



Chapter 6: **Transportation**

Improving Transportation Systems for Healthier Food Retail

General Strategy Overview

This chapter discusses the public health role in developing safe and viable transportation options for people to travel to healthier food retail venues.

Individuals who do not own cars are dependent on public transportation (such as buses and trains) as well as non-motorized modes of transportation (such as walking and biking). These dependent individuals often face challenges in getting to food retailers where they can purchase healthier food items.¹⁰⁵ Challenges include not being able to walk or not having the time to walk long distances to food retail venues, managing bags of groceries on a bus, or having to get rides with friends or neighbors.^{105,106} Thus, those with transportation challenges may rely on less healthy food options that are cheaper and more readily available.^{106,107}

Transit dependent individuals:

- ▶ Have little or no access to an automobile and are frequently low income. People of color, the elderly, young people, and people with disabilities often live in households without available vehicles.¹⁰⁸⁻¹¹⁰
- ▶ Tend to live in communities lacking access to affordable healthier food retail options and adequate transit services.^{105,106,110}
- ▶ May have to ride several transit lines to reach the nearest affordable grocery store^{105,106} or may be required to switch to a different mode of transportation. These transfers may be costly in terms of money, time, and energy.
- ▶ Are typically able to purchase only the amount of food they can carry with them during any single trip on public transportation,^{105,106,111} and are limited to non-refrigerated items if trips are particularly long.

More affordable and accessible transportation options provide easier travel to retail stores with healthier food options. Enhancing transportation systems may facilitate the reduction of health disparities, in part, by improving transportation access to clinics and pharmacies in addition to healthier food retail venues.¹⁰⁹ Improved transportation systems can also increase general mobility and physical activity, decrease traffic collisions, and improve air quality.¹¹² Additionally,

What is a Transportation System?

Transportation systems allow for movement of people and goods around a specific area. These systems may employ different modes of transportation including:

Streets and highways for motorized transportation.

- ▶ Cars and trucks for personal use.
- ▶ Buses, shuttles, trolleys, and coaches for public use.

Off-traffic transportation.

- ▶ Trains, rapid transit, subways, and light rail.

Non-motorized transportation.

- ▶ Sidewalks, walkways, trails, bike lanes, and bike paths.

communities may see economic benefits through new jobs and connected neighborhoods.¹⁰⁹ Public health practitioners can address transportation issues as a cross-cutting method for improving access to healthier food retail.

Working with Partners

As a public health practitioner, you will need to collaborate with partners when addressing transportation issues in communities with low access to healthier food retail.

The [Partnerships, Assessment, and Evaluation](#) chapter has detailed information on partnering for healthier food retail initiatives. Organizations that have the oversight of and expertise on transportation and related issues include:

Transportation and Planning Groups

- ▶ State Departments of Transportation (DOT).
- ▶ Metropolitan Planning Organizations (MPO).^{§§}
- ▶ Regional Transportation Authorities.
- ▶ Urban or Regional Planning agencies or organizations.
- ▶ Transportation service companies, such as taxi and shuttle services.

Food Retail Groups

- ▶ Food Retail Associations.
- ▶ Corporate representatives of chain retailers.
- ▶ Government agencies.
- ▶ City governments.

Non-governmental Organizations

- ▶ Service organizations that assist special populations, such as senior citizens or those with disabilities.

When considering transportation initiatives, note that transportation planning typically happens at a state, regional, or local level. However, funding usually is allocated from the federal government and administered by state agencies, such as DOT. This means initiatives may need to follow federal requirements for planning and implementing activities. It also means that you and your transportation partners can take advantage of national goals or direction that encompasses healthier food retail initiatives.

^{§§} A Metropolitan Planning Organization (MPO) is a requirement for states or regions spending federal highway or transit funds in urban areas. MPOs plan, program, and coordinate federal highway and transit investments. (Source: Association of Metropolitan Planning Organizations, <http://www.ampco.org/index.php>. Accessed February 26, 2013.)

Action Items

As a public health practitioner, you can do the following to collaborate with partners on transportation issues:

- ✓ **Identify regions or municipalities of greatest need** for improved transportation access and resources and share results with partners.
- ✓ **Educate staff at relevant agencies** about the potential health benefits of developing healthier communities as a part of transportation planning, such as through Long Range Transportation Plans or Transportation Improvement Programs.
- ✓ **Explore how federal requirements affect regional, state, or local level planning**, and how they can create opportunities for working on healthier food retail initiatives. For example, the current federal transportation law, Moving Ahead for Progress in the 21st Century Act (MAP-21) from the U.S. Department of Transportation Federal Highway Administration, has goals that include economic vitality of metropolitan areas and increasing safety for non-motorized users. More information is available at <http://www.dot.gov/map21>.
- ✓ **Educate partners on where healthier food retail projects are underway** and where there may be an opportunity to address transportation needs or problems.
- ✓ **Educate partners about programs that address transportation challenges** for low-income individuals. For example, the Low Income Flexible Transportation (LIFT) Program in the San Francisco Bay Area funded creative transportation projects for low-income residents that enhanced access to jobs, childcare, and fundamental services.^{113,114} More information is available at <http://www.mtc.ca.gov/planning/lifeline/lift.htm>.
- ✓ **Coordinate public education campaigns promoting the use of transportation** resources for purchasing healthier food.
- ✓ **Aid partners in procuring grants** and other forms of funding for efforts designed to improve transportation to healthier food retailers, including letters of support.



Transportation in Action: Partnership and Assessment in the Twin Cities (St. Paul and Minneapolis), Minnesota

In 2008, Minnesota Department of Health (MDH) was awarded the Community Health Project Related to Brownfield/Land Reuse grant from the Agency for Toxic Substances and Diseases Registry (ATSDR). The purpose of the project was to conduct a baseline assessment of indicators related to community health for a new Central Corridor Light Rail Transit (CCLRT) route.¹¹⁵ This route has now opened as the “Green Line” and it connects the downtown areas of Minneapolis and St. Paul, a distance of 11 miles.¹¹⁶

MDH worked with several community organizations, regional planners, and state and local agencies to evaluate the CCLRT area.¹¹⁵ With input from Twin Cities’ community members, MDH determined a set of indicators, or “counts,” to track the impact of health-related changes resulting from the construction of the CCLRT. MDH titled the assessment *Healthy Communities Count!* One of the counts, access to healthier foods, was measured by counting the number of people living within 500 meters of a grocery store (a 10-minute walk for most people) compared to the number of people living within the same distance of a store that sells prepared meals. Findings from the baseline evaluation showed that 64% of people live within walking distance of a grocery store, and 80% of people live within walking distance to a store with prepared meals.¹¹⁵ You can learn more about this project at <http://www.health.state.mn.us/divs/eh/hazardous/lightrail/intro.html>.

Activities to Improve Transportation Systems

There are many ways to make changes to transportation systems that support healthier food retail. The activities highlighted in this guide are:

- ▶ Promote walking and biking accessibility.
- ▶ Enhance traditional public transit services.
- ▶ Offer shuttle services.
- ▶ Support car sharing and carpooling.

Promoting Walking and Biking Accessibility

Walking and biking are practical transportation options to consider for those without access to motorized vehicles or public transportation. Walking and biking may be the only means they have for reaching healthier food retail. In addition, many people may prefer to walk or bike to food retailers, especially if they are close, convenient, and safe to reach. Walking and biking can have health benefits as well.

Sidewalks, street crossings, and street lighting. It is important to be able to walk to and from food stores safely, particularly for those who lack a car and cannot rely on public transportation. Pedestrians need well-maintained sidewalks, proper street lighting, and safe street crossings.¹¹⁷ Customers also need to be able to safely access a store from the street or parking lot. Without these measures, pedestrians may be at risk for traffic injuries or crime when walking to nearby stores.

Safe and secure biking. Improving biking routes is another strategy for transport to and from food retailers. To make biking safer and easier for residents, communities can adopt a variety of bike friendly features for busy streets in and around communities where healthier food retailers are located.

Bike-Friendly Features

The bike-friendly features described here can be implemented on their own, or as part of a Complete Streets design:

- ▶ **Bike Lanes** provide a designated space on the street for bicyclists to use. They help to prevent accidents and injuries, and allow for smoother flow of traffic.¹¹⁷
- ▶ **Sharrows or Shared Lane Markings** indicate to motorists and bicyclists that these street lanes are to be shared and bicyclists are allowed to take the entire lane if desired.¹¹⁷
- ▶ **Wider Street Lanes** help bikes and cars coexist on the road by making it easier for cars to pass bicyclists without having to cross into another lane of traffic. These streets can also be designated as shared lanes.
- ▶ **Bike Paths** are off street paths or trails that allow bicyclists to travel in a space designed for bicycling without the risk of motor traffic accidents.
- ▶ **Curb Cuts** provide a safer and easier transition between sidewalks and the street by cutting out a small ramp from the curb.¹¹⁷
- ▶ **Bike Racks and Bike Lockers** allow bicyclists to lock their bikes and store them temporarily in a secure area designated for bikes.¹¹⁷

Design recommendations for some of the features above can be found at <http://nacto.org/cities-for-cycling/design-guide/>.

Complete streets. Complete Streets is a planning and design approach that aims to enable safe access for users of all transportation modes. Complete Streets policies involve designing street networks to improve safety for walking, biking, driving, and using public transportation. Implementing a Complete Streets approach provides those who cannot drive or afford cars with safe and convenient access to points of interest, such as grocery stores and other healthier food retail venues.¹¹⁸ Some communities may take on land use policies that improve the current landscape but do not involve full adoption of Complete Streets. For more information, visit the Smart Growth America Web site at <http://www.smartgrowthamerica.org/complete-streets/complete-streets-fundamentals>.

Action Items

As a public health practitioner, you can do the following to promote walking and biking accessibility:

- ✓ **Lead an assessment of a community's walkability or bikeability** in relation to healthier food retail access. Do this with support from local partners such as community organizations, pedestrian or bicycling groups, and crime and safety advocates.
- ✓ **Work with local city authorities such as departments of public works or transportation** to identify areas around healthier food retail establishments that would benefit from new sidewalks, sidewalk repair, new street lighting, or new street crossings.
- ✓ **Talk to staff at DOTs, MPOs, and other planning agencies** to find out if any complete streets policies are in development or existence in your state. Provide information on how a Complete Streets approach to community design can improve access to healthier food retail, particularly important in underserved neighborhoods.
- ✓ **Assist in developing relationships** between community organizations, cycling clubs, food retailers, and Departments of Transportation, Public Works, or Recreation to make biking routes to food retailers safer.
- ✓ **Consider the safety of customers accessing retail establishments via walking and biking** when planning for healthier food retail initiatives. Help partners include the safety for all travelers when designing stores or reviewing zoning policies. Features such as building setbacks, building orientation to the street, and parking lot design can all influence pedestrian accessibility.

Transportation in Action: Complete Streets in New York, New York

New York City offers an example of city planning that integrates elements of urban infrastructure and design with public health concerns.¹¹⁹ The *Active Design Guidelines* resource was developed through partners that included: the New York City Departments of Design and Construction, Health and Mental Hygiene, Transportation, and City Planning and the Office of Management and Budget. City departments also worked with university-based experts and practicing architects to produce the *Active Design Guidelines*. This document is a manual of recommendations and strategies for designing buildings, streets, and urban spaces with an eye toward increasing physical activity and other healthier lifestyle behaviors. For example, the guidelines recommend the development of supermarkets and full-service grocery stores near places of work and residence to promote healthier diets.¹²⁰ You can download the guidelines and access training webinars at http://www.nyc.gov/html/ddc/html/design/active_design.shtml.

Enhancing Traditional Public Transit Services

Public transit services often provide the greatest opportunity for community members without cars to travel within, to, and from their neighborhoods. Improving these services for community members is important to make shopping for food easier.

Additional transit access points. Working with partners to create additional points of access to local transit systems can help reduce the time it takes for people to get to a public transport station or stop. Specific service improvements that would assist people accessing healthier food retail stores include:

- ▶ Creating more access points on a direct transit line to accommodate passengers.
- ▶ Designing local bus lines that can feed into existing stops for express transit lines, allowing for quicker travel to healthier food retail locations from multiple points of entry.
- ▶ Extending transit lines further into communities that have less access.

High frequency transit services. It is also important to consider the frequency of stops during transit schedules. For example, if buses or train stops are erratic or infrequent, passengers may have a challenging time getting to healthier food retailers in a timely fashion.¹¹⁷ A greater frequency of stops can cut down on wait times and make it easier for patrons who miss a bus or train because they don't have to wait as long for the next one to arrive.

Transportation in Action: New Downtown Routes in Los Angeles, California

The Los Angeles Department of Transportation modified two of its DASH Downtown bus routes in 2007, and added additional bus lines with stops between two major Metro plaza stations. The additional lines expanded service to South Park residents and gave customers direct access to Ralph's Fresh Fare Supermarket and other nearby stores. At its opening in 2007, Ralph's was the only local full-service supermarket serving residents in the downtown area. The new routes operate seven days a week.^{117,121}

Direct transit routes to healthier food retailers. Established transit routes and operating services may not correspond with the locations or hours of food retailers or the shopping times convenient for many residents. This is particularly true when transportation systems are designed primarily to focus on residents commuting long distances to and from work rather than on shopping trips within their immediate community.¹⁰⁶ Transit users may also have to make several connections to get to a food retailer, making their food shopping trips inconvenient and time consuming.¹⁰⁶

Designing new, direct routes to existing food retail locations can improve the accessibility of healthier foods and beverages. Furthermore, it is important to consider the location of existing public transportation when developing new food retail outlets, including farmers markets. It is preferable to have transit lines stop within a reasonable walking distance from the entrance to the healthier food retail store or farmers market.^{117,120}

Transportation in Action: Bus Routes to Grocery Stores

The Grocery Bus in Austin, Texas. The publicly run Grocery Bus line in Austin's Eastside was designed specifically to take residents from a low-income Latino community lacking sufficient healthier food retail options to supermarkets in other neighborhoods. It was established in 1996 in response to a study by the Sustainable Food Center (SFC), which reported both a dearth of competitively priced supermarkets in the Eastside area, and a need to establish affordable transportation programs to neighboring supermarkets. The Grocery Bus, developed through collaboration between Austin's Capital Metro transit system, Austin/Travis County Food Policy Council, community members, and supermarkets, was applauded for its convenience and savings¹⁰⁶ and was assimilated into the regular transit system.¹²²

Metro Transit in Madison, Wisconsin. In Wisconsin, the city of Madison Metro Transit *Ride Guide* provides customers with detailed route information. The guide lists the bus routes for many popular destinations, including more than 20 area grocery stores, and then shows these destinations on individual route maps. Metro Transit has an electronic trip planner through Google Maps, and has mobile apps to plan your trip and track your bus. The *Ride Guide* is available at <http://www.cityofmadison.com/metro/schedules/> and the trip planner and apps are available under the "Plan Your Trip" tab.

Reduced cost of public transit. Cost is an important factor for most individuals when it comes to the use of public transportation systems. Making transportation affordable for low-income families can facilitate its use and make it easier for residents to make multiple trips to and from grocery stores or other food retailers.¹¹⁷

Various options to reduce public transit costs for low-income or transit dependent communities that have lower access to healthier food options include:

- ▶ Free rides for individuals with a receipt from an authorized healthier food retailer.
- ▶ Agreements with local grocers and other healthier food retailers to pay for transit tickets or passes for low-income customers shopping in their businesses.

- ▶ Reduced fares to healthier food retail venues for customers who use Special Supplemental Nutrition Program for Women, Infants, and Children (WIC) and Supplemental Nutrition Assistance Program (SNAP) benefits, subsidized by the transit system or other government agency.¹¹⁷
- ▶ Special transit lines that are free to the public and designed to bring residents to and from farmers markets or retail stores with healthier food options.

Action Items

As a public health practitioner, you can do the following to enhance traditional public transit services:

- ✔ **Work with transportation agencies to assess and identify transit lines** to healthier food retailers. Encourage additional, direct, or more frequent stops to make healthier food retailers more accessible to travelers.
- ✔ **Encourage food retailers or community organizations to consider transportation programs** that subsidize public transit for food shopping in underserved communities.
- ✔ **Help publicize any enhancements** made to existing public transit routes that increase access to healthier food retail establishments, such as full service grocery stores or farmers markets.
- ✔ **Collaborate with transportation officials** to create a guide or other materials for transit riders that shows where grocery stores are located on transit routes.



Offering Shuttle Services

Shuttle services may be operated by a public entity, such as a city government or publicly owned transit authority, or by private businesses. They offer a more targeted approach to transportation by providing service to a particular community or population.

Food shopping shuttles. Shuttles designed specifically to operate directly between residential neighborhoods and food retailers can help make grocery shopping easier and faster by:¹⁰⁶

- ▶ Having enough room for adult passengers, their children, and several bags of groceries per passenger.
- ▶ Operating at times during which more passengers make food purchasing trips.
- ▶ Providing direct home service, in which a person could make a reservation to be picked up from home for food purchasing and then returned home afterward.

Community partners can develop a food shuttle program with input from community members on how the program will operate and when and where the shuttle would run. Also, chain and independent grocery stores and food markets can charter their own shuttles to pick up and drop off patrons at their stores.¹⁰⁶ Merchants sometimes set minimum purchasing requirements for customers who use these services,¹⁰⁶ but should be aware that these requirements, if set too high, may prevent lower income customers from using the service.

Transportation in Action: Shuttle Services in Los Angeles, California

Shoppers Van Shuttle Service, operated by Numero Uno Market, is a key component of the supermarket chain's innovative marketing strategy. By offering the shuttle service free to customers who spend a minimum of \$30, the company has capitalized on the transit dependency of local residents while offering them a valuable service.^{123,124} Three Ralph's supermarkets in Los Angeles also contracted with a shuttle van company to provide free rides home to customers who spend at least \$25 at the store.¹²³



Paratransit services for special populations. Paratransit services are important for populations with special needs, such as senior citizens or people with disabilities, who may have difficulty accessing public transportation or be unable to drive themselves. These services typically pick up and drop off their passengers at individual residences, senior homes, or disability care centers. Specialized shuttles may be necessary, and often the shuttle driver or an attendant will need to assist passengers getting on and off the shuttle and help carry bags into their home.¹⁰⁶

Transportation in Action: Getting Seniors to Market in Chelsea, Michigan

In this small city in southeast Michigan, the Chelsea Area Transportation System (CATS) collaborated with the Chelsea Farmers Market to furnish senior citizens with transportation to the farmers market. On Saturday mornings, the CATS bus stops at three local senior centers to pick up senior residents and deliver them to the market. The seniors have an hour to shop before the bus picks them up for their return trip to the senior centers.¹²⁴



Action Items

As a public health practitioner, you can do the following to support shuttle services to healthier food retail:

- ✓ **Work with city governments and transportation agencies to identify populations** that could benefit from easier access to healthier food retail via shuttle services.
- ✓ **Encourage food retailers to develop their own shuttle programs** in areas with low access to their stores. Consider meeting directly with store owners to develop individual programs or connect with corporate officials of a grocery chain.
- ✓ **Work with grocery retailers to promote shuttle services** in the communities that would most likely benefit from them.
- ✓ **Collaborate with senior and disability organizations to explore transit solutions** that connect them to healthier food retail, such as local senior centers or area agencies on aging. If administrative funds are available from the state agency, the state's Senior Farmers Market Nutrition Program (SFMNP)^{***} may be able to support a transportation component

Continued

^{***} The SFMNP is a U.S. Department of Agriculture (USDA) program that awards grants to states, U.S. territories, and federally-recognized Indian tribal governments to provide low-income senior citizens with coupons to purchase eligible foods (such as locally grown fruits, vegetables, herbs, and honey) at authorized farmers markets, roadside stands, and Community Supported Agriculture (CSA) programs. More information is available at <http://www.fns.usda.gov/sfmnp>.

to make it easier for seniors to access farmers markets and use their SFMNP benefits. Share your assessment findings and the potential health implications with these organizations and agencies.

- ✔ **Explore emerging programs to enhance transportation options for special populations,** like time banking. Time banking is a service exchange concept where individuals accumulate credits for services instead of money and are able to exchange accumulated credits for other services, like transportation. You can learn more about innovative programming for seniors and other populations at the National Center on Senior Transportation at <http://seniortransportation.easterseals.com/>.

Supporting Car Sharing and Carpooling

Carpools and car sharing programs allow community residents to share resources and help one another conveniently and efficiently travel to food retail locations in order to shop for food. These programs may:

- ▶ Develop informally as community residents organize regular group trips to the local food stores or farmers market.¹²⁵
- ▶ Be formally organized and use a community owned or shared van to take individuals to and from the food markets.¹¹³
- ▶ Be particularly relevant in rural settings where there are few to no public transportation services.
- ▶ Rely on church groups or informal community networks.

Action Items

As a public health practitioner, you can do the following to support car sharing and carpooling:

- ✔ **Encourage faith and community organizations in underserved areas** to develop car sharing or carpool programs to make food shopping easier.
- ✔ **Provide interested organizations with information** on how to establish car sharing and carpooling programs.
- ✔ **Ensure that car sharing options are feasible for low-income individuals.** For example, requiring a credit card for participation in a car sharing program may present a barrier for low-income individuals or families. Another option would be to subsidize membership and other fees for qualified participants.
- ✔ **Check insurance and liability issues** before engaging in car sharing or carpooling programs.

Transportation Resources

Centers for Disease Control and Prevention

CDC's Division of Nutrition, Physical Activity, and Obesity undertakes evaluability assessments to better understand innovative initiatives and policies being implemented in states and communities. There are "Spotlights" from the assessments on active transportation initiatives that summarize program functions and accomplishments and provide considerations for those wanting to implement similar initiatives. <http://www.cdc.gov/obesity/stateprograms/resources.html>

The National Center for Environmental Health provides a Web page describing the connections between transportation and health. The topics of physical activity/obesity, injury levels, air pollution, social capital and mental health, and environmental justice/social equity are discussed, and resources are provided. <http://www.cdc.gov/healthyplaces/healthtopics/transportation/default.htm>

The Convergence Partnership

The Convergence Partnership commissioned PolicyLink and The Prevention Institute to develop both of the following documents.

Healthy, Equitable Transportation Policy: Recommendations and Research provides a comprehensive understanding of various transportation equity and access issues for low-income communities. One chapter focuses on transportation with respect to food access. <http://www.policylink.org/find-resources/library/healthy-equitable-transportation-policy-recommendations-and-research>

The Transportation Prescription: Bold New Ideas for Healthy, Equitable Transportation Reform in America offers suggestions about opportunities for creating or revitalizing transportation systems that promote health and health equity. The concepts in the report are derived from a more in-depth examination of the ideas in the book, *Healthy, Equitable Transportation Policy: Recommendations and Research*. Each chapter and the entire text can also be found online at <http://www.policylink.org/find-resources/library/the-transportation-prescription-bold-new-ideas-for-healthy-equitable-transportation-reform>.

Robert Wood Johnson Foundation: Childhood Obesity Program

Community Design for Healthy Eating: How Land Use and Transportation Solutions Can Help is a brief report on how land use design and transportation systems have impacted food access. A few brief examples are provided to demonstrate how some communities have addressed these issues. <https://folio.iupui.edu/bitstream/handle/10244/561/communitydesignhealthyeating.pdf>

Design for Health

Planning Information Sheet: Promoting Food Access with Comprehensive Planning and Ordinances provides excerpts from various city sustainability plans that attempt to address food access issues using multiple methods, including improved transportation resources and access. <http://designforhealth.net/food-access/>

Planning Information Sheet: Integrating Health into Comprehensive Planning is a tool to help planners and public health professionals integrate health into comprehensive plans, including transportation issues. It provides a variety of different planning options that relate to basic health issues such as safety, physical activity, accessibility, and mental health. <http://designforhealth.net/integrating-health-into-comprehensive-planning/>

American Planning Association

American Planning Association: Complete Streets Project offers resources related to complete streets planning and policy development, including an inventory of 80 complete streets policies that have been developed in state and local areas. A comprehensive set of resources related to complete streets is also provided. <http://www.planning.org/research/streets/>

TransForm

Creating Healthy Regional Transportation Plans helps public health and transportation professionals connect the built environment and health outcomes. The report outlines how planning is an opportunity to shape the built environment in ways that produce desirable health outcomes. <http://www.transformca.org/resource/creating-healthy-regional-transportation-plans>

