers to add new stores, these two cities compiled incentives to encourage outside chains to locate a package of five stores within each city. Incentives included proposed sites, tax abatements, and a reduction of permitting fees (p15).

A partnership between the Baltimore Department of Housing & Community Development, the Baltimore Development Corporation, the State of Maryland, and Save-A-Lot Foods brought a Save-A-Lot store to West Baltimore to fulfill a need for a supermarket and jobs for residents. A press release in June 2001 stated that 6 more locations in Baltimore were “on the drawing board” (p15).

In Los Angeles County, a 2002 study comparing the number of supermarkets in various zip codes found that in areas where only 10-20% of the households earn less than the \$35,000/yr, there are over 3 times as many supermarkets as in those where 60-70% of the households earn less than \$35,000/yr. The city has not yet taken a proactive stance towards grocery stores, but recommendations within a report prepared by the Urban and Environmental Policy Institute call for a City-wide ordinance on supermarket access in low-income communities, city assistance with land identification, environmental remediation, market feasibility studies, tax breaks, and other incentives to encourage grocery stores (p15).

With staffing resources from the City of Portland’s Office of Sustainable Development, Multnomah County’s Department of Health and Department of Business & Community Services, a Food Policy Council created in the Spring of 2002 began to take a comprehensive look at food issues as they relate to hunger, diet-related illness, and supporting local agriculture. In its

October 2003 report, one of 6 major goals expressed was to develop community-based solutions for areas with inadequate food access, (whether the need be for a full service grocery store, a community garden, or a farmers' market). When possible, the policies suggested by the Food Policy Council make linkages between regional agricultural production and ensuring access to food for area residents (p16).

The Austin Food Policy Council, no longer in existence, worked with the Austin Transit Authority to create more frequent circulation routes between public housing developments, low-income neighborhoods, and supermarkets. This was considered an interim solution to a lack of grocery stores in low-income neighborhoods (p16).

With policies like this under consideration, it is obvious that access to food choices is an important equity issue in cities across North America. Although none of the cities mentioned above has considered policies to protect or encourage the establishment ethnic food stores, the Madison report featured a number of ethnic stores and neighbourhood co-ops that the city continued to support. It would be relatively easy to identify specific food needs in ethnic neighbourhoods, with the help of ethnic cultural associations. These could be mapped and prioritized for future entrepreneurial opportunities and flagged for neighbourhood grants or other development incentives. This type of initiative would help preserve traditional diets, encourage small-scale retail development in ethnic neighbourhoods and encourage walking or cycling to stores. Transit access to supermarkets could be encouraged by increasing route frequency to stores, providing scheduling information at stores, and designing parking lots and bus stops so that people would not have to cross a vast parking lot to access the store.

Conclusion

Research has shown that supermarkets are unequally distributed across regions, and there is some concern that neighbourhoods without supermarkets may not have easy access to healthy food choices. Small neighbourhood stores, which at one time provided fresh meats, produce and milk, now often only sell long shelf-life foods. There have also been several trends in the food retail industry, including tight profit margins and consumer shopping habits, which have encouraged the development of supermarkets over smaller stores. Every consumer is affected by these trends. Neighbourhood food choices may affect immigrants in a different way. As

immigrants settle into their new lives, they go through a process of acculturation, including dietary acculturation to Western diets. As a result, second- and third-generation immigrants are at greater risk for chronic diseases. Dietary acculturation occurs for many reasons, but a major influence is the lack of availability of traditional foods.

Historically, ethnic food stores have provided a means for new immigrants to buy their traditional foods within their own neighbourhoods. Small, independently-owned food stores have also functioned as economic catalysts for new commercial developments in ethnic neighbourhoods. Many cities have made efforts to attract grocery stores, showing that planners can help influence food choices. Future policies on access to food choices could also help support ethnic food stores, in an effort to preserve traditional diets and provide job opportunities within ethnic neighbourhoods.

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