



Chapter 7: Distribution

Improving Distribution Systems for Healthier Food Retail

General Strategy Overview

This chapter discusses the public health role in sourcing and distributing healthier foods for retail venues, including local or regional foods.

Accessing affordable healthier foods is challenging for some retailers. Distribution methods may not work optimally for small store owners and mobile food vendors who typically stock only small quantities of a few types of products.^{5,63} Because of this operational model, small store and mobile food retailers often do not have the purchasing power to get fresh produce or other healthier products at a wholesale price. Instead, they often obtain food products from warehouse club stores or other large food retailers, resulting in a mark-up of price that is then passed to the customer.⁶³ If stores are able to buy in bulk, the low turnover of produce can lead to older and lower quality fruits and vegetables.⁵

Grocery store retailers, primarily those of small and non-chain grocery stores may also face obstacles in working with food distributors to source healthier foods. Many distributors offer a limited range of product types, requiring use of multiple distributors to maintain the necessary assortment of food items.⁵ Additionally, some distributors may not carry desired specialty or culturally appropriate foods.

Distribution systems can be modified to harness the power of multiple buyers or to take advantage of regionally or locally grown produce, among other options. Public health practitioners and their partners can help improve distribution of healthier food products to retailers so that consumers in underserved areas have access to healthier foods.

What are Distribution Systems?

Food distribution systems are the mechanisms by which food moves from the producer (such as a farmer) to the customer. Although there are many inter-connected elements in food distribution systems, the primary components related to healthier food retail are transportation, storage, and marketing. Other facets of distribution related to healthier food retail include processing and packaging.

Policies, regulations, and codes govern the various components of food distribution systems and can affect healthier food retail strategies in a number of ways. Commerce regulations for moving food products between states can create barriers for small retailers trying to source local or regional foods from neighboring states. Health and safety codes for preparing and packaging fresh foods may allow healthier mobile food retailers to sell whole but not cut produce. Regulations on the number and types of foods that a store must stock to become a certified vendor for federal nutrition assistance benefit programs may motivate retailers to seek distribution systems that carry a greater number of healthier food options.

Working with Partners

As a public health practitioner, you may help coordinate efforts that address distribution issues at a state, regional, or local level. The [Partnerships, Assessment, and Evaluation](#) chapter has detailed information on partnering for healthier food retail initiatives. To address issues around distribution to food retailers, you will need to collaborate with partners such as:

Agriculture Offices and Growers/Producers

- ▶ State Departments of Agriculture.
- ▶ State or regional organizations that represent producers, such as groups supporting local farmers or fruit and vegetable growers.
- ▶ Local or regional producers.

Distributors and Buyers

- ▶ Buyers and distributors, including those that work with restaurants and institutions.
- ▶ Retail owners and managers.

Planning Groups

- ▶ Local and regional planning agencies, such as Regional Planning Commissions.
- ▶ Business and economic development organizations, such as a Chamber of Commerce or Community Development Corporation.

Action Items

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

- ✔ **Identify state, regional, or local distribution routes and networks** as well as underserved areas where distribution systems are lacking. If available, review foodshed assessments available for areas in your state, as they usually include a discussion of how the food distribution system works for that area. If no assessment is available, consider conducting one with your partners.
- ✔ **Help retailers determine what sorts of specialized products** customers might desire and locate distributors who carry those products.
- ✔ **Help determine if there are distributors who are able to process and package produce** and other foods in sizes or forms that are easy to sell in various store formats. For example, find distributors who can wash, cut, and package fruits and vegetables in snack sizes or as salads for corner stores.
- ✔ **Convene retailers having problems acquiring healthier food products** with farmers, distributors, or other retailers that have overcome barriers to healthier food acquisition.

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- ✔ **Explore opportunities for cooperative buying** with restaurants or institutions, such as hospitals and schools. Cooperative buying can allow a food retailer to obtain healthier foods from distributors that generally do not deliver to retail locations.
 - ✔ **Provide training to retailers** on issues such as sourcing from local producers, developing a buying contract, and putting together an appropriate order given the retailer's customer base, desired product mix, and storage capabilities.
 - ✔ **Participate in public education programs** promoting the use and purchase of local and regional food products.
 - ✔ **Work with administrators** of Special Supplemental Nutrition Program for Women, Infants, and Children (WIC) and Supplemental Nutrition Assistance Program (SNAP) in your state to ensure certified vendors have distributors who can provide healthier products.
 - ▶ For WIC, it is important that distributors be able to comply with the revised regulatory requirements for WIC-Eligible Foods (for both types and packing sizes of food). Information on the WIC package is available at <http://www.fns.usda.gov/wic/benefitsandservices/foodpkg.HTM>.
 - ✔ **Aid in procuring grants and other forms of funding** for efforts designed to improve distribution to healthier food retailers, including securing letters of support for partners.
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Distribution in Action: Partnerships in the Healthy Corner Store Program in Washington, D.C.

The District of Columbia (D.C.) Department of Health provided funding to D.C. Hunger Solutions who collaborated with the Korean-American Grocers Association (KAGRO) and other community organizations to develop a Healthy Corner Store Program in underserved neighborhoods.¹²⁶ Phase I of the Healthy Corner Store Program was conducted from October 2007 through September 2008; Phase II was conducted from October 2008 through September 2009.¹²⁷

During Phase I, an assessment of 21 corner stores in selected neighborhoods was conducted to determine the availability, cost, and quality of healthier foods and beverages offered, as well as whether or not the stores accepted Special Supplemental Nutrition Program for Women, Infants, and Children (WIC) and Food Stamp benefits (the forerunner to Supplemental Nutrition Assistance Program (SNAP) benefits; still in place at the time of the assessment).¹²⁶ Interviews with store owners revealed that:

- ▶ Customers wanted more options for fresh and healthier foods.
- ▶ Store owners wanted to supply healthier foods to their customers.
- ▶ Corner store retailers could not purchase healthier foods at wholesale prices, and often had to purchase these foods at retail prices.¹²⁶

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To address the distribution issues identified in the assessment, the D.C. Hunger Solutions and the Healthy Corner Store Program had many recommendations. Two related to distribution were:

- ▶ Developing cooperative buying agreements between large food purchasers and small stores, schools, and restaurants.
- ▶ Working with distributors of corner stores to identify healthier food options that can replace stock of high calorie snack foods.¹²⁶

During Phase II, the Healthy Corner Store Program worked with participating store owners to pilot two distribution models for sourcing fresh fruit and vegetables. In the first model, stores placed orders with an area nonprofit, Healthy Solutions, which purchased and distributed fresh fruits and vegetables to pick-up sites and market stands. D.C. Hunger Solutions staff and volunteers picked up the orders at a designated location and delivered them to participating stores for resale. In the second model, the Mid-Atlantic Gleaning Network (MAGNET) purchased gleaned produce from farms and sold them directly to low-income individuals at local farm stands (gleaned fruits and vegetables are slightly blemished or unripened at the time of the commercial harvest but are still edible). MAGNET also purchased gleaned fruits and vegetables to deliver directly to four corner stores. In both models, store owners were given a \$150 stipend from the Healthy Corner Store Program with which they could buy the fruits and vegetables.¹²⁷

Although the D.C. Healthy Corner Store Program experienced both challenges and successes with each model, results of the program are promising. Both Healthy Solutions and MAGNET are continuing to work with the small stores with which they have built a relationship in order to refine the pilot program. However, additional capital and time to become financially stable are necessary for the programs.¹²⁷ You can find out more about the lessons D.C. Hunger Solutions learned in the pilot at <http://www.dchunger.org/publications/>.

Further work in distributing fruits, vegetables, and healthier snack items to small stores was supported through the 2010 FEED (Food, Environment, and Economic Development) D.C. Act, such as launching an affordable wholesale delivery service. The legislation aimed at decreasing food deserts and increasing the abilities of District residents to eat a healthier diet.¹²⁸ More information on D.C. Hunger Solutions Healthy Corner Store Program can be found at <http://www.dchunger.org/projects/cornerstore.html>.



Activities to Improve Distribution Systems

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

- ▶ Improving existing distribution systems for independent and small store retailers.
- ▶ Creating or supporting small store buying groups.
- ▶ Connecting local food producers to distributors and retailers.

Improving Existing Distribution Systems for Independent and Small Store Retailers

There are many ways to work with the existing distribution systems to get healthier foods to independent and small store retailers. Some of these might involve small changes and others may use more unconventional approaches. You can work with prime or broadline distributors, who supply a wide variety of grocery items, or more specialized distributors, such as those who supply only produce.



Working with distributors to increase availability of healthier foods. This method involves working with the existing companies that distribute foods in order to help stores acquire healthier foods and beverages such as low-sodium soups, whole grain bread, low-fat milk, and fresh produce. Sourcing healthier items, from distributors can be difficult for most small and independent stores.^{63,126} Distributors may not stock these items, realize that there is a demand for them,¹²⁶ or have the necessary equipment for distributing perishables. The store owners may also be unsure which foods are healthier than others. Working with distributors to increase the amount of healthier food items available and to market these items to stores can help stores obtain the healthier items they are looking for.¹²⁶

Slipstreaming. One method for working with large distributors is slipstreaming, in which small orders are added to orders from larger purchasers, such as grocery stores or restaurants.⁶³ This is an option that smaller retailers can use to purchase healthier products at the same wholesale prices that larger retailers receive. Both the larger food retailer and the food distributor would need to coordinate the slipstream orders.

Supermarket-small store collaboration. This method of working with large distributors involves a collaborative effort between small stores and larger retailers, such as a supermarket. For this method, a larger food retailer provides a consistent stock of healthier food options via “mini-markets” or branded displays in smaller stores. This allows the smaller retailers to offer quality, healthier products and the larger retailer to gain customers and sales.⁵

Action Items

As a public health practitioner, you can do the following to improve existing distribution systems for independent and smaller store retailers:

- ✓ **Bring stakeholders together to discuss** how the state's traditional distribution network can be modified to accommodate purchasing needs of smaller retailers.
- ✓ **Help plan and manage initial efforts** to improve the existing distribution system.
- ✓ **Assess the demand for healthier products from retail venues** and work with distributors to offer these items, particularly in ways that minimize risk to store owners. For example, it can be helpful for distributors to provide a discount on the first purchase of a healthier item or to offer healthier items for sale in smaller quantities.
- ✓ **Develop marketing tools with distributors** to help retailers know which items are healthier such as placing a symbol next to healthier foods and beverages in a distributor's ordering system (see [Distribution Strategies in New York, New York](#) call out box).
- ✓ **Support ancillary activities to promote the work of an improved distribution system**, such as acknowledgement programs, direct-to-consumer marketing, or evaluation.

Distribution in Action: Distribution Strategies in New York, New York

Shop Healthy NYC is an initiative of the New York City Department of Health and Mental Hygiene (NYC DOHMH) that aims to increase access to healthier food and to engage residents and organizations to support sustainable food retail change in their community. Shop Healthy NYC, launched in 2012, was developed based on the health department's intensive work with more than 1,000 retailers since 2005 in the most high-need communities of the city, and targets multiple types of retailers: bodegas (or corner stores), supermarkets, farmers markets, and Green Carts (mobile fruit and vegetable vendors). The Shop Healthy intervention model includes three key components to impact both supply and demand: 1) direct outreach to food retailers to increase stock and promotion of healthy foods, including an intensive component requiring stores to meet specific criteria; 2) outreach to engage community constituents to support participating retailers and increase neighborhood access to healthy foods; and 3) collaboration with distributors and suppliers to facilitate wholesale purchases and widespread promotion of healthy foods. This collaboration with distributors and suppliers includes working with local distributors to identify healthier items to retailers. The NYC DOHMH developed a

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logo that designates a product as “healthy” based on the NYC Food Standards (<http://www.nyc.gov/html/doh/html/living/cdp-pan-hwp.shtml>). The initiative works to promote the use of this logo in the various formats through which products are sold, such as through online ordering systems, order catalogues, or circulars. NYC DOHMH has also identified barriers to getting healthier foods in the stores (for example, contracts that dictate which stores receive what items) and are working with distributors to eliminate these structural barriers. More information on Shop Healthy NYC is available at <http://www.nyc.gov/html/doh/html/living/shophealthy.shtml>. An implementation guide on this Web page includes information on working with suppliers and distributors.

Creating or Supporting Small Store Buying Groups

Small retailers may have difficulty gaining the interest of large distributors due to their small product volumes. By forming buying groups with other small store owners, these retailers may collectively have enough purchasing power to attract business from food distributors. Buying groups can purchase large volumes of produce and then divide the bulk orders as needed.

A large number of small food retailers may be required to match the buying power of a full-service supermarket chain. An estimate by Bay Area Economics found 50 small stores were needed to match the volume of one supermarket in their region.⁵ Buying groups require cooperation among members but some small store owners may be hesitant to formally associate with other small store retailers whom they see as competition.⁵ However, a buying group model can be adapted to specific retailer needs.

Action Items

As a public health practitioner, you can do the following to create or support small store buying groups:

- ✓ **Conduct an assessment** of whether or not retailers would be interested in participating in a buying group. Although small store owners are likely to be most interested, grocery stores and supermarkets may also be interested, particularly if they have problems with accessing local producers, quality fresh products, or specialty items.
- ✓ **Connect food retailers interested in forming a buying group** to purchase healthier foods from wholesale distributors.
- ✓ **Inform partners of strategy options** (such as offering tax exemptions) that further the development of small store buying groups, and promote or reward distributors entering into purchasing agreements with the buying groups.

Connecting Local Food Producers to Distributors and Retailers

Food producers and distributors are economically motivated to find markets for their products. Connecting producers and retailers to distributors in a state or region can support regional production of healthier food items, assist small farmers and retailers, and contribute to economic improvements in underserved communities. Developing a distribution network or system for local or regional producers may result in:

- ▶ An expanded customer base and increased revenue for local producers.
- ▶ A wider variety of affordable products available for retailer purchase.
- ▶ Competitively priced quality produce and other healthier foods offered to customers.
- ▶ The attraction of customers who prefer to support local farms by purchasing locally produced goods.

Distribution systems that connect producers to retailers can vary by number of producers, distributors, and retailers involved; scale of implementation; or amount and type of local products to be distributed. This variation can be seen in the models of distribution systems for local and regional foods that are described below. Most of these systems fall under the category of regional food hubs, which connect local producers to retailers via a centralized distribution facility. One other model is provided that directly connects local producers to retailers, usually on a smaller scale.

Regional food hubs. The U. S. Department of Agriculture (USDA) defines a regional food hub as a business or organization that actively manages the production, aggregation, distribution, and marketing of locally and regionally grown food.¹²⁹ A key element of the food hub model is coordination of supply chain logistics.¹²⁹ Food hubs can provide technical assistance, food transportation, and brokerage services,¹³⁰ and some provide important infrastructure functions, such as facilities for storing and processing of produce and other foods.¹²⁹ Food hubs are operated by staff who have the business management skills needed for the various tasks associated with all of these functions and services.^{129,130} Food hubs allow producers to gain access to a wider range of markets, such as institutions, restaurants, and grocery stores,^{130,131} and can provide the consumer with consolidated access to a large number of local and regional farmers.¹³⁰

You may come across a virtual food hub model, where an online system connects local producers and buyers. Benefits of virtual food hubs include fewer costs associated with accessing local foods due to the automation of some business services, the ability to sell or purchase items at any time, and creating networks that allow access to smaller producers that were otherwise difficult to reach.¹³² Examples include FoodHub (<http://food-hub.org/>) that works out of six western U.S. states, or Bountiful Baskets Food Co-op (<http://bountifulbaskets.org/>), a volunteer-run organization that delivers local, affordable produce baskets and more to sites in states across the U.S. Some companies offer platforms or software to facilitate the development of an online marketplace for local foods, such as Local Orbit or Lulus Local Food.

Another model similar to food hubs is a traditional wholesale market. This model generally focuses on leasing space to produce wholesalers and others,¹²⁹ such as the Philadelphia Wholesale Produce Market (PWPM). The PWPM's main facility has over 650,000 square feet of space where independent produce distributors sell a wide variety of produce.¹³³ See <http://www.pwpm.net/index.php> for more information.

Distribution in Action: Food Hubs

The following three examples demonstrate the range of activities that can be encompassed in regional food hubs. A working list of existing food hubs across the U.S. can be found at <http://www.ams.usda.gov/AMSV1.0/foodhubs>

Appalachian Harvest, a Regional Food Hub in Rural Virginia. One example of a food hub comes from southwest Virginia. Appalachian Sustainable Development (ASD), a nonprofit organization, provides training and technical assistance to local farmers in order to increase organic specialty crops.^{134,135} Through the Appalachian Harvest program, ASD manages the marketing and distribution of locally raised produce supplied by a network of 40-70 certified organic and conventional farmers.^{135,136}

ASD staff works with buyers to understand product and volume demands, and then the network of farmers collectively plan crop production based on these demands. ASD provides direct technical support to farmers to enhance farming practices, obtains Good Agricultural Practices (GAP) certification and organic certification, and meets quality requirements.¹³⁶ Farmers bring their produce to a 15,000 square foot central facility for sorting and packaging before being shipped. The produce is then distributed as far north as Maryland and as far south as Georgia, primarily to grocery store chains and produce brokers.

The brand has over 30 core products,¹³⁶ annual sales around \$1,250,000, and a consistent demand that outweighs available supply. Although Appalachian Harvest has received a great deal of capital through foundation grants and individual contributions, it eventually plans to become a for-profit subsidiary to improve its capital base.¹³⁶ More information can be found at <http://asdevelop.org/programs/appalachian-harvest/> and in the report *Moving Food Along the Value Chain: Innovations in Regional Food Distribution* at <http://www.ams.usda.gov/AMSV1.0/getfile?dDocName=STELPRDC5097504>.

Good Natured Family Farm, a Regional Food Hub Serving the Balls Foods Retail Chain in Kansas City, Kansas. Good Natured Family Farm (GNFF) is a natural food umbrella brand for products supplied by an alliance of over 150 farms and businesses in the surrounding region.^{137,138} Food products from these farmers are sold locally and distributed exclusively to Balls Food Stores (Hen House Markets and Price Chopper Stores). The GNFF brand, which started out supplying only beef and tomatoes, has grown to include a whole host of fresh foods and products such as honey, milk, cheese, eggs, chicken, fruits and vegetables, and jams and jellies. The partnership between GNFF and Balls Foods provides a steady sales outlet for producers and allows for increased flexibility in price negotiation between farmers and retailers. GNFF staff handles price negotiations and product marketing with Balls Foods, as well as production coordination and product deliveries.¹³⁷

To address the logistics of product distribution, the local farms transport their food to the Balls Food Stores central warehouse or, in some cases, Balls Foods picks up

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food from the farms. Balls Food Stores also handle the delivery of food, except meat, to their grocery stores. GNFF delivers beef and chicken directly to each store. To ensure consistent quality, GNFF partnered with Kansas State University to develop a U.S. Department of Agriculture (USDA) Quality System Certification and a Quality System Verification program for small livestock and poultry, respectively. GNFF is one of the first producer groups selected by the USDA to implement USDA Group GAP certification for small-scale family farms growing and packaging fruits and vegetables on their farms.

The branding of local food products has benefitted both Balls Food Stores and GNFF. The two partners share the costs for promoting the brand to consumers, with GNFF handling the packaging and labeling and Balls Foods overseeing advertising and in-store displays. They have also benefitted from the local implementation of the national FoodRoutes Network's "Buy Fresh Buy Local" campaign. GNFF, through its partnership with Balls Foods, has reported tremendous success and hopes to continue growing the brand, focusing on long-term financial viability.¹³⁷

Market Mobile, a Regional Food Hub Delivering Local Foods in Rhode Island and Massachusetts. Because local restaurants had expressed an interest in buying from local producers, Farm Fresh Rhode Island, a non-profit organization, piloted a new program called Market Mobile. Initiated in 2009 with support from Rhode Island's state health and agricultural departments, the program started to facilitate buying relationships between producers, institutions, and other buyers. Market Mobile generated over \$1.5 million dollars in sales from over 60 local food producers to more than 260 customers in 2012, including to independent grocery stores, corner stores, farm stands, schools, and worksites.

Farmers post their pricelists online twice a week, and Market Mobile customers receive e-mail notices regarding product availability and order placement deadlines. Farmers and other producers are notified of orders and work to harvest and supply the products to fulfill the orders over a 1-2 day period. Orders are delivered to customers throughout the state, and in neighboring areas like Boston, twice a week. With a warehouse, walk-in refrigerators and freezers, a cold packing room, and a conveyor belt, Market Mobile estimates it provides 50,000 families locally produced food each week. More information can be found at <http://www.farmfresh.org/hub/>.



Linking producers and retailers. The model of farmers selling their products directly to local small stores or grocery stores can increase profitability and customer demand for stores. Local produce can have a longer shelf-life. Therefore, there is less lost profit from spoiled food for the store, and customers will return for high-quality produce.¹³⁹ This model also decreases the need for an intermediary to coordinate distribution or other logistics. While some stores, especially those equipped for perishable items, can sell local produce and other local food items on standard shelving or in-store displays, other stores may find less risk in using mechanisms such as an individual farm stand or Community Supported Agriculture (CSA) located on the sidewalk or parking lot by the store, and may benefit from the increased customer traffic these markets would attract.¹³⁹

Distribution in Action: Produce Packs in Warren County, NC

Researchers from the University of North Carolina (UNC) at Chapel Hill Center for Health Promotion and Disease Prevention (HPDP, a CDC-funded Prevention Research Center) piloted a program in collaboration with Working Landscapes, a community-based organization in Warren County working to link local farmers to new markets. This effort was spurred from conversations with the state director for the Special Supplemental Nutrition Program for Women, Infants, and Children (WIC) who articulated the challenges related to redeeming WIC Cash Value Vouchers (CVVs) at grocery outlets. CVVs are issued as part of standard WIC benefits specifically for the purchase of fruits and vegetables. Produce can only be purchased for specific dollar amounts through CVVs; if the total amount of produce purchased is less than the amount of the CVV, change is not given and the excess value is lost.

The “produce pack” program was designed to bring fresh, local produce to consumers, particularly those who use CVVs. The project team collaborated with farmers in rural Warren County, NC, to create packs of produce that are priced to correspond with CVV dollar increments. These packs make the process of selling produce to customers easier, especially CVV clients, as they do not need to be bagged, measured, or weighed. The project launch was supported with a branding and marketing campaign, and the products were sold in an independent grocery store and two corner stores over a 10-week pilot period.

The project was funded with an Economic Innovation Grant from the North Carolina Rural Center for Economic Development. A partnership with the Warren County WIC Office in the Warren County Health Department allowed for marketing and outreach to their clients. Additional partnerships have formed around this project and funding has been sought to expand to a larger geographic area. The project team and partners are also discussing how this approach can support a larger U.S. Department of Agriculture project and other farmers market and corner store efforts in the state in order to create economic opportunities in rural areas of North Carolina. Information on the project can be found at <http://hdpd.unc.edu/research/projects/foodworks/>.



Action Items

As a public health practitioner, you can do the following to connect local food producers to distributors and retailers:

- ✔ **Provide marketing or communications support to retailers and producers**, promoting the concept of local or regional produce for consumers.
- ✔ **Coordinate the start-up of a food distribution network** that brings local or regional produce to retailers, including identifying potential partners for funding.
- ✔ **Facilitate discussions between food distributors and food producers on:**
 - ▶ Available state and regional products and impacts on supply (such as seasonality).
 - ▶ The resources and solutions required by distributors to improve their food distribution networks.
- ✔ **Help facilitate direct sales from producers to retailers** by connecting retailers with groups that represent local foods (e.g., small, local farmers, food or farming cooperatives, or community gardening programs). This could involve working with managers of chain stores who can place local produce in multiple stores, or working with multiple store owners in order to harness their collective buying power in purchasing food from local farmers.¹³⁹
- ✔ **Connect small farmers to small stores** interested in serving healthier foods, especially fresh fruits and vegetables. This could include:
 - ▶ Hosting or facilitating direct meetings between groups of small stores and groups of small food producers to help both stakeholders find ways to share resources and support one another.
 - ▶ Creating a database or other resource that includes information about farmers and retailers who are looking to make a connection.



Distribution in Action: Fresh Choices in Minnesota's Small Stores

Spurred by the leverage created through historic changes to the Special Supplemental Nutrition Program for Women, Infants, and Children (WIC) food package in 2009, the Institute for Agriculture Trade and Policy (IATP) launched an innovative supply chain model to connect small stores in Minnesota authorized by WIC with a steady supply of fresh, culturally appropriate produce. IATP first conducted research to identify the existing distribution patterns and associated economics in how food products reach small stores (defined as those with one or two cash registers) in the region. IATP found that most small corner stores in the region were being served by a relatively small number of prime distributors. IATP also discovered that while these prime distributors were adept at delivering less-perishable grocery items, most did not have an effective system in place to manage the procurement and distribution of fresh produce. Compared to the distribution of non-perishable items, produce distribution is uniquely challenging in that it relies on different (and often global) supply chains and procurement expertise, and requires specialized warehousing and handling expertise to maintain product quality.

Given these challenges, IATP worked with allied businesses to re-conceptualize how corner stores could be linked with a reliable, year-round supply of culturally appropriate produce offerings. IATP and a produce distribution partner, with whom IATP has worked in the past, approached two prime distributors (one regional and one national) who serve small WIC-authorized stores in Minnesota. Jointly, they crafted a system for running fresh produce from the produce distributor through the prime distributors' existing system to participating stores. Recognizing the smaller footprint and lower product turn-over among small stores, a "right-sized" program was also developed that allows stores to purchase small pack-sizes (e.g., six oranges or avocados) that better meet their needs and avoid waste. Ultimately, more than 50 different "right-sized" products have been made available.

Using this innovative approach, retail owners can now order fresh produce using the same ordering, billing and delivery mechanisms they have previously used with the prime distributors. A "ghost inventory" system enables store orders to be consolidated by the prime distributors, who then place an order with the produce distributor who actually holds an extensive inventory of fresh produce. The produce distributor then fills the orders and delivers the produce to the prime distributors' main distribution centers. The prime distributors deliver fresh produce to individual stores using the same refrigerated trucks and routing system as their other products. The Minnesota example is unique in that no parallel procurement, ordering, shipping, or invoicing

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system had to be created for stores to access the fresh produce. The “ghost inventory” system helps reduce associated risks for the prime distributors by minimizing the time that they hold fresh product in their facilities and keeping the expertise needed to procure fresh produce at the produce distributor level.

The Minnesota Department of Health (MDH) collaborated with IATP on early work with corner store operators. The work included trainings and using focus groups to explore operators’ concerns about selling, storing, and handling fresh produce, customers’ taste preferences, and their stores’ promotional needs. MDH also collaborated with IATP to co-design related promotional materials for corner store retailers, such as posters and shelf labels, in four languages. These promotional resources were designed to help stores promote the availability of fresh produce, and are available at <http://www.health.state.mn.us/divs/fh/wic/vendor/fpchng/index.html>.

Initial results indicate that most WIC-authorized small stores have been able to meet the minimum variety of fresh produce items required under Minnesota’s stocking requirements and that consumers are purchasing fresh fruits and vegetables made available through the “right-sized” program.¹⁴⁰ As importantly, the program and the relationships between allied businesses have been sustained with minimal facilitation by IATP and without the infusion of additional outside funding. The produce distributor and two prime distributors made the products available to approximately 500 small stores in Minnesota, including approximately 200 of Minnesota’s 500 certified WIC vendors that have either one or two cash registers. The model has also expanded into parts of Wisconsin and Michigan. A summary of the core program elements, evidence, implementation guidance, and potential public health impact are available from the CDC at <http://www.cdc.gov/nccdphp/dnpao/programsta/nutrition.html>.

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Distribution Resources

Healthy Corner Stores Network (HCSN)

This Web site connects professionals and other stakeholders, provides resources for improving access to healthier foods, and describes efforts in corner stores around the United States and Canada. The “Distribution” portion of the Web site provides information about working with small stores to source local produce and working with distributors to get healthier food options in small stores. <http://www.healthycornerstores.org/tag/distribution>

The *Supplier-Retailer Gap: Connecting Corner Stores with Local Foods* discusses sourcing local foods for small stores. The document provides two program examples, keys to success, and resources. <http://www.healthycornerstores.org/hcsn-issue-brief-the-supplier-retailer-gap-connecting-corner-stores-with-local-foods>

ChangeLab Solutions

Providing Fresh Produce in Small Food Stores: Distribution Challenges & Solutions for Healthy Food Retail provides a variety of potential strategies for addressing the challenges of sourcing and marketing fresh produce at affordable prices. <http://changelabsolutions.org/produce-distribution>

Making the Link Between Stores and Suppliers is a webinar about addressing challenges in the distribution of fresh and healthier foods to corner stores. Innovative strategies including food hubs, cooperative purchasing, and agreements with distributors are covered. <http://changelabsolutions.org/publications/making-link-between-stores-and-suppliers>

D.C. Hunger Solutions

Creating Healthy Corner Stores in the District of Columbia: Healthy Corner Store Program - Phase One Research Results and Recommendations is a case study on a program in Washington D.C. that addresses hunger and food access issues by providing access to fresh produce in small stores. The case study describes an assessment process that explores in-store marketing and placement, storage and supply of perishable foods, and distribution and access to affordable produce. Lessons learned, limitations and challenges, and model programs are provided. <http://www.dchunger.org/publications/>

Successfully Selling Fresh Produce in Washington, D.C. Corner Stores outlines Phase Two of the Healthy Corner Store Program. During Phase Two of the D.C. Healthy Corner Store Program, D.C. Hunger Solutions recruited stores and worked with them to assist with stocking, promoting, and selling healthier food options. Phase Two of the program ran from October 2008 through September 2009. This second case study outlines many partners and processes that were used to help get healthier food items, mainly produce, to participating stores. <http://www.dchunger.org/publications/>

National Good Food Network (Winrock International)

This network of food system stakeholders includes producers, buyers, distributors, advocates, investors, and funders. The goal of the network is to create a community dedicated to improving and increasing sourcing and access to good food. The network Web site facilitates access to peers and partners, and provides practical information and resources. A dedicated Web page includes various resources and links to more information about food hubs. <http://www.ngfn.org/resources/food-hubs>

United States Department of Agriculture (USDA)

The Food Hubs Web page by USDA's Agricultural Marketing Service provides the USDA's perspective on food hubs along with information, resources, news, and research regarding food hubs. A listing of established food hubs across the country and the *Regional Food Hub Resource Guide*, released by the USDA in 2012, are available. The *Resource Guide* is a collection of information and resources about developing or participating in a regional food hub. The guide outlines the role that food hubs can play in regional food systems, their operation as an innovative business model, and the economic contributions they make to local communities. Funding opportunities, best practices, and additional strategies for developing regional food hubs are also included. A follow-up report, *The Role of Food Hubs in Local Food Marketing*, was released in 2013. <http://www.ams.usda.gov/AMSV1.0/foodhubs>

California Center for Cooperative Development (CCCD)

The CCCD has brought together Regional Food Hub representatives to discuss the potential for a state-wide food hub. In addition to information available on the site regarding food cooperatives, materials from the Regional Food Hub session are posted at http://www.cccd.coop/events/RFHN_home/RFHN_agenda, including meeting proceedings, state-wide assessment results, and an action plan.

Public Health Seattle-King County

Farm to Table: Assessing Delivery Models for Childcare and Senior Meal Programs provides results from pilot testing of several models for procuring and delivering local fruits and vegetables to senior meal and childcare programs. The project was funded through CDC's Communities Putting Prevention to Work. Information on these delivery models could be helpful in the retail setting, including a community food hub, virtual food hubs, and farm aggregation. http://www.agingkingcounty.org/docs/F2T_AssessingDeliveryModels.pdf

