Emerging Local Food Purchasing Initiatives in Northern California Hospitals

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Executive Summary

Hospitals in California's San Francisco Bay Area are at the forefront of a small but growing national movement to incorporate fresh, local food into healthcare foodservice. By purchasing and serving local food, hospitals can improve the quality of their foodservice and encourage their patients, staff, and visitors to eat more healthfully. Serving better food advances hospitals' mission to promote and protect health, especially in light of widespread, chronic, nutrition-related illness such as obesity, diabetes, and cardiovascular disease.

Not only can serving local food in patient meals and cafeterias directly improve eating habits, but it can help hospitals take a leadership role in creating food and agricultural systems that foster public and environmental health and social and economic equity. By modeling local food consumption, hospitals can use their considerable influence to actively promote sustainable agriculture and support California's small and mid-scale farmers. If "farm-to-hospital" initiatives continue to expand, they may soon comprise significant demand for local farm products. In California, where agriculture is still a primary industry, these markets are needed to help farmers and rural communities withstand diminishing farm prices and the concentration of the agriculture and food sectors.

Buying local food is a complicated and challenging task for hospitals, due to a range of contractual obligations and financial constraints, as well as dependence on established and carefully regulated procedures for menu planning and meal production. Local food purchasing is difficult to incorporate into hospital food supply chains, which are tied to many other food processing, distribution, and procurement systems and institutions, including foodservice distributors and Group Purchasing Organizations (GPOs). For these reasons, hospital efforts to purchase local food represent significant efforts to change institutional policies and practices as well as the wider healthcare foodservice industry.

How have Bay Area hospitals pioneered local food purchasing in healthcare institutions? This paper presents a cross-section of current farm-to-hospital initiatives in the region, in order to demonstrate what has been accomplished and how. It is intended to help hospital foodservice leaders plan and develop their own local food sourcing practices, and help those outside the hospital setting, e.g. farmers, public officials, nonprofit support agencies, better understand the hospital purchasing environment. It is hoped that these findings and analysis can inform the process of addressing current institutional and industry barriers facing farm-to-hospital initiatives, and suggest some direction for facilitating them through further research, policy, education, and technical assistance efforts.

Over the spring and summer of 2007, SAREP conducted exploratory research with chefs and foodservice directors at hospitals in and around the Bay Area. Information was also gathered through a partnership with San Francisco Bay Area chapter of Physicians for Social Responsibility (SF PSR), which leads local work on the "Healthy Food in Healthcare Campaign" coordinated by the international organization Healthcare Without Harm (HCWH). Extensive observations and insights on this work were provided by members of SF PSR's staff, the HCWH network, and the Hospital Leadership Team, a group of Bay Area hospital foodservice directors organized for the goal of increasing sustainable food procurement in their institutions.

Findings

Characterizing the Local Food Movement in Hospitals

- It is useful to characterize "localness" as a continuum rather than a strict set of geographic boundaries for farm-to-hospital initiatives, but typically local food is understood by foodservice directors as produced in Northern California or California.
- Buying and serving local food may increase consumption of fruits and vegetables by those who eat in hospitals, and thus provide them with important nutritional and health benefits.
- Hospitals can use local food purchasing to exert public influence that supports preventive health, environmental health, and social justice in their communities.
- Local food purchasing in hospitals responds to growing consumer demand for local food and may bring cost-savings to hospitals.

Structure of Hospital Foodservice

- Key internal structural variables affect the environment for local food purchasing in hospitals, including service division (patient meals/cafeteria/catering,) patient dietary regulation and modified diet needs, menu rotation procedures, production systems, relationship to a multi-hospital system, and organization of labor.
- The context for local food purchasing in hospitals must also take external variables into account, such as the roles of Group Purchasing Organizations (GPOs), contracted and non-contracted vendors, and produce growers, shippers, and distributors.
- Major challenges to local purchasing in hospitals include budget constraints; large product volume needs; reliance on ordering, delivery, and billing efficiency; contract stipulations; lack of staff skill and support; lack of administrative buy-in; and lack of local food supplies that meet needs.

Paths to Local Purchasing

- By generating positive attention, placing formal requests for financial and administrative assistance, engaging clinical staff, and forming food committees, hospitals can cultivate the support of key leaders within their institutions.
- A variety of institutional food policies can help establish standards and procedures, clarify priorities, generate resources, tie local food to other institutional priorities, and otherwise institutionalize local purchasing practices. Emerging policies at the local government level may also encourage public hospitals to purchase local food.

- Understanding and navigating purchasing contracts and working with producers and distributors to request, evaluate, and select products are critical steps. Requests for information, questionnaires, and "spec sheets" are some of the tools used to state preferences and solicit information in order to select local products.
- Networking among hospital foodservice directors to exchange information and pool purchasing power build capacity for local food purchasing.
- Bay Area farm-to-hospital initiatives benefit from technical assistance and other forms of support from and collaboration with various nonprofit organizations working on issues of agriculture, environment, food, and health in the community.

Analysis: Moving Forward

- Hospitals and their community partners should use a dual approach to increase local food purchasing: 1) work within the constraints of the existing institutional framework on small, informal projects, and 2) identify and adopt ways to influence their institutions and suppliers and thus effect systemic institutional change.
- Food procurement systems should be strategically adapted to accommodate ordering, inventory, production, and accounting procedures that support local food purchasing. This will require the development of coordinated information systems and economic analyses that can demonstrate potential financial impacts and guide decision-making to effectively increase local food purchasing.
- Clinical nutrition staff should be integrated into local food purchasing efforts. By communicating nutritional implications, sharing information about seasonal availability, providing resources for recipe analysis and modification, and including patient meals in local food efforts, hospitals can enlist nutritionists to support local food purchasing goals and translate them into concrete actions.
- Training and support resources for foodservice staff are essential. Peer-to-peer training, a local sourcing clearinghouse, menu planning and nutritional analysis tools, a recipe database, individual consultation and technical assistance, and educational curricula in culinary, technical, and academic institutions have all been discussed as means of meeting these needs, but are not yet widely available.
- Relationships with hospital marketing and public relations departments should be cultivated to help advance local food purchasing goals. Both internal and external marketing support is needed to increase awareness of farm-to-hospital projects and build support for their expansion.
- Further work is needed to determine how best hospital food policies can be translated into practice. Strategic planning, benchmarking, and evaluation efforts have not yet "caught up" with policy development, but will contribute to making food policies more meaningful and credible.
- Building a demand for local food in hospitals, especially that produced by California’s small and mid-scale farmers, will require broader reorientation in the food supply chain. Hospitals have the potential to help develop "mid-tier food value chains" by creating new purchasing structures and mechanisms and influencing their network of production, processing, and distribution institutions.

I. Introduction and Background

Introduction

Northern California is well-known for leading the local food revival of recent years. As sales of fresh, local food skyrocket across the country, the San Francisco Bay Area's concentration of farmers markets, Community Supported Agriculture (CSA) programs, and local-centric restaurants and groceries remains unrivaled. Even its school districts were part of a pioneering first wave of public institutions to embrace local food.

The U.S. healthcare sector is the latest to make headlines pursuing local food, and Northern California is again paving the way. Hospitals in the region are creating policies and practices that facilitate bringing locally produced food to their patients, staff, and visitors. They are partnering with farmers, cooperatives, and foodservice vendors and distributors to source local products. They are asking their leaders to invest financial resources in local purchasing, and forming institutional food committees to provide guidance and strategy for these efforts.

Although "local" is not always synonymous with "healthier," using local food has become a cornerstone of a new priority on healthier food in healthcare institutions. It is part of a broader shift toward more "from-scratch" cooking, fewer processed products, more fruits and vegetables, and more nutritious and appealing menu choices. This trend is partly a response to some of today's gravest health concerns, including obesity, cardiovascular disease, and certain cancers. As medical providers struggle to prevent and treat record rates of these chronic nutrition-related diseases, part of the answer may lie in promoting fresh, healthy, good tasting food.

Beyond nutrition, "farm-to-hospital" initiatives are one way in which hospitals can contribute to improving the food system. These initiatives are vehicles for uniting the healthcare mission with the interests of the local agricultural community and creating new markets for small- and mid-scale farmers. The tremendous purchasing power and public visibility of hospitals could be a key lever for building infrastructure and demand for local food. Hospital efforts may also bring attention to public health impacts of the food system, including air and water pollution, residues from pesticides and other toxins, and health inequities in agricultural communities. A stronger focus on food helps hospitals play a role in promoting environmental sustainability and in raising awareness of its links to human health.

However, buying local food is a challenging task for hospitals, and healthcare is an unproven market for farmers. Local food is difficult to incorporate into complex institutional food processing, distribution, and procurement systems. Numerous administrative and contractual issues must be negotiated, and financial constraints are constant and prohibitive. Even in Northern California, with its abundance of local fruit and vegetable production, hospitals must make exceptional efforts to change their sourcing infrastructure and practices to buy and serve local food.

This paper is intended primarily to present a picture of the current state of farm-to-hospital initiatives in and around the Bay Area of Northern California. If these programs are to succeed, expand, and be replicated in time, a better understanding of what has been accomplished and

how is a good place to start. It is hoped that hospital foodservice leaders can benefit from this compilation of tools and strategies that have been used to plan and develop local food sourcing initiatives, as well as interim findings on the impact of these initiatives.

An additional aim of the paper is to help those outside the hospital setting, e.g., farmers, public officials, and nonprofit support agencies, better understand the purchasing environment for hospital foodservice, especially related to Group Purchasing Organizations (GPOs), prime vendors, produce distributors, and other players in the supply chain. This information is crucial to developing ways to address existing external barriers and initiate and facilitate farm-to-hospital programs.

Finally, because the farm-to-hospital movement is in its early stages, this paper suggests what its growth and success might depend on. It is hoped that this analysis and recommendations help lay the foundation for supporting local food purchasing in hospitals through policy approaches, investment in infrastructure, public and professional education, and further research.

Background and Methodology

This study began in late 2006 as a demand analysis of the market for local food in Northern California hospitals. It was soon discovered that many hospitals in the Bay Area were currently buying local food and/or actively planning local food purchasing initiatives. Because the market was rapidly incubating, and because the purchasing environment was so complex, SAREP researchers decided to deepen the scope of the study. Rather than a simple survey-based demand analysis, we would conduct exploratory research into the purchasing environment and the nature of the local food transactions already in play. This approach would cast a shorter net (fewer hospitals and no quantitative data) but capture important information needed to investigate hospitals as a market for local food, and identify strategies for farmers to enter the healthcare market.

In the spring and summer of 2007, phone and in-person interviews were conducted with 10 chefs and foodservice directors at hospitals in and around the Bay Area. In each interview, subjects provided detailed information about their foodservice operations, current and planned purchasing of local food, and the challenges they faced in purchasing local food. Secondary research for background information on institutional foodservice, the produce industry, and distribution mechanisms was also conducted.

In May of 2007, one of the researchers, Elizabeth Sachs, began working with the San Francisco Bay Area chapter of Physicians for Social Responsibility (SF PSR), a local nonprofit member of the international Healthcare Without Harm (HCWH) coalition. Among other programs, SF PSR is involved at the regional and national level in HCWH's Healthy Food in Healthcare campaign, which helps hospitals procure food that is produced using ecologically sound and economically and socially responsible methods, and that creates a healthier food system. Sachs works with SF PSR to provide education, advocacy, and technical assistance for hospitals in the region in planning and developing sustainable food initiatives. Through direct involvement in farm-to-hospital program development, a wealth of additional information about the foodservice environment and issues related to local food purchasing has been gleaned. Much of the analysis

and conclusions in this paper were developed in this capacity, especially through extensive discussions with SF PSR's Hospital Leadership Team, a group of local hospital foodservice directors that organized for sustainable food procurement, and with numerous other foodservice and administrative staff, clinicians, and support agencies in the Bay Area and across the U.S.

II. Local Food in Healthcare

A. What is local food?

Local food is not easily defined. Various attempts have been made to delineate geographic boundaries inside of which food that is consumed must be grown and processed to be called local. One hundred or 150 miles are common radii of these designated local food regions. Others have used more subjective definitions, such as produced "in a region that can be called a community," "in the bioregion," "within a day's drive," or "outside of the industrial food chain." Still others have used a continuum model, represented by the image of a map with several concentric circles around the location of consumption. In this model, the emphasis is on a progression from the nearest to the furthest resources, suggesting the principle of commitment to the closest food first.

For the purposes of this paper, we will adapt a version of this last definition of local food, whereby it is differentiated from conventional food according not to a distinct geographic divide but to a closer relative degree of proximity between eater and grower or producer. According to this model, onions grown in Marin County are "more local" to a hospital based in Marin than onions grown in Yolo County, but the Yolo County onion is more local than that grown in Fresno, and so on.

However, the nature and extent of health, ecological, and social benefit provided by local food does not always or exactly correspond to a given food's geographic point of origin. Geographic location must be integrated with other related and useful criteria to measure these benefits. A tomato from 400 miles away may have fewer pesticide residues than one from 75 miles away, or an apple orchard in Washington may provide better working conditions than one in California, or an industrial-scale manufacturer may sell locally, or a "green" entrepreneur may conduct business by mail order only. As sociologist Claire Hinrichs has argued, the social and environmental relations need to be distinguished from the spatial relations of localization, or else "'local' food can distract attention from careful appraisal of social inclusion/exclusion or environmental impacts."[1] For this reason, our differentiation of local food is closely associated with increased access to information about characteristics of food products and production and processing practices that enables consumers to make choices that reflect multiple value-driven criteria.

In this paper we acknowledge the complex and sometimes contradictory nature of food localization and its accompanying values and relations. We will not try to delineate local food, or contrast local and global food systems, or argue for exclusive benefits conveyed by purchasing local food. However, we will suggest that participating in the development of local food systems (broadly interpreted) has much of value to offer hospitals and their stakeholders, as explored in the next section.

A final note on defining local: Our observation is that hospitals that deliberately purchase local food frequently use the "continuum of local" as a conceptual model in planning and decision-making. For instance, a hospital may switch from ordering melons to citrus in winter in order to increase use of California-grown fruit, without stipulating to its produce vendor that "all fruit must come from within 200 miles." On the other hand, it is helpful for hospitals to use more objective and clear-cut definitions of local in order to communicate with producers and suppliers. For instance, it might be more realistic for a food buyer to request apples grown in Northern California than to ask for the "most local apples" from a produce distributor. In general, hospital foodservice directors interviewed for this paper use "grown in Northern California" and more broadly, "grown in California" as their quick-and-dirty definitions when communicating with vendors.

B. Why increase local food in hospitals?

Increasing demand for local food is largely motivated by growing awareness of the health, environmental, and social harms of the industrial food system. The preference for locally grown food joins those for organic, fair-trade, free-range, and the many other food production methods and standards that are perceived as better for health, the environment, workers, and animals. Eating a greater proportion of local food may help keep jobs and dollars in communities and farmers on the land, as well as promoting healthier diets. The benefits of increasing local food connections have been detailed elsewhere (for example, Hinrichs,[2] Pretty,[3] Anderson,[4] and Halweil. [5]) Here we will describe some of the specific reasons why leaders of farm-to-hospital initiatives are building these connections.

In general, it has been suggested by foodservice directors, physicians, nutritionists and others that healthcare institutions can play an influential role in modeling better eating habits and a more sustainable food system. Improving meals fed to millions of people each year is a natural path for hospitals to engage in nonprofit and corporate social responsibility initiatives that impart social change as well as increase sales and build their public image. Purchasing local food is one way for hospitals to acknowledge that their purchasing decisions have important consequences, and to link their purchasing power to positive health, community, and environmental outcomes. Here are some of the ways these links are articulated:

1. Local fruits and vegetables frequently taste better.

Significant and growing attention to increasing preventive healthcare has sharpened both the medical and the public policy focus on dietary disease prevention. For healthcare providers to effectively work to reduce the tremendous social and financial burden of nutrition-related chronic disease, they must facilitate preventive practices such as healthy eating. By engaging in local food systems, hospitals send the message that food quality and dietary habits are essential parts of preventive health. This commitment is especially significant in addressing the persistent and increasing racial, ethnic, and economic health disparities that characterize the prevalence of obesity, diabetes, cancer, heart disease, and other chronic diseases.

Fruit and vegetable consumption is a key part of healthy diets, but Americans get far fewer fruits and vegetables than recommended. Studies have begun to show that providing access to local produce can increase total consumption of fruits and vegetables. In schools, introducing local fresh salad ingredients has been shown to increase consumption of vegetables.[6] Other studies show that when people shop at farmers markets, they consume more fruits and vegetables.[7] By virtue of being fresher, riper, and frequently of more flavorful varieties, local produce is usually tasty and appealing. Conventional produce varieties are selected for durability and consistency in size and shape, frequently at the expense of flavor. By replacing these with fresher, more diverse, more flavorful produce, institutions can encourage patients, staff, and visitors to devote a greater part of their diets to fruits and vegetables.

2. Proximity to the food source can mean better information and more choices.

When dealing with large national and international supply chains in which food products are combined and travel through many distribution points, it is difficult to get information about sources, growing practices, and processing methods. By buying locally, consumers can potentially access more information about how food was grown and express a preference for certain attributes. Local food may come in more diverse varieties, sizes, and stages of ripeness. These qualities may make the food more flavorful and in some cases, more nutritious.

Locally grown fresh produce may also be more nutritious if it is harvested closer to the time of consumption than non-local fresh produce, if effective post-harvest handling practices are employed. Fresh fruits and vegetables lose nutrients to oxidation over time, and non-local produce may be stored longer and transported long distances to their nutritional detriment. In addition, local fruits and vegetables may be more likely to be picked riper, because they do not have to be shipped and stored for long periods. In many fruits and vegetables, ripeness at harvest is positively correlated with higher levels of nutrient quality and bioavailability.[8]

3. Hospitals can support the development of healthier food systems.

Healthcare institutions are a force to be reckoned with. Representing 545,000 institutions and 13.5 million jobs (2004) in the U.S., healthcare is considered the country's largest industry.[9] Government, businesses, and individuals are enormously invested in the sector, and every region's economic resilience and general quality of life is affected by its healthcare resources. Because healthcare providers play such a pivotal role in their communities, they can exert extensive influence by modeling and advocating for systemic social change. By increasing their local food purchases, hospitals signal their public service commitment to increasing sustainable food systems that can improve public and environmental health. In this way, they not only change their institutional practices, but also use their power to actively build and promote healthier food systems.

"Locally grown" is not necessarily synonymous with healthier, safer food or more ecologically sound farming practices. But for hospitals, which combine a health mission and substantial purchasing power, a focus on local food may lead to a better understanding of how food production systems affect health and encourage exploration of the alternatives. For instance, there is growing awareness of how some agricultural materials, such as pesticides, artificial

growth hormones, and antibiotics, may threaten human health (good overviews of these issues may be found in Harvey[10], Horrigan et al.[11], and Cohen et al.[12]) There is also increasing concern about the centralization and globalization of the food supply chain and its implications for food safety. In the wake of several devastating outbreaks of foodborne illness, many questions have arisen about the sufficiency of our food safety oversight, especially regarding animal feedlots, food packing plants, and food import systems. By sourcing local food, hospitals can demonstrate demand for more transparent supply chains and a commitment to using information about production methods in making food purchasing decisions. In this way, hospitals can use their influence to make health issues associated with food production a priority to their food suppliers, as well as producers, other healthcare institutions, policy makers, and the media.

4. Hospitals can engage in broader environmental and economic issues in their communities.

How food is produced, processed, and distributed affects the quality of soil, water, air, and other natural resources. Among the myriad environmental problems caused by the food system are soil and water contamination from pesticides[13] and nitrate pollution from fertilizers and industrial feedlots.[14] Major crops are grown in monocultures, which reduces biodiversity, hastens soil erosion, and increases disease resistance. The transporting of food nationally and internationally is also a major contributor to air pollution, increased greenhouse gas emissions, and global warming. Buying locally allows hospitals to choose food that is grown using less energy-intensive, more environmentally benign practices, and thus reduce harmful ecological impacts of the food system.

Purchasing local food also helps hospitals to support markets for local growers. The U.S has lost almost five million farms since the 1930s, as technology and policy helped to concentrate the food market among fewer and fewer producers. Farmers have seen diminishing prices for their products due to the integration and globalization of food markets, especially small- and medium-sized farmers, and those who are among racial and ethnic minorities. Despite Northern California's urban centers and growing population, many rural communities in the region continue to depend on agriculture as their economic mainstay. Buying local food can enhance local farmers' share of food prices, because less money must be spent on distribution. It can also help circulate more income among area residents, sustain more businesses and civic institutions, and create jobs for local residents. For instance, a recent study in Michigan found that if Michigan families spent ten dollars per week on local food, it would keep an extra 1.9 billion dollars in the state each year.[15]

5. Hospitals can increase their bottom lines.

Generally, the rationale for increasing local food in healthcare institutions is based on the principle that these institutions are mostly nonprofit and public institutions that exist to serve their constituents, and that these constituents should be the ultimate beneficiaries of changes to policy and practice. However, local food purchasing can be attractive from a financial standpoint as well, bringing cost savings to institutions because of limited transportation, storage, and marketing requirements. Two recent studies, one of which took place in California, found that

local seasonal produce can actually be less expensive for institutions to purchase than non-local produce.[16]

Buying local food might be "good business" in other ways. Most hospitals are driven to maximize sales and revenues in their cafeterias, and have the flexibility to adjust pricing on cafeteria menus. The greater appeal of fresh, local food can increase sales—one Marin County hospital attributes the quadrupling of its cafe sales to sourcing local produce and a consequent menu overhaul. Although it would be an exaggeration to say that buying local food translates into better working conditions in hospitals, it has also been suggested that better food might be a benefit in attracting and retaining workers—both in foodservice and in clinical care.[17] Hospital employees may eat one or more daily meals at work, and better food offerings could certainly be seen as a valuable perk. At least two Bay Area foodservice directors are former high-end restaurant chefs who were drawn to hospital foodservice in part because they saw potential to bring the growing momentum of local food systems into an institutional setting, making hospital cafes healthier and more appealing places for their customers.[18]

Finally, hospitals compete for patients much as restaurants and grocery stores compete for customers, and likewise they pay attention to consumer trends. Sales of fresh, local food are on the rise in every market channel in the U.S., representing about a $5 billion market in 2007, up from $4 billion in 2002, and expected to be a $7 billion business by 2011.[19] These estimates are based on the exponential growth of farmers markets as well as retail and foodservice purchasing trends, reflecting "increased concerns about food safety and a growing awareness of the ‘green’ culture," according to a recent market analysis.[20] Like other food merchandising businesses, hospitals are learning that showcasing local food is an emerging competitive strategy and may help them grow a bigger share of the market.

III. Structure of hospital foodservice

When most people think of markets for local food, they think of individual consumers buying produce from small, family-owned farms at weekly farmers markets, on U-Pick operations, or through Community Supported Agriculture (CSA) programs. Or they may think of their favorite Bay Area restaurants that feature seasonal, locally grown vegetables and grass-fed beef. The size and structure of institutional foodservice makes buying local food a much more complicated task than in a household or restaurant, and hospitals in particular purchase, prepare, and serve food in a unique operating environment. They are organized to provide large volumes of food at very low cost and according to an array of specific dietary regulations. Hospitals' mission is to deliver high-quality, cost-effective clinical care, and the financial pressures of the healthcare environment mean that investments in improving foodservice are not usually a high-ranking institutional priority. Also, an entire industry has evolved to sell food, supplies, equipment, and technology to the healthcare foodservice market, and procurement and production systems within hospitals have co-evolved with the industry. These efficient and entrenched relationships connect hospitals with large, consolidated food supplies, and do not have numerous obvious access points for local food purchasing. However, there are also internal structural variables that affect if and how a hospital environment can source local food. Several of these variables are particularly important, because they affect how easily operations may be modified or adapted to accommodate local food.

A. Key internal structural variables

1. Divided service

The typical hospital serves patient meals ("patient feeding,") sells food in at least one cafeteria, and caters onsite meetings and special events. Generally, each division represents its own cost center, and foodservice directors must be able to separate patient and nonpatient costs. Patient meals are budgeted at an extremely low cost, often between $2.00 and $3.00 per meal, and do not generate revenue, so controlling costs in this division is necessarily a high priority. In retail cafeterias, pricing is somewhat flexible, and operators can raise prices in accordance with increased food cost. However, cost containment and revenue generation are constant aims in retail foodservice, especially as these services are increasingly expected to offset the cost of patient feeding. In some hospitals, the issue of retail revenues is complicated by subsidies for employee meals,[21] or by management contracts with private firms. Catering events usually make up a smaller percentage of meals served by a hospital, but they are budgeted at a fairly high cost, usually between $5.00 and $20.00 per person, and are expected to be of higher quality than cafeteria food. Special orders of high-quality, costlier products are most likely to be placed for catered meals, and some directors see these catered events as opportunities to showcase local foods and gain support for expanding local food purchasing.

2. Restricted patient menus

Patient menus vary with hospitals' patient populations, as well as their foodservice production facilities and processes. However, most hospitals provide one or more standard patient menus for each meal, as well as those for various therapeutic diets (e.g., renal, cardiac, diabetic), modified consistency diets for patients with swallowing problems, and special diets such as vegetarian. Hospitals vary in their patient feeding systems: patients may order from a pre-select menu 24 hours before meal time, or a "spoken menu" system may allow them to order a few hours before the meal, or a hospital may offer restaurant-style room service so that patients may order and eat when they please. Regardless of menu system, though, foodservice workers must juggle multiple dietary restrictions and ensure careful attention to patient meals.

One commonly cited reason for the low quality of hospital food is that hospitals have typically "cooked to the least common denominator," in order to meet this variety of dietary restrictions. Dietary regulation plays a significant role in any hospital's food purchasing and preparation decisions. Foodservice leaders may strive for creative and appealing patient meals, but they are required to standardize menu items, remove or substitute ingredients with specific nutritional profiles, alter flavors and textures to meet dietary needs, and otherwise modify most dishes. Typically a new menu item is submitted to the clinical dietary staff for nutritional analysis, and then returned with required modifications: a recipe may require adding sauce for easy swallowing or the substitution of nondairy products to minimize potassium content for renal patients, for example.

3. Menu rotation schedules

Unlike in restaurants, where menus may change on a daily basis, most hospitals use long-term menu cycles and rotations for patient meals, and many also have long-term rotations for cafeteria

offerings as well. For patient menus, a three-month menu cycle may be planned every two to three years. This is partly due to the various levels of analysis and approval required for patient menus, and partly to make ordering and preparing food less wasteful and time-consuming. "There is no improvising in patient meals," noted one foodservice director we spoke with.

Menu planning in cafeterias is likely to be more flexible, but because of tight budgets and labor demands, frequent menu revision may be discouraged. Also, some foodservice directors have noted that customers are sensitive to changes in the cafeteria menu, especially when they include higher prices (e.g., for organic options.) Others have observed that the stressful circumstances that bring friends and family members of patients to hospitals lead them to seek out familiar "comfort foods" rather than less familiar and/or healthier items. Several directors commented that daily specials are a good venue in which to experiment with new foods and preparations. In both patient and retail service, some directors have found that they can broaden menu plans to include food categories, rather than food items (e.g., a menu might include "fresh sliced fruit" rather than "apple slices" to allow for more flexibility.) Several also suggested that salad bars and other self-serve options lend themselves to substituting new, more diverse items and may also be a good "first step" for the incorporation of local products.

4. Production systems

There are several main types of foodservice production systems used by hospitals:

- *Conventional:* In conventional foodservice systems, food is purchased by a hospital, but may have been preprocessed to some extent. Prepeeled and chopped vegetables are commonly used, as are preproportioned servings of meat. All production is done on the premises and food is held hot or refrigerated immediately after production, and served within a short time. Meals are then assembled on a tray line in the kitchen, or distributed in bulk quantities and then assembled closer to patient rooms.

- *Ready-prepared:* Ready-prepared systems evolved in response to high labor costs and a shortage of unskilled labor. These systems include "cook/chill" and "cook/freeze" methods, which involve producing items for inventory by partially cooking them, then rapidly chilling or freezing them using special equipment, and then withdrawing them for reheating and assembly at a later time.

- *Commissary:* The commissary model uses a centralized procurement and production facility, and distributes finished or partially finished menu items to various remote locations in a single or multiple facilities. Of all of the systems, commissaries are best equipped to handle large amounts of unprocessed ingredients. Most hospital commissaries have specialized equipment such as meat cutters, and skilled labor to prepare foods from scratch.

- *Assembly-Serve:* Assembly-serve operations purchase processed, pre-prepared food that requires minimal cooking. In this model, only storage, assembly, heating, and serving are performed in the hospital.

The type of production system used by a hospital is one indicator of its ability to purchase local food. Labor, storage space, prep and cooking equipment, and many other factors are important to consider when making the change to local food, which frequently involves changing from processed to whole or minimally processed foods as well. Local fruits and vegetables tend to be most commonly available in whole, unprocessed form, although several local produce processors are beginning to address the increased demand for preprocessed local items. Even within types of production systems, hospitals can vary widely in the volume and variety of food they can handle and their capacity for processing, cooking, storing, and serving food. For instance, many Bay Area hospitals employ conventional systems but buy significant amounts of pre-prepared items as well for weekends or holidays.

5. Hospitals vs. hospital systems

In recent decades, hospitals have been largely consolidated into "multi-hospital systems" (MHSs), organizations that own or manage multiple hospitals, to improve efficiency and increase market power. The rise of MHSs is considered a response to the financial pressures of managed care.[22] In the Bay Area, the largest MHSs are Catholic Healthcare West (CHW,) Sutter Health, and Kaiser Permanente. MHSs strongly influence the purchasing habits of their member hospitals. Although consolidation affected foodservice operations in numerous ways, there are several specific factors with implications for local purchasing:

a. Frequently, whole systems or subsystems of hospitals may contract with foodservice suppliers for better pricing. Ordering is typically done by each individual hospital, and contracting, budgeting, and accounting may be internal to the hospital or conducted at the system level. In some rare cases, even ordering is centralized. Production and labor are usually managed independently, but a few systems, such as Kaiser Permanente, distribute food to hospitals from a central commissary where food is ordered and prepared. In small hospital systems such as John Muir, a single manager directs multiple on-site kitchens by rotating among campuses.

b. Most MHSs have systemwide or regional departments to conduct outreach and education, provide financial and technical resources, partner with area nonprofits, and otherwise engage with local communities to foster better health and quality of life. In some cases, these departments are "home" to local food initiatives. Kaiser Permanente, for example, has a Community Benefit Department which supports at least 25 farmers markets on hospital grounds and sponsors "Healthy Eating, Active Living" collaborations that include local food initiatives across its service region, along with various other programs.

c. Although most of the hospitals we studied for this paper are self-operated or "on-staff," the healthcare industry in general has moved to contracting with private companies that conduct food procurement, service, and sales. In some hybrid models, only management is contracted out. Economic efficiency, specialized equipment and production processes, and access to industry research are the main incentives for outsourcing foodservice management. Sodexho and Aramark are well-known private foodservice management companies used by area hospitals, universities, and other institutions.

Management companies may pose an advantage to hospitals that want to source local food, as

hospitals can set benchmarks and hold these contractors to certain performance standards. Several universities have made significant progress in partnering with management companies on sustainable food initiatives.[23] On the other hand, management companies are for-profit operations and not likely to voluntarily adopt new practices that represent additional labor or food cost. Efforts to develop local purchasing in hospitals with management contracts should take this extra layer of organizational structure and priorities into account.

6. Organization of labor

Foodservice staffing structure varies widely in hospitals. In some cases, all foodservice staff are employees of the hospital, and in others the management staff is contracted. Generally one foodservice director or manager manages several shift or production supervisors, who directly oversee the work of the cook staff and other workers, such those who assemble food on tray lines or run dishwashing equipment. A few hospitals employ actual "chefs," executives who are exclusively in charge of overseeing the kitchen and all cooking. Variable staffing structures and administrative systems means that the staff member who orders food may have more or less power to make changes such as substituting local items.

Regardless of variation in staffing structure and operation, two aspects of labor are nearly universal to hospital foodservice: 1) Labor costs represent the vast majority of total operating costs, averaging 60 to 70 percent, and pressure to limit labor costs is high; and 2) Line staff positions are treated as low-skill and compensation is minimal, usually less than ten dollars an hour with limited benefits. For these reasons, foodservice staff capacity is one of the most important considerations in determining the feasibility of a local food initiative.

B. Key external structural variables

In addition to the institutional factors that can potentially impact local purchasing in hospitals, numerous external factors are important as well. Hospitals are merely one participant in an enormous, complex food supply chain, and purchasing local food changes how this supply chain operates. The context in which hospitals conduct their food purchasing includes the following:

1. Group Purchasing Organizations (GPOs)

In the 1990s, healthcare providers began forming Group Purchasing Organizations (GPOs) to pool their purchasing power in negotiating prices for products, including equipment, supplies, and food. GPOs are now large national firms that serve as outsourced vendor contract negotiators, and almost all hospitals are members of a GPO. In multi-hospital systems, GPO membership is systemwide. GPO-contracted purchases are estimated to be over $200 billion dollars annually[24] making them an established and powerful link in the healthcare supply chain. In the Bay Area, most hospitals belong to one of three GPOs: Novation, MedAssets, or Premier. Premiere is actually a member-owned company in which member hospital systems such as Catholic Healthcare West hold financial stake.

The benefit of GPO membership to hospitals is controversial. According to a 2002 article in *Healthcare Purchasing News*, GPOS are the "strongest, the most profitable, and in the best position regardless of the state of the market" among all healthcare food supply chain players.[25]

Although they are supposed to help hospitals achieve cost savings, critics say that GPOs' operating practices serve to consolidate their own marketing power and give them significant control over both supplier and buyers.[26] This is partly due to their business model of generating revenues through "administrative fees" from producers and manufacturers, essentially tying their own profits to those of the companies they refer to hospitals. A thorough critique of the GPO model and an analysis of the costs incurred by hospitals in doing business with GPOs were published in 2006 by the International Center for Corporate Accountability.[27] Although this was not a subject of this study, we mention the controversy here to suggest that the nature of GPO membership may limit hospitals' freedom to exercise choice in buying food outside of GPO negotiated contracts.

2. Prime vendors

Almost all hospitals buy most of their food through two to three-year contracts negotiated by a GPO with a "prime vendor." Prime vendors like U.S. Foodservice and Sysco, often called "broadline distributors," supply many different institutional products, including food and foodservice supplies. Distributors secure markets for the products they handle, and generally charge a margin of 20 to 30 percent for this service. Most hospital foodservice operations are required to purchase between 80 and 90 percent of their budget from their prime vendor, and this requirement can only be changed when contracts are up for renegotiation. In recent years, GPO contracts have increasingly been tied to a series of exclusive distribution contracts. For example, hospitals that are members of the GPO Premier must use U.S. Foodservice as a prime vendor. In 2004, the GPO Novation replaced its previous multisource contract with an exclusive contract with U.S. Foodservice as well. According to a January 2005 article in *Food Management*, these contracts have "technically given USF a sole-source relationship with facilities controlling as many as two-thirds of all acute hospital beds [in the country.]"[28]

How do hospitals work with prime vendors? Prime vendors source products from producers, manufacturers, wholesalers, and other distributors, store these products in warehouses, and deliver them to institutions to fill orders. It is not uncommon for larger hospitals to receive food deliveries three or more times weekly. Hospitals establish accounts with prime vendors that specify terms of ordering, delivery, and payment. Product catalogues are available in electronic form, and most ordering is done electronically, but hospitals are usually assigned a sales representative to answer questions and provide assistance in person or via phone.

Prime vendor contract pricing is negotiated by GPOs, but not all pricing is "fixed-cost." Fixed-cost pricing assures that the cost of a product plus a flat markup will remain constant for the duration of the contract. Costs for most market-stable items, such as dry, frozen, and canned goods, are usually fixed. Cost-percentage pricing is used for high-volume products that are prone to more volatile market conditions, such as produce, dairy, and meat, and includes a percentage in addition to the cost of the product.

3. Other vendors

In the Bay Area, local resources allow many hospitals to buy dairy products, bakery items, and increasingly, fresh produce, from suppliers other than their prime vendor, as long as they meet

their contract obligations. Some prime vendor contracts stipulate that if the prime vendor cannot provide a similar product to one demanded by a customer, than the customer can purchase the product off-contract without it counting toward off-contract percentage maximums. However, some foodservice directors express confusion about what is meant by a "similar" product, because vendors may not differentiate among products with different functional qualities. For example, a free-range chicken may be the same as a conventional chicken according to vendor specifications. On the other hand, some food service directors report that contract percentages are not strictly enforced, and that vendors tend not to be concerned with what they might consider sideline or specialty items that don't constitute major profit centers.

Some small food distributors are actually subsidiaries of broadline distributors. For instance, international distributor Sysco owns various regional specialty distributors, including San Francisco produce distributor Lee Ray Tarantino Produce, which has begun to partner with hospitals on local food sourcing. This structure may facilitate an increase in local produce use because it combines access to local sourcing with on-contract buying.

4. Produce markets

Local food purchasing is most likely to emphasize fresh fruits and vegetables, partly because they are a central part of healthy diets. Fruits and vegetables are abundantly produced in California and there is existing infrastructure for their distribution. Many hospitals source their produce from distributors in the region who currently buy large volumes of in-state produce, especially during the growing season. Produce distributors in California tend to handle a wide range of fruits and vegetables, including those grown in Northern California, in other parts of the U.S., and in other countries.

How do produce distributors get the produce that they sell to hospitals? After harvest, fresh produce is handled and packed by a shipper or a grower-shipper. (Grower-shippers grow, pack, and ship produce, and pack and ship other produce.) At this point, it may be exported or sold directly to individuals, retailers, or institutions. More frequently, sales by growers and grower-shippers are made to specialized produce wholesalers or brokers. These wholesalers may also sell directly to institutions, or they may sell to a distributor such Sysco or U.S. Foodservice. Wholesalers' role is to consolidate supply from numerous farms to increase product volume and breadth. Wholesalers aggregate product from various sources and can avoid fluctuations due to weather and season, grade products for different markets, and help to balance quality and prices. Before the late 1980s, most produce was sold on daily "spot markets," based on fluctuating prices and quality. Now most produce is sold on standing agreements or contracts specifying various conditions and terms, including quality, pricing, and marketing services.[29]

This trend has largely come about as a result of the consolidation and integration of the retail food industry. According to a 2000 study of the dynamics of the U.S. produce market, the fresh produce industry has been influenced by supermarkets in other ways as well. The study found that self-distributing supermarket chains are buying a larger share of fresh produce directly from shippers, and with that trend the number of intermediary brokers (many of which also serve foodservice institutions) is declining. Retail trends have also led consumer demand for year-round availability, precut produce, and more packaged and branded items, changes that are

"likely to have profound effects on the way the produce industry is organized and the way it conducts business."[30] These consumer trends, coupled with the increasing influence of companies that consolidate produce to make it widely and cheaply available, may make local produce a harder sell in some institutions.

C. Challenges

Not all of the structural factors discussed above should be considered hindrances to hospitals buying local food. Instead, they describe the institutional and environmental context of hospital foodservice and may help to locate potential entry points for local food within this context. Nonetheless, numerous challenges have been cited by those in hospitals who have tried or are trying to buy local food. Some of these challenges are related to institutional or industry structure and others are related to organizational culture and the attitudes and beliefs of those in hospital leadership. They include:

1. Financial challenges

Local food is sometimes but not always more expensive to buy than non-local food, especially in the case of dairy products and seasonal produce. However, the perception that local food will always cost more is widespread. In one recent foodservice study, 23 percent of respondents said that "competitive or better pricing elsewhere" was the primary reason they did not buy local food.[31] In addition to direct food prices, some additional labor expense is inevitable when an operation begins to purchase local food, because of the time required to make menu changes and adapt production practices. Finding suppliers, changing menus, integrating new items into inventory and production, and adapting billing procedures may all take additional time. Over the long term, there may be other labor expenses involved in preparing local food, such as cutting or peeling whole produce, but this is not always the case. Nonetheless, because foodservice departments face extreme pressure to tighten budgets, higher expected costs are one barrier to garnering administrative support for investing additional dollars in buying local food.

2. Challenges related to product volume and administrative procedures

After cost, there are two overarching challenges to purchasing local food cited by almost every foodservice operator:

a. *The need for high volumes of items.* Because large food distributors source food nationally and internationally and combine items from multiple producers, shortages due to seasonality or growing conditions are rare. Buying locally naturally limits when and how much of a product is available. Lack of consistent supply and last-minute changes in availability were commonly given as reasons that local purchasing was not successful or could not be expanded by many hospitals.

b. *The nature of delivery, inventory, and billing systems.* Hospital ordering, delivery, tracking, and billing systems are standardized for convenience and efficiency, making it difficult to integrate multiple additional vendors. Broadline distributors and large produce wholesalers provide next-day delivery several times each week, so hospitals can avoid running out of

products and minimize the loss of perishable items. Smaller vendors may not be able to offer favorable payment terms, electronic billing, tracking and reporting tools for inventory and financial analysis, and many other services that streamline the foodservice purchasing operation.

3. Challenges related to vendors and contracts

In many ways, ordering local food bucks the system. Food procurement in hospitals is based on an industrial model and supported by extensive infrastructure. The industry has followed a path of integration and consolidation, and cost reduction with fewer and bigger suppliers is expected to continue. If buyers try to work within the current food procurement system to source local food, their current vendors and GPOs will be affected. Local food initiatives don't translate into more profits for these companies, so enlisting their cooperation can be a major obstacle.

Many foodservice directors see their contract stipulations as limiting the amount of local food they can buy. Yet when they attempt to request local food from their prime vendors, it is not likely to be available. There are many reasons why vendors are not inclined to work with local food producers, including small product volume, inconsistency of product due to varieties and seasonality, and various insurance and liability requirements. Many distributors also charge "service fees" to producers and manufacturers to market and distribute their products. Also, vendors are not accustomed to reporting the geographic source of their products. Several hospitals in the Bay Area have asked produce distributors to provide them with source information before they place an order, and a few have complied. Most have said that they are not "set up" to provide source information at this point.

Local food is widely considered a niche product by food distributors. Speaking at a recent conference, several distributor representatives referred to local food as a "trend" or a "specialty" food category.[32] Indeed, food companies do seem to be adopting certain language in their branding and marketing in response to consumer interest in local food (e.g., emphasizing the place where food is grown, describing it as coming from family farms.) Unlocking the question of why vendors take a short-term view of the value of local food is an important step in engaging their meaningful commitment.

Whether or not GPOs can be enlisted to pressure distributors into sourcing and selling local food is questionable, because there is no financial incentive for them to do so. For instance, one GPO representative, in response to a question about what the company could do to help make antibiotic-free chicken available to hospitals, replied that "supply follows demand," and went on to say that there was insufficient demand by clients for the company to pursue. [33] GPOs' readiness to help hospitals source local food is likely equally dependent on the emergence of a profit opportunity.

Despite the view that integrating local food into current food procurement systems is challenging, many foodservice directors praise their distributor sales representatives for their responsiveness to needs and overall quality of service. Because of the general satisfaction level with these relationships, it may be also be difficult for directors to criticize, challenge, or push for change in these relationships.

4. Challenges related to foodservice buy-in

The knowledge, skills, and cooperation of foodservice staffs play a critical role in initiating or expanding local food purchasing. Although foodservice jobs are sometimes described as "low-skill," in many cases it is not that workers are unskilled, but that jobs are created to maximize efficiency with the least amount of training and labor possible. Further, they are frequently poorly paid, and many hospitals experience frequent employee turnover. Some of the key labor-related issues cited by food service directors include:

a. Lack of knowledge about food production and preparation. Familiarity with agriculture can no longer be expected. Foodservice buyers may not know which crops are grown in their region, or when these crops are in season. Some employees may not know what less familiar foods taste like, or how to store or prepare them. In some cases, even kitchen managers and lead cooks may not be experienced in cooking with ripe whole produce or new varieties, and may not know how to adapt menus that retain the quality and flavors of local food.

b. Lack of appropriate training mechanisms. Buying local food may be accompanied by new menus, increased preparation requirements, different cooking methods and equipment, and other changes in production. Because many line workers have been trained to prepare prepared and convenience foods such as heat-and-serve items, they may have difficulty with or resist learning the skills required for more complex preparation and cooking. Likewise, institutional food service operations tend to have few opportunities for on-site professional development once employees are initially trained, such as in-service events or workshops.

c. Myths about food safety issues and regulations. There are many common misunderstandings about food safety, such as the belief that whole, raw produce from small farms may be more likely to be contaminated by *E. coli* bacteria from raw manure. These perceptions may discourage foodservice buyers from sourcing local food, as can confusion about regulation, inspection, and certification processes. Although all farms and food processing plants are subject to the same regulations, regardless of size, several foodservice directors have reported being told by health inspectors that they cannot buy food from local farms because it is not "government certified."

d. Perception of conflicting dietary goals. Nutrition staff plays an important role in hospital foodservice, and it is their responsibility to ensure food meets Federal dietary recommendations, patient dietary requirements, and other standards. Local foods may be of sizes and varieties that have not undergone extensive nutritional analysis, and the objectives of a foodservice director or chef who champions local food may be seen as conflicting with this priority. Also, given the extent and severity of nutrition-related disease, some nutritionists may see a focus on the benefits of local food as detracting from specific health-related dietary advice such as that related to caloric intake, macronutrients, fiber, etc.

5. Challenges related to institutional buy-in

Beyond the foodservice department, hospital leadership is crucial to building institutional capacity and commitment to buy local food. If senior administrators in charge of budget, human resources, procurement, community benefits, and overall institutional strategic direction do not support local food efforts, they can be can be severely crippled. Although many food service directors cite tremendous support from senior leaders, others have noted that securing institutional buy-in can be challenged by the following:

a. Food not on the hospital wide agenda. Delivering effective, efficient clinical care is the priority of hospitals. Foodservice may be perceived as a required function for hospital operation, but it does not carry the weight or immediacy to compete on the agenda with many other institutional needs.

b. Isolation of foodservice department and staff. Hospital kitchens are usually self-contained, and frequently physically isolated from other hospital departments. Isolation may be social as well, as employees have little interaction with staff in other departments. Despite the relationship between health and food, foodservice may be perceived as being more closely integrated with "facilities" or "operations" than with preventive health and clinical care.

Breadth and complexity of local food objectives. Local food advocates in hospitals may find it difficult to communicate the importance of local food in order to build institutional support. There are so many different issues related to healthy and sustainably produced food that "local gets lost," said one foodservice director. Unlike with rationales for "organic" or "trans fat-free" food, many people are not familiar with why consuming local food should be a priority. "Local" also has no clear-cut definition and no corresponding production standard, unlike these terms.

Hostility to local food issues. Although no one is "against local," some people may associate advocacy for local food with fringe political movements with which they do not identify (e.g., anti-globalization). Others may perceive a preference for local food as elitist and unrealistic. Still others may mistrust evidence for the health benefits of eating local food, especially if it challenges their scientific knowledge and training.

6. Challenges related to supply

Although this paper is not intended to explore the extent to which local food producers can meet the demands of the healthcare market in the Bay Area, it is important to raise this question, and to note that farm-to-hospital initiatives may be substantially challenged by supply-side issues. Although California is the country's leading producer of fruits and vegetables, there is not an accurate picture of how much and what kinds of local food are available for hospitals in the region to purchase. Local production of food does not mean that producers would prefer to sell locally, or to sell to institutions. Many farmers are part of existing markets and do not produce enough additional food to supply high-volume institutional buyers. Large farmers may be uninterested in the additional marketing and customer relations that might be required to sell their products locally. Smaller farmers are not likely to have the sophisticated, professional

systems to coordinate production and marketing systems that are convenient for institutional buyers. Producers who currently direct-market may be reluctant to work with institutions or distributors because they expect to get lower prices in these markets, because they feel their products would become undifferentiated, or because they perceive these markets as having prohibitive rules and regulations. Producers may also be reluctant to make planting decisions based on untested demand, or they may have exclusive contracts with other distributors, e.g. grocery chains, which they are satisfied with. It has been suggested that large institutions like hospitals might pursue medium-term contracts with producers that would ensure them with a market for certain crops and lower the risk for both parties. Collaborative marketing models such as co-ops and small local distribution alliances are also a potential solution. However, at this time there are many reasons why local food supplies for hospitals or healthcare foodservice distributors may be limited, and analysis of these supply networks and feasibility studies are greatly needed.

IV. Case studies

Despite the challenges, many Bay area farm-to-hospital initiatives are well underway. In fact, local food sourcing projects are moving so quickly that a comprehensive report would be immediately outdated. New ideas and experiments develop weekly. However, the following case studies describe some recent and current projects, in an attempt to provide a representative picture of these to date. The hospitals profiled here are very different in size, resources, and food service structure, and are approaching local purchasing in different ways. These studies demonstrate some of the various strategies that hospital leaders have taken to change their purchasing strategy in favor of local foods and their successes to date.

A. Dominican Hospital, Catholic Healthcare West, Santa Cruz

Dominican Hospital in Santa Cruz is one of 46 members of the Catholic Healthcare West (CHW) system, the largest nonprofit hospital system in California, and the eighth largest hospital system in the country. Dominican's onsite garden and buying partnership with a nonprofit collaborative of organic farms, and CHW's systemwide Ecology program, Foodservice Council, and pioneering food vision statement have made them national models for institutional and multi-hospital system sustainable food initiatives.

CHW's comprehensive approach to sustainable food procurement grew from longstanding involvement in the corporate environmental responsibility movement. It was one of the first healthcare systems to adopt formal recycling and water and energy conservation goals and monitoring as part of the Coalition for Environmentally Responsible Economies (CERES.) CHW has a systemwide program to address environmental issues and coordinate activities related to ecologically sound purchasing and waste management led by Dominican's Sister Mary Ellen Leciejewski. The health system extended its environmental commitment to reviewing and revising purchasing practices through a set of operating principles established with Premier, the GPO of which it is both a member and shareholder. These principles represent a mutual commitment from both CHW and Premier to using environmental impact as a primary consideration in negotiating goods and services.

In 2005, CHW implemented its "Food and Nutrition Vision Statement" to recognize "that food production and distribution systems have wide ranging impacts on the quality of ecosystems and their communities [and] that healthy food is defined not only by nutritional quality, but equally by a food system which is economically viable, environmentally sustainable and which supports human dignity and justice." The statement addresses seven practices of sustainable food procurement, including a direct commitment to increasing local food sourcing. The statement also calls for supporting sustainable food transportation systems and source labeling, as well as a variety of other practices related to family farms, workers' rights, humane production practices, environmentally friendly food packaging, and organic and ecological agriculture systems.

In crafting the statement, CHW acknowledged that implementation of the vision would be a gradual and ongoing process, and that it would affect many different aspects of hospital food operations and many different product categories. It also called for education and communication strategies that support its buying initiatives, and established a Food and Nutrition Council to develop strategic annual goals, monitor progress, and share information among all of the system's foodservice departments. The Council consists of 12 foodservice directors who convene in person three times a year, and hold conference calls intermittently to discuss plans and projects. Pat Burdullis, an R.D. who negotiates and manages CHW's non-clinical contract from its Supply Chain Management office in Arizona, is responsible for coordinating and facilitating Council activities.

Although individual hospitals fall under the leadership of CHW headquarters, food purchasing operations are highly decentralized. Each hospital conducts its own purchasing and menu planning, and is free to pursue local projects of interest. Deane Bussiere, a former restaurant chef who is now at the helm of the Dominican Hospital kitchen, has made a name for his cafeteria with an emphasis on local, seasonal, and organic foods and a menu that boasts about 85 percent vegetarian or vegan offerings.

Dominican purchases about $500 worth of produce each week from the Agriculture and Land-Based Training Association (ALBA), a nonprofit providing training and business opportunities to farmers in Salinas and Northern Monterey County. In addition to providing training and technical assistance, ALBA has served as an incubator for numerous small farm enterprises, leasing land to beginning and limited-resource farmers, many of whom are immigrants to the U.S. Its organic produce distribution company, ALBA Organics, supplies packing, storage, and delivery services, marketing the produce at local restaurants, grocery stores, and numerous public and nonprofit institutions.

Dominican has been working with ALBA to request that certain crops be grown in exchange for a buying commitment. Although it requires advanced menu planning on the part of Bussiere and his staff, guaranteed sales have resulted in lower prices, helping the hospital increase its purchases from ALBA. Savings have also been observed because the fresh produce has a longer shelf life, and less is thrown away. The staff uses a simple tracking system to help compare prices, monitor usage, and project produce requirements for future orders from ALBA. The ALBA-Dominican partnership has also led to a Community-Supported Agriculture (CSA) program through which staff members can subscribe to receive a weekly box of fresh produce delivered to the hospital.

An onsite garden at Dominican provides additional produce and flowers for the facility. The brainchild of several staff members who are active gardeners, the Dominican Garden was established in 2003 on a 1,000 square foot plot on the hospital grounds, and soon quadrupled in size. Foodservices storeroom coordinator Michael Raciti and hospitality service manager Denise Fritsch planned the project and presented a proposal to the hospital administration for approval. A neighboring high school is now involved, and various employees and community members have also donated time, skills, money, and equipment, including a small greenhouse. Although food from the garden does not represent cost savings in the hospital food budget, it has attracted public attention and is considered a staff- and community-building asset. Currently, the garden is being reconfigured as a "Victory Garden," in which individual hospital departments can adopt their own garden beds to cultivate.

Despite buying directly from ALBA and growing some produce on-site, Dominican—and all CHW hospitals--must still deal primarily with U.S. Foodservice through the system's GPO contract. The contract stipulates that 80 percent of food must be bought from the company. According to Burdullis, produce constitutes most of the system's off-contract purchases, but bread and dairy products are also sourced from local suppliers. Two other Bay Area CHW hospitals are planning a pilot project to source locally grown, antibiotic- and hormone-free meat. Produce bought on contract by Dominican Hospital comes primarily from ProPacific Fresh, a regional produce distributor subcontracted to U.S. Food. According to Burdullis, ProPacific reports that 70 to 80 percent of its produce comes from Northern California, although the company does not list farm names or locations in its catalog or packing slips.

Burdullis noted that although ProPacific buys regional produce and has been supportive about providing information, CHW will continue to request more details on food sourcing and transportation practices. Every two years during the bidding cycle when CHW and Premier renegotiate their contracts, there is an opportunity to increase purchasing of more sustainably grown food and require winning vendors to improve their own sourcing and reporting. In between bidding cycles, though, Burdullis says that CHW can influence product selection the same way that cafeteria customers—primarily staff—have improved food at Dominican Hospital: by demanding it.

B. John Muir Medical Center, John Muir Health, Concord and Walnut Creek

John Muir Health has undergone a cafeteria makeover in recent years, thanks to the hiring of Executive Chef Alison Negrin. After years in some of the Bay Area's best-known restaurants, Negrin applied her culinary skills and growing interest in nutrition and health to management of the small hospital chain's three foodservice operations. Beginning with a few simple steps, like swapping frozen vegetables for fresh ones and introducing fresh herbs, Negrin has devoted much of her five years at John Muir to bringing freshness and flavor to food that satisfied countless dietary restrictions, with limited labor, and on an extra-lean budget. With support from John Muir's foodservice director Sandi Rigney and other supporters in the hospital, these efforts have resulted in revised menus at the two main campuses, a new focus on from-scratch meals, and a commitment to purchasing minimum volumes of local food.

Early in Negrin's hospital career, she was one of a handful of chefs to attend FoodMed 2005, the first national conference on Healthy Food in Healthcare. Coordinated by Healthcare Without Harm, the conference introduced Negrin to colleagues from other hospitals pursuing similar changes. One presentation at the conference profiled hospitals in other parts of the country that had established interdepartmental food committees to build momentum and develop strategies for sustainable food procurement. Negrin then began working with one of the campaign's local member organizations, the San Francisco Bay Area chapter of Physicians for Social Responsibility (SF PSR), to recruit a food committee at John Muir.

The committee, which has representation from the clinical and dietary staff as well as senior administration and various other departments, was provided with the services of the hospital's strategic planning expert. Planning sessions led to a multi-year strategic plan to make the hospital's foodservice healthier and more environmentally friendly. The strategic plan includes objectives, concrete action items intended to meet these objectives, timelines, and responsibilities delegated to various people and departments. Purchasing local food, along with minimizing waste and educating patients and staff about sustainable food, is a key priority of the plan. Although local food wasn't immediately shared as a key priority, it came about as a result of collective interest in improving the quality and appeal of John Muir's cafeterias.

In 2007, John Muir signed an agreement with the Community Alliance with Family Farmers (CAFF) through the nonprofit's "Buy Fresh Buy Local" marketing campaign. With the agreement, the hospital committed to buying an initial five percent minimum of its produce locally, gradually increasing to a minimum of 10 percent. This arrangement was made possible by switching the bulk of the hospital's produce order to Bay Cities Produce, a produce wholesaler in San Leandro. Negrin says that the company specializes in California grown produce, and estimates that 70 to 80 percent of its produce is grown in central/northern California. However, there is not yet "perfect information" about the source of all its produce, and several hospital buyers have encouraged the company to improve sourcing details and seek even more local items. Some institutional buyers see particular potential in working with Bay Cities to increase local purchasing because the company operates a processing facility and markets cut and sliced items as well as unprocessed produce.

Negrin was one of the founding members of the Hospital Leadership Team, a Bay Area network of hospital foodservice directors that meets monthly to share ideas and sources for sustainable food purchasing. Part of the mission of the Team is also to identify opportunities to negotiate with suppliers and distributors by demonstrating the hospitals' pooled purchasing power. The Team is developing a local direct meat and poultry sourcing project, but members hope also to persuade their existing contracted vendors (U.S. Foodservice and Sysco) to purchase more local and sustainably grown food on contract as well.

The hospital has undertaken several other projects in an attempt to engage its staff and community in food system awareness. The Concord campus' Diablo Cafe, for instance, has outdoor seating in a culinary herb garden, and also sources a small amount of produce raised by students from a neighboring high school. Although projects at this scale don't have a major impact on the foodservice operation, they have helped to beautify the grounds, increase cafeteria

traffic, and remind staff and visitors that hospitals are meant to engage and serve their communities.

C. Santa Rosa Memorial Hospital, St. Joseph Health System, Santa Rosa

Linda Hansen, Area Director of Nutrition Services, is responsible for managing foodservice-related activities at the three Santa Rosa campuses of the privately owned St. Joseph Health System. Hansen has been with the hospital for almost three decades, and now directly oversees foodservice operations at these sites, including the 209-bed acute care hospital at the main Montgomery campus. A long-time advocate for local and sustainably raised food, Hansen has become a local leader in sharing ideas and expertise with other hospital foodservice directors on sustainable food issues. Hansen is an active member of the Hospital Leadership Team, and is currently working with the team to negotiate a source of local, antibiotic- and arsenic-free chicken for area hospitals.

The annual food budget at the Montgomery site is $3.5 million. Although produce is not calculated as a separate line item in the food budget, an estimated $25,000 dollars is spent on fruits and vegetables each month. The hospital is required by its GPO MedAssets to source 90 percent of its food through Sysco, but quality concerns led Hansen to substitute some of its produce order with Sonoma County Growers Exchange, which specializes in supplying local produce, as well as non-local "specialty" produce. In addition to buying from local and non-local growers, Sonoma County Growers Exchange has recently begun growing its own fruits and vegetables on 250 acres in the Capay Valley. The company recently instituted its "Sonoma Sliced and Diced" program, which provides cut and processed items to its customers.

The hospital buys about $10,000 dollars of produce from Sonoma County Growers Exchange each month, and receives deliveries three times each week. Hansen defines locally grown produce as "preferably from California," but acknowledges that sometimes produce grown on the West Coast or even in the U.S. is a meaningful preference. She has expressed to the company that tracking and communicating where individual items are grown would be a valuable service, but currently does not receive item-specific information.

Hansen says it is fairly easy to adapt cafeteria meals to the less predictable availability of local food items. Patient menus, designed by a team of dietary staff, do not change seasonally and are rewritten only every three to five years. Cafeteria menus, however, are planned two weeks at a time. Certain popular items make a regular appearance on the menu, and the lead cook uses seasonal items to design specials. Cafeteria menus are not limited by budget, because prices are set according to cost. The cafeteria aims for a 65 to 75 percent gross margin on sales of most site-made items.

Hansen applied for and won a $10,000 internal grant of additional funds to the annual foodservice budget to bring in more fresh and local food. Most significantly, the kitchen began substituting fresh, pre-cut produce for much of the frozen and canned produce it was currently using. The grant funds initially offset the increased costs. The fresh vegetables sold much better in the cafe and more permanent changes in purchasing practices and par levels were then implemented. Once the fresh vegetables had proven their popularity, the price of side dishes

could be slightly raised to cover the additional cost. Based on improved customer feedback, Hansen received an additional $90,000 budget increase from the administration for the next fiscal year.

In 2006, Hansen approached the Santa Rosa Farmers Market coordinator to help find a farmer interested in selling at the hospital. St. Joseph began hosting a seasonal on-site farmers market and a CSA dropoff point at the Montgomery campus, primarily serving hospital physicians and staff. Both are supplied primarily by a single farm, Petaluma's Canvas Ranch. Additionally, St. Joseph buys produce from Canvas Ranch when there is enough supply, including heirloom potatoes, tomatoes, and squash. Hansen is currently seeking another farmer in order to expand the market.

Hansen mentioned three key challenges in increasing local food purchasing.

1) "Labor, labor, labor" is the single most important challenge. Many fruit and vegetables bought by the hospital comes processed in some way, and the operation is not equipped to handle the processing and preparation of most whole produce. Emphasis on keeping labor costs to a minimum constitutes a significant barrier to changing this practice.

2) GPOs are not flexible in contracting with smaller suppliers, and prime vendor contracts don't allow for much purchasing outside of contract. Hansen is working with her hospital's GPO, MedAssets, to explore how more sustainable products, including local produce, can be supplied.

3) Making informed choices is difficult. Suppliers are generally either unable or unwilling to provide extensive information about where and how their food products were grown.

D. San Francisco Veterans Affairs Medical Center, San Francisco

San Francisco VA Medical Center (SFVAMC,) part of the Veterans Health Administration's Sierra Pacific Network, serves veterans throughout Northern California. A 124-bed primary and specialty care hospital and 120-bed geriatric and extended care program comprise the main site, with primary and mental healthcare provided at community-based outpatient clinics across the region.

Although VA foodservice is the largest system of independent healthcare buyers in the U.S. not belonging to a GPO, the department falls under the administration of the national VA Nutrition and Foodservice (NFS,) which negotiates prime vendor distribution agreements on behalf of all VA hospitals. For the last ten years, NFS has contracted with U.S. Foodservice for its foodservice contract, requiring that hospitals spend 75 to 80 percent of their foodservice budget with the company. Although all VAs must purchase food from U.S. Foodservice, ordering, delivery, and accounting are handled regionally.

Unlike most hospitals, only patient feeding is handled through NFS. In the VA, retail cafeterias are operated by the Veterans Canteen Service (VCS,) a separate, independent unit of the VA. Without cafeteria meals to generate revenues, food cost is highly inelastic for the VA.

Karen Arnold is the Chief of Nutrition and Foodservice at SFVAMC. With a long-held interest in environmental nutrition issues, Arnold is a committed proponent of sustainably grown food in the hospital, the VA system, and the Bay Area. Arnold traces her involvement with San Francisco Physicians for Social Responsibility (SF PSR) to her attendance at the 2005 FoodMed conference. She is now an active member of SF PSR's Hospital Leadership Team, and is at work on several projects to bring more quality and accountability to hospital food procurement. She and five other local foodservice directors have recently initiated talks with local poultry producers and suppliers to identify a local source of antibiotic- and arsenic-free chicken. The group also compiled a "meat memo" describing its beef and pork usage, and it is currently planning a pilot project to buy grass-fed beef from California farms.

Produce is not subject to the 75 to 80 percent minimum requirement that SFVAMC must comply with in its other purchasing from U.S. Foodservice. This is primarily because of a government program designed to promote sourcing from small, minority-owned, and veteran-owned businesses. VA hospitals receive financial incentives based on a point system for their contracts with businesses that meet these qualifications. As many produce distributors are likely to be small and family-run, this is a good opportunity for VA hospitals to seek out local produce.

SFVAMC is investigating opportunities to increase local purchasing. Because the institution uses highly predictable volumes of produce such as apples, tomatoes, and lettuce, says Arnold, it should be feasible to arrange local supplies. She had hoped to begin purchasing from the Growers Collaborative, a new company started by the nonprofit Community Alliance with Family Farmers (CAFF) to provide local farm products to institutions, but the service is not yet available in her area.

Fresh vegetables comprise about five percent of SFVAMC's annual foodservice budget of $550,000. (The foodservice budget, however, includes much more than food, including nutritional supplements and paper and packaging products.) However, delays in the annual Congressional appropriations process mean that SFVAMC must operate at 80 percent of its projected budget for part of the year. SFVAMC uses very little processed fresh produce, but it does purchase substantial quantities of frozen vegetables. Arnold mentioned that substituting some portion of these frozen vegetables with fresh vegetables is one way that the hospital might increase local produce purchasing, but that the increased labor requirement could be problematic.

One potential challenge to buying local produce for SFVAMC is that its U.S. Foodservice maintains multiple suppliers and can generally avoid extreme price jumps. For instance, when one kind of lettuce gets more expensive, large distributors usually have alternate sources to buy from and can maintain pretty consistent pricing. Buying from large distributors protects hospitals from price fluctuations, and because meal prices must be consistent (approximately two dollars per patient meal) and there is no retail business to bring in revenues, SFVAMC cannot easily substitute higher-priced produce into menus.

Arnold believes that the VA's patient population may also constitute a particular challenge to implementing changes in foodservice. Because patients are generally male and over 55, she says, "it's a meat and potatoes crowd." High rates of mental illness and substance abuse also affect

patient acceptance of less familiar foods, and many patients are low-income, making food insecurity and malnutrition immediate concerns.

Arnold says that foodservice managers need to be realistic about hospital budget priorities—diagnostic and treatment technologies are higher on the spending plan than local tomatoes. She also suggested that in the VA system, pooled purchasing power for preferred pricing could be a key means to implement systemic changes in procurement.

V. Common Paths to Local Purchasing

The hospitals described above are diverse in size and structure. As hospitals and their environments vary widely, there is no one strategy for local food purchasing that is appropriate for all hospitals, nor a single set of criteria for success. Further, most hospitals that have achieved some degree of local purchasing view this work as "only the beginning." It is expected that as hospitals, producers, and intermediaries continue to develop partnerships and resources to meet their local purchasing goals, many new approaches will be identified. Also, neither the market nor the policy context for local food purchasing is static: hospitals will continue to have to adapt to numerous opportunities and pressures to work toward local purchasing in a changing environment.

Local food purchasing in hospitals may be initiated by a single individual ("spark plugs" in Bay Area hospitals have included doctors, foodservice directors, chefs, and social workers,) by an internal group or committee, or through an approach by an outside organization (e.g. a farmer or group of farmers, or a community-based nonprofit.) Starting points vary as well--sometimes plans and programs grow out of an initial project that is not directly related to foodservice procurement, such as the launch of a farmers market. These projects may generate visibility for and interest in local food issues, and may lead to further projects and eventually, institutional commitment to long-term local food procurement goals. Despite the diversity of initiatives, however, there appear to be certain strategies to increasing local food that have been found realistic and effective by many hospitals. Here we will summarize some of these "common paths to local purchasing" that have emerged:

1. Building institutional support

Regardless of who initially identifies local food purchasing as a goal in a hospital, engaging key leadership within the institution is critical to moving forward. Hospital administration, financial management, and operations departments all have a stake in the changes necessary to increase local food purchasing, and hold important resources that enable these changes to be made. Further, momentum for local food purchasing can be lost when people change or leave jobs if no institutional support remains. Several strategies have been used to engage leaders:

a. Informally generating attention and interest

Most foodservice departments have the current discretion and flexibility to order small amounts of local food. Some have purchased food from local producers for daily specials in the cafe or for catered meetings, workshops, symposia or other events, especially those where Board members

and senior leadership are present. By serving local food in these one-time situations, and using signs, tent cards, and menus to market it, foodservice directors can create an opportunity to begin talking about local food. Other good venues for news and information about local food are institutional newsletters, cafeteria bulletin boards, and employee listservs.

Hosting farmers markets and farmstands are highly visible ways for hospitals to promote local food. Much of the recognition given to the farm-to-hospital movement thus far is due to on-site farmers markets. Farmers markets on the grounds of hospitals are attractive, entertaining, and a practical source of high-quality, fresh, local food for employees, patients, and community residents. Additional benefits mentioned by hospital hosts include positive publicity, differentiation from competitors, better employee health, added patient satisfaction, more visible nutrition education, and improved community relations.[34] Not only do farmers markets provide a community service to customers and support local growers, but they may help to build goodwill for local food procurement efforts within the hospital.

The same could be said of community supported agriculture (CSA) programs organized by hospitals on behalf of employees. CSAs are partnerships between local farms and members who subscribe to receive a regular basket of fresh farm products. CSAs are often an easier option for hospitals than farmers markets because of space restrictions and because markets require ongoing oversight. Joining a CSA can expose members to new foods and excite them about cooking and eating, and can complement local food procurement efforts nicely. Although no area hospitals are yet subsidizing all or part of CSA memberships for their employees, this has been discussed as a potential employee benefit.

b. Making a formal request

Most hospital presidents, CEOs and senior management teams (usually a CFO and several vice-presidents) aim to be responsive to their staff members' needs as well as to those of their patients and communities. Some local food advocates in hospitals have written letters, arranged for meetings with senior leaders, requested the opportunity to present information about sustainable food issues and options, and otherwise sought support in researching, planning, or piloting local food initiatives. At least one hospital (Santa Rosa) won special funding from the institutional budget for sustainable food initiatives. Some hospitals also maintain internal departments that administer cash grants or in-kind resources for special projects, especially those with a community outreach component.

c. Engaging clinical staff

Doctors, nurses, residents, and other clinical staff see patients directly, many of whom suffer from chronic nutrition-related diseases, and they may be especially interested in the potential positive health outcomes of increased consumption of local food. Doctors are also likely to be familiar with food-related environmental health problems such as antibiotic resistance, food-borne illness, and chemical poisoning. Unlike many administrators, the clinical staff tends to have little opportunity to leave the premises during the work day, so they may also have a personal interest in better cafeteria food.

The medical staff of a hospital is considered its greatest asset, and hospitals compete to attract and retain the best doctors. For this reason, doctors have a powerful voice in shaping hospital decision-making, and can be important allies in the drive for local food purchasing. One doctor in the area, Preston Maring of Kaiser Permanente, has become a national leader in the sustainable food movement as a result of his work to establish farmers markets at many of Kaiser's hospitals. Targeting doctors with information about goals and activities can be a valuable way to build understanding and a broad base of support for local food in an institution.

d. Establishing a food committee

Several hospitals have developed multidisciplinary food committees to lead the planning and implementation of sustainable food initiatives. These committees include staff from food and nutrition services, administration, purchasing, nursing and clinicians, and sometimes other departments such as community affairs, ethics, or quality improvement. At John Muir Hospital, Chef Alison Negrin began recruiting staff to join a food committee in late 2006. Several months later the hospital provided a strategic planning expert to help the committee identify goals, set direction, and plan activities. One of the goals in the resulting strategic plan is "increase the availability of fresh, locally-produced food." Four strategies were identified to accomplish this goal, along with specific tactics for each, including negotiating a new local produce "purchase plan" with distributors. The team also delegated responsibilities, set timelines, and created benchmarks to measure progress toward each goal.

e. Developing and implementing food policy

An institutional food purchasing policy can be a useful tool for implementing local food purchasing practices, as well as growing and sustaining these practices beyond a single person that may be driving them. Food purchasing policies created by hospitals typically focus on multiple food issues, including increasing local sourcing. These policies help to formalize and institutionalize practices that may have started as demonstrations or pilot projects, and make clear that a hospital is intentionally pursuing these practices. They also establish standards and mechanisms for compliance to guide decision making and continuous improvements.

Local food policies typically stipulate minimum percentages of total purchases that must be purchased from local sources (e.g., 30 percent of fruits and vegetables.) Local may be defined as a specific geographic region, or it may be ordered to reflect a continuum of preferences (e.g., first Northern California, then California, then the West Coast, then the U.S., and then international.) Some food policies identify preferences that combine and rank "locally produced" with other qualities such as organic or raised on small/medium farms. (e.g., first Northern California organic, then Northern California non-organic, then California organic, etc.)

By making local food purchasing mandatory, policies also help to demonstrate how food priorities are connected to other institutional priorities. For instance, because healthier diets can lower the burden of chronic disease, serving healthier food may save hospitals money in the long run. Food purchasing policy can position food purchasing as more than an area in which to cut costs, and thus support the case for its improvement.

Policies also help narrow down and clarify priorities in order to guide those that are specific and achievable, set targets and outcomes, and identify needed resources. They enable foodservice directors and others to justify time spent on researching products and suppliers, analyzing costs, working on menu and production issues, and other supportive activities. Not least, they can lay a foundation for increasing local purchasing and other sustainable food initiatives in the long run. (A policy might require a hospital to increase its minimum percentages of local food by two percent each year.)

The city and county of San Francisco adopted a Sustainability Plan that includes product procurement goals and guidelines aimed at building healthier food systems. All government institutions, including the city's two public hospitals, are subject to the guidelines. Under the plan, institutions are required to develop multiyear Sustainable Food Procurement and Processing plans that increasingly integrate sustainable foods, of which local production is one criterion. In late 2007, San Francisco General Hospital and Laguna Honda Hospital staff were in the process of developing their food plans.

Food purchasing policies, whether institutional or regional, may be influential in generating support and cooperation from suppliers. Most policies includes a specific directive to work with GPOS and vendors to change their supply practices as well as to address internal operations. These policies convey the importance of increasing local food purchasing in the institution and the extent of its commitment, and can signal to suppliers that they must help hospitals meet their goals in order to retain their business.

Along these lines, the national Health Care Without Harm campaign developed a pledge (http://www.noharm.org/us/food/pledge) that hospitals sign in order to formalize their commitment to sustainable food. By signing the Healthy Food in Healthcare Pledge, hospitals agree to model healthy, sustainable food practices in an ongoing fashion. The first of the Pledge's five tenets is "Work with local farmers, community-based organizations and food suppliers to increase the availability of locally-sourced food." To date, signing the Pledge does not represent an assurance, but only an intention to buy local and sustainable food. However, the campaign is currently developing benchmarks that will help hospitals to measure progress and impact according to a range of specific outcomes.

2. Communicating with suppliers

Working with producers and distributors to request, evaluate, and select products is one of the most important steps in building capacity for local purchasing. Many hospital food buyers in California have reported that a high percentage of produce they currently purchase is grown in the state. Although distributors may not be sourcing local produce to fulfill health or environmental goals, doing so can sometimes be cheaper and more practical for them. In many cases, the food buyer did not know that produce was local until they asked for this information. Requesting information from current vendors about the origin of their products is a good point of departure for local purchasing efforts, because:

- It signals that place of origin is important to the buyer, and that the buyer has or is developing criteria for classifying food as local, and standards to which vendors will be held.

- It helps buyers understand how the vendor defines local.

- It provides information about the vendor's suppliers, products, buying strategies, shipping and storage processes, and other practices.

- It provides baseline information on what percentage of current food purchases are local, and helps hospitals to establish targets for increasing this percentage.

- It starts communication about whether the vendor can or is willing to purchase more local food. In many cases foodservice directors have been the ones to find local foods and then convince distributors to carry those foods.

- It provides an opportunity to discuss how purchasing more local food will affect pricing for the buyer.

- It identifies the current ability of the vendor to make origin information available in its catalogue.

- It helps gauge the vendor's willingness to change tracking, cataloguing, and reporting methods to help the buyer choose more local food.

- It buyers to evaluate claims about product origin and press for more detailed information and evidence of origin. (Some foodservice buyers report receiving vague or misleading information about how much of what they source is local. For instance, a poultry processor may be located in Sonoma County, but source chickens from other parts of the state, and still market its chickens as from Sonoma. The company's distributors may then unintentionally misrepresent the chicken as being raised in Sonoma.)

A commitment to sourcing local food may also entail surveying vendors that a hospital does not currently purchase from. Diversification of suppliers was named as an imperative by the majority of food service directors. Anecdotal evidence suggests that several small Bay Area produce distributors can provide more local fruits and vegetables, of more satisfactory quality, at competitive prices for some hospitals, compared to the hospitals' current prime vendors. A handful of hospitals have shifted at least some of their fresh produce order from a prime vendor to a specialty produce distributor for this reason.

Supplier communications are generally improved when those who purchase food have a clear understanding of their contract terms. Because contract stipulations can be complex and vague, have exceptions and "fine print," and change when contracts are renegotiated, hospital buyers are not always aware of what their contracts allow them to purchase off contract. For instance, some buyers found that certain products are not counted toward the maximum percentage that can be bought off contract. Others have needed to clarify whether a product they wish to purchase is actually carried by their prime vendor, since most contracts also don't count products not carried by the prime vendor toward off-contract percentages.

It is not uncommon for institutions to use questionnaires, requests for information (RFIs) and "spec sheets" to select products and vendors for equipment and service contracts. Foodservice buyers have found these tools can be useful in sourcing local food as well. These documents state preferences in writing and/or solicit product information from potential or current suppliers, such as the company's policy on prioritizing local produce and how it verifies the source and production method of the produce it carries. An RFI can also encourage a distributor to look for products it does not currently sell and set a timeline for making them available. A much-discussed alternative is for hospitals to include a preference for local and sustainably grown products during bid renegotiation, or when soliciting bids for future contracts with GPOs and prime vendors. However, because GPO membership and some vendor contracts affect the whole hospital or hospital system, these initiatives are likely to require extensive institutional support.

3. Exchanging information and combining purchasing power with other hospitals

As more hospitals across the country are delving into local food purchasing and other sustainable food initiatives, an informal network is emerging for sharing information about food sources, purchasing strategies, and other resources. The 2005 and 2007 FoodMed conferences coordinated by the international nonprofit Healthcare Without Harm have helped to facilitate this network by bringing hospital foodservice directors, dieticians, clinicians, scientists, and food vendor and GPO representatives together. In this group many foodservice directors and others have shared strategies and lessons learned, financial analyses, procurement policies, and other tools with their colleagues. By sharing information and resources, hospital leaders report they can minimize duplication of efforts and expedite their local purchasing efforts.

Regionally, a group of seven foodservice directors and one hospital social worker meet regularly to share information about sources for sustainable, local foods. Organized by the Bay Area chapter of Physicians for Social Responsibility, the Hospital Leadership Team comes together to research vendors and products, learn about each other's facilities and programs, plan education and advocacy activities, and develop collaborative strategies to achieve their food sustainability goals. For instance, the team is currently combining purchasing power to negotiate a source of local, free-range, antibiotic- and arsenic-free chicken. Team members attribute many of their local food "finds" to tips from others on the Team, and are currently planning several other product analyses and sourcing projects.

4. Seeking external support and technical assistance

Partnerships that include agencies other than buyers and sellers have proved to be important in the development of local food sourcing in the Bay Area. A variety of agriculture- and community-based nonprofits, including San Francisco Bay Area chapter of Physicians for Social Responsibility, Community Alliance with Family Farmers, and several farmers market associations have played a role in these efforts, along with public agencies such as the San Francisco Department of Public Health. These agencies provide services including:

- Contributing staff and skills to research purchasing options;
- Connecting hospitals to agricultural and community constituencies and resources;
- Acting as brokers for local food products;

- Coordinating meetings and providing technical assistance in negotiating with suppliers;
- Organizing training and networking events such as roundtables, presentations, and conferences;
- Providing print and electronic sourcing directories and buying tips;
- Developing pilot local purchasing projects; and
- Marketing farm-to-hospital projects within hospitals and to the wider community

VI. Recommendations for Moving Forward

It is hoped that this account will demonstrate to healthcare, agriculture, and industry and community leaders the substantial headway that has been made in getting local food into Bay Area hospitals. It is also intended to help examine the possibilities for driving the growth and success of farm-to-hospital efforts in the region. What has been learned from these early experiments? What ideas are emerging that could solve problems facing farm-to-hospital projects, and what do we need to know in order to assess their potential? What strategic resources are indicated, and how can these by supplied by the various players—hospitals, farmers, the food industry, public and nonprofit agencies?

Although this report cannot provide comprehensive answers to these questions, we can report key issues and areas of strategy that have emerged during the initiation and development of farm-to-hospital projects, and around which a community of practice is evolving. Foodservice operators and their allies in the farm-to-hospital movement have identified many of these recommendations as central to building a better environment for local food in hospitals. We believe that these suggestions can help hospitals and those in supportive and facilitative roles shape objectives, build capacity, and design initiatives to move these projects beyond their current activities and impact.

1. Move on two fronts

As described in the preceding case studies, sourcing farm-to-hospital initiative have been mostly guided by informal arrangements. Many hospital foodservice directors, kitchen managers, and chefs have found ways to jump-start their use of local food without initiating large-scale change in institutional policy or practice. These examples indicate that institutional investment is necessary to increase local food procurement in hospitals, and that foodservice leaders hope their informal efforts will lead to complementary institutional change. Most are taking steps to engage their hospital leadership and suppliers in building more structured, stable systems for local food procurement.

Hospitals and their community partners are gaining a foothold for local food purchasing on two fronts: 1) working within the constraints of the existing institutional framework, and 2) identifying and adopting ways to effect systemic institutional change. Both are intricate processes, integrating a wide range of initiatives, requiring a diverse set of skills and tools, and involving many other players, including growers, distributors, GPOs, and public and nonprofit support organizations. Foodservice leaders suspect national and international healthcare and food industries will continue to pressure hospitals in the direction of standardized, bottom-line

purchasing. Yet they also are aware that there is potential for institutions to use their purchasing power to bring health, social, and environmental considerations into procurement.

One of the key advantages to engaging in both spheres of activity—small, informal, experimental projects and larger, system-wide commitments—is that it allows hospitals to strike a balance between developing process and seeing results. Long-term planning might be required to convince hospital administration to sign on to procurement policy, develop a food committee, or back a contract renegotiation, but not for a weekly delivery of seasonal fruit from a local farm. The small, informal projects can happen quickly and provide much of the initial momentum for hospitals to consider larger and more systemic changes requiring extensive research and planning.

2. Strengthen the procurement function

The term "procurement" generally refers to the process of buying food to supply foodservice operations. However, interviews with foodservice directors and others in charge of buying food revealed that this function merits closer and more distinctive examination. For those outside the hospital environment, it may be surprising how complex the role of food procurement is, and even within the hospital its scope is little understood. Procurement includes everything from identifying needs, specifying product requirements, identifying suppliers, soliciting and evaluating bids and proposals, controlling inventory, tracking and reporting progress, taking deliveries, inspecting and storing items, and paying suppliers. Even without making strategic changes to increase local food purchases, effective institutional procurement requires extensive coordination of many different institutional functions.

Attempts to persuade institutions to buy local food often fail to account for the complexity of the procurement function. Local food directories and matchmaking events may introduce local producers and institutional buyers and lead to new partnerships. But for foodservice directors, knowing that local food exists is only the beginning. A greater challenge is figuring out how to incorporate it into their systems—ordering, inventory, production, accounting, etc. For instance, foodservice operations tend to rely on pre-set parameters within their inventory control systems to dictate which products are reordered, how much, and when. These systems are designed for constant inventories, and it is difficult to substitute more variable products such as local, seasonal produce into these systems.

One major reason that procurement does not easily accommodate local food is that it is a highly fragmented system. Hospitals have well-defined divisions of labor and function, and in many cases, food buyers do not play an active role in the budgeting or contracting process. Management information systems in hospitals are not structured so that food buyers receive effective information for decision-making. Policies, quality standards, or supply terms may be developed in one department or facility and handed down to the food buyer in another. There is limited information available to analyze costs and benefits of new purchasing initiatives, because point of sale systems are not usually integrated with inventory systems. Food buyers are not expected to exercise much innovation in their purchasing practices. Financial analysis is conducted to identify opportunities for lowering costs and improving controls, but rarely to

diversify or innovate. In general, hospitals don't invest in developing food procurement systems as a strategic function.

One of the key needs identified by foodservice directors is for economic analyses of their operations that would help them to develop a better understanding of the potential financial impact of increasing local foods. Not only would this information help them make informed decisions, but it is necessary to build a case for administrative buy-in and institutional support. Foodservice directors who are pursuing local food understand that it offers value beyond the bottom line, but no studies have yet quantified the costs and benefits. Examples of questions raised are: What percentage of food currently purchased is local? What are the transaction costs involved in going from one produce supplier to three? How many additional cafeteria sales can be expected with an all-local salad bar? By what percentage do labor hours increase when switching from preprocessed to whole vegetables? Some observers have suggested that there are indirect savings to hospitals that improve their foodservice, such as lower treatment expenses due to less frequent malnutrition in severely ill patients, or reduced foodservice staff turnover due to more interesting and varied work, but no studies have yet been conducted to gather evidence for these hypotheses.

Disconnected procurement systems and a lack of resources to find and analyze useful data have challenged food buyers' ability to increase local food purchasing. They feel that they are missing important information that could help them review their current buying practices and explore opportunities to bring in more local food. They also suggest that the general view of procurement within hospitals is that it is a static, mechanical function with little potential for impact beyond cost savings. For hospitals to integrate local food into their highly structured and regulated procedures, the procurement system must be recognized as a tool for organizational change. Especially as local food efforts grow and diversify in hospitals, foodservice directors must be able to use the system to create measurable targets, track their progress, and justify further investments.

3. Recruit and engage nutrition professionals

Just as there is a need to leverage local food purchasing with better coordinated and more dynamic procurement systems, there is also the need to develop flexibility and synergy among the food preparation and nutrition functions in hospitals.

Some nutritionists may be interested in the evidence that some commercial produce varieties have been "bred away" from nutritional value for durability, and other evidence that premature harvesting compromises nutrient levels in certain fruits and vegetables. But all nutritionists have long known that people need more whole foods, especially fruits and vegetables, for a healthier diet. The most compelling nutritional argument for local food is that it usually has a taste advantage. In double-blind taste tests, consumers overwhelmingly favor local farmer's market produce over supermarket produce.[35] Because people will eat more of what tastes good, substituting local produce for non-local produce can help introduce more vegetables and fruits into diet, clearly a priority of nutritionists. Given that flavorful local food can help people eat the recommended number of servings of fruits and vegetables, hospital nutritionists have an

important role in articulating the benefits of local food, and in integrating the goal to increase local food purchasing with hospitals' dietary goals.

Nationally, many nutritionists have become leading advocates for sustainable food systems, and are playing a role in local food education and action. (This work is described in "Healthy Land, Healthy People: Building a Better Understanding of Sustainable Food Systems for Food and Nutrition Professionals, " a primer published by the Environmental Nutrition practice group of the American Dietetic Association.[36] Also, Registered Dietician Christine McCullum's article in *The Journal of Community Nutrition* "Using Sustainable Agriculture to Improve Human Nutrition and Health" describes numerous ways that sustainably grown foods may address nutrition concerns. [37])

But can hospitals serve tasty food that is also good for you? A recent article in the *East Bay Express*[38] comically exaggerated the experience of a local hospital chef trying to negotiate fresh and flavorful patient meals with the hospital's nutrition staff. Hospital chefs do face challenges in having their menus inspected and analyzed, just as nutritionists struggle to manage patient diets according to dietary requirements and standards for clinical care. Because so many commercially available products are standardized, it is easy for nutritionists to incorporate them into their analyses. A jar of "spaghetti sauce" arrives with complete nutrient information, and may even be fortified to meet a full range of daily nutrient requirements. But spaghetti sauce from scratch using local ingredients--a case of heirloom tomatoes of different size and variety, several pounds of grass-fed beef, and a few onions and heads of garlic-- doesn't come with an instant nutrient breakdown and may be harder to analyze.

Nutritional recommendations are sometimes thought to deprive eaters of delicious and satisfying food, and good-tasting food is expected to be of low nutritional quality. The idea that chefs don't care about health and nutritionists don't care about taste is a cliché, but reconciling the pleasure of eating with its preventive and therapeutic health functions isn't always easy.

If communicating the nutritional benefits of local food is a priority, then patient meals should be included in local food efforts as well. Focusing farm-to-hospital efforts on the less-restricted and more profitable cafeteria and catering lines of service is a sensible start-up strategy, but patient meals play an integral role in foodservice operations because they are directly tied to therapeutic care for patients. Many illnesses change patients' nutritional requirements, reduce their ability to eat, or alter their appetites. Because patient feeding is essentially part of a hospital's most explicit function—to treat illness—it is of primary concern, and the main reason that hospitals employ nutrition professionals. It is also a major cost center: preparing patient meals requires staff to analyze recipes, prepare multiple variations of meal items according to dietary modification requirements, supervise tray lines, and deliver meals to patient rooms.

The benefits of local food are frequently discussed in an environmental context, in terms of food miles, greenhouse gases, and carbon footprints. Although these concepts themselves have implications for human health, it is easy for health to get lost in the message, and for local food to not be considered a nutritional issue. Helping nutritionists connect local produce with better nutrition, understand local food beyond the strict parameters of geographic proximity, and appreciate that nutritional requirements can be met locally year-round (at least in California), is

essential. Supporting nutritionists in analyzing new recipes that incorporate local food and making dietary recommendations that are more inclusive of local food are also important. Getting local food on hospital menus is a team effort, and the skills and commitment of nutritionists are vital for translating the benefits of local food into concrete recommendations and institutional practice.

4. Educate food service leaders

Not every hospital is fortunate enough to have a culinary institute-trained chef who has left restaurant work to bring sustainable food into the health care setting. There has been a nationwide trend of institutions luring executive chefs away from restaurant kitchens, but most hospitals employ people whose experience is in managing health care or other institutional operations. At least in the Bay area, chef émigrés to the hospital world are mostly working in small, hospitals that are able to grant them more freedom and less administrative responsibility than what many large public hospitals can afford.

Restaurant chefs may bring their experience working with fresh ingredients and improvising menus to drive the purchase of local food in hospitals. However, food service directors or others whose expertise is in managing institutional food service can be equally committed to local food, as leaders like Karen Arnold, chief of nutrition and food service at the San Francisco VA hospital demonstrate. These leaders' deep familiarity with the unique procurement and production environment of the hospital kitchen enables their innovation within extensive financial and regulatory constraints. On the other hand, some former chefs have not easily "crossed over" from the creative freedom of the restaurant world and resigned or were fired soon after transitioning to the world of hospital food service.

Regardless of title, chefs, food service directors, and others responsible for selecting food and designing menus in hospitals may each be very knowledgeable and skilled in working with local fresh foods. If someone outside food service is leading the charge for local food, however, the food service director must be recruited and educated. In conversations with several regional health care food service directors, we found limited understanding of what foods are produced locally and why these might be preferred for health, environmental, and social reasons. One director, in describing his ability to get tropical fruit and melons year-round, suggested that he would consider seasonal substitutions of domestically produced fruits a liability, not an advantage.

If local food is to become more widely available to hospitals, help is needed for all food service leaders, including those who are convinced of its merits and those who are not. In interviews with food service leaders and in discussions with national and local farm-to-hospital organizers, educational resources are named as a basic need. Some of the ideas now being developed to train, educate, and support food service directors include:

- Association or practice group to provide networking, education, and professional development opportunities for food service directors related to sustainable food;
- Peer-to-peer training program, to involve on-site workshops and demonstrations (e.g., how to substitute local grass-fed beef into current recipes, seasonal menu planning, etc.);

- Publication, listserv, or other communication vehicle that would serve as a clearinghouse for sourcing and preparing local food in the hospital setting;
- Customization or adaptation of menu planning and nutrition analysis software to better integrate local food ingredients;
- Database of recipes that have been created and/or adapted by hospital chefs, to showcase local, seasonal foods, that includes nutritional analysis and production notes for immediate adoption in hospitals (perhaps modeled after England's "National Dish Selector);
- Consultation and technical assistance for food service leaders in making production changes to accommodate local food; e.g., staff training, production scheduling, equipment purchase, kitchen layout, etc.; and
- New curricula in culinary, technical, and academic institutions that incorporate the principles of local, sustainable food and help to recruit and develop hospital food service professionals with this orientation.

5. Market local food

When a hospital gets a new MRI machine or sophisticated laser surgery tools, a community awareness campaign is launched. The marketing department develops and implements a strategy--billboards, radio and print ads, press releases to the local news outlets--to promote the technology and attract new patients. Publicizing their resources and achievements is a key part of hospitals' overall strategic plan for growth, which is why most hospitals invest in top-notch marketing departments.

Few local food initiatives have been able to harness hospital marketing and public relations assets to help advance their goals. "They just don't get it," say leaders of these initiatives, reporting that they have tried to cultivate marketing and communications alliances without success. Although the many issues surrounding food system localization may indeed be difficult to understand, there may be other reasons for the roadblock. Marketing and PR departments most likely have no experience promoting hospital food, since until recently, it has not been the stuff of headlines. Food service directors may have little experience working with marketing staff, and little time to devote to the task. Because most local food purchasing developments have been small and gradual, it may be difficult to convey their significance and role in a larger plan for change. Also, marketing departments naturally prioritize the marketing needs communicated from CEO and senior management offices over others such as food service.

Whatever the reason marketing departments have not been widely involved in building awareness and support for local food purchasing, they should be part of future efforts. These departments are responsible not just for advertising and other external promotion, but for tracking hospital's market share, monitoring patient satisfaction, organizing community events, and managing a wide range of internal communication functions. Not only are these functions vital to increasing awareness of what has been accomplished, but they are a key part of program developments to increase local food purchasing. For instance, at least one hospital food service director has changed the feedback form placed on patient trays, so that it can capture responses to the addition of local and organic ingredients. Other marketing strategies include:

- Table tents, tray liners, and signs in hospital cafeterias to indicate the use of local food and educate customers about its source (e.g., CAFF provides display materials to hospitals who agree to buy local produce);
- Service to develop feature stories, FAQs, and other materials that can be provided to food service and marketing departments to highlight local food initiatives in staff newsletters;
- Boilerplate content that can be adapted by marketing departments in their brochures or other PR materials;
- Events in conjunction with holidays (e.g., Earth Day, Staff Appreciation Day, etc.) that showcase local food in the cafeteria or in employee gift baskets;
- Local food-themed health fairs and other wellness events at churches and other community sites;
- "Celebrity chef" events, cooking demonstrations, book signings, presentations by physicians and researchers, "farm days" and other local food-themed events; and
- The incorporation of local food messages into employee wellness resources (e.g. many hospitals provide gyms, exercise classes, workshops and clinics, health screenings, and support groups as staff benefits).

6. Make governance and policy work

Almost every corporation has a sustainability policy that states a commitment to environmental protection, community investment, and/or other social benefits. However, implementation of these policies varies widely, and may happen only as a result of regulation or economic incentive. In order for hospitals to use sustainable food policies proactively to change their purchasing in favor of local foods, they must link them to specific and measurable objectives. As policies become a core part of sustainable food purchasing, a closer examination of how they can be translated into action is needed. Policies run the risk of being vague, unrealistic, and isolated from institution wide priorities and resources. They also are challenging because they affect players in the supply chain beyond hospitals. Efforts to get source information or negotiate new contracts are often thwarted by market conditions, vendor practices or policies, or other developments.

One part of a purchasing policy that must be carefully developed is a systematic procedure for information-gathering and decision making. For instance, the statement that "we will purchase local produce when available and appropriate" must be linked to methods to determine what produce is available, as well as when and how, and to methods for deciding the conditions for "appropriateness" In most cases, the attribute of localness must be weighed against others such as price, quality, and volume. For example, a detailed policy might state that a local item must be within five or 10 percent of the price of a comparable non-local item, averaged over the season. It may also describe who will be responsible for pricing produce from different sources, identify these sources, and describe the cost-benefit analysis to be used. Policies should also be careful to match resources to both immediate and long-term goals, both for financial resources and also for time and labor. Almost all food service operators suggest that local food purchasing adds responsibilities to their job description and that administrators must be willing to grant them time for these additional responsibilities, especially in the beginning.

Another important aspect of food purchasing policy development is identifying constraints that may prevent hospitals from achieving local food goals. Funding crises, contract limitations, unstable staffing situations, and other challenges can interfere with local food purchasing plans, and policies should be flexible and realistic. This is one reason why all major segments of the hospital staff and leadership should be represented in policymaking—people from different departments will have additional perspective on constraints and solutions. In particular, senior leaders of the hospital should be involved in developing food policy so that it is developed in the context of the overall operating environment and organizational direction.

The national Healthy Food in Health Care campaign is in the process of working with hospital food service leaders to develop a benchmarking system that will be integrated with the Healthy Food pledge. The system will help hospitals that sign the pledge identify the factors most important to accomplishing their local food purchasing goals, and to approach their work in a systematic fashion. The benchmark process will include a range of indicators and evaluation mechanisms so that hospitals can tailor it to their individual food plans, but will generally offer hospitals the ability to gather feedback and measure performance for continuous growth and improvement.

7. Redirect supply chains

As noted before, hospitals that are purchasing local food are primarily doing so in small, discrete steps, while simultaneously trying to lay a foundation for long term systemic change. In building this foundation, farm-to-hospital leaders and organizers can be expected to focus more sharply on the supply chain beyond the hospital facility. Reorienting hospital food service operations toward local food necessarily involves the wider system of food production, processing, and distribution institutions and activities. Figuring out how to move one institution forward means mobilizing a whole range of producers, distributors, and other buyers as well.

More research is needed in order to understand the supply chains and distribution networks that support hospital food service, and to build new networks and markets that can connect hospitals with local food. Businesses that are already part of the hospital food supply chain will certainly be involved, and new companies and partnerships may emerge as well. Analyses of production and transaction costs, processing and marketing issues, pricing strategies, volume needs, and capitalization costs of farm-to-hospital initiatives are the next step in building momentum.

In their work on the challenges and opportunities facing America’s vanishing class of mid-scale farmers, Fred Kirschenmann, Steve Stevenson and others use the concept of a values-based "value chain" that links regional sustainable food enterprises, distributors, and retailers in sustained long-term partnerships.[39] These food value chains are a variation of traditional food supply chains that are characterized by transparency and trust, include more equitable partnerships between farmers and buyers, and provide products that are distinguished by their social and environmental attributes.[40] Supporting their growth is seen as "appropriate for situations in which regionally-oriented markets are developing for significant volumes of differentiated, value-adding food products."

As local food gathers steam in Bay area hospitals, one such "situation" is emerging. Mid-tier food value chains are proposed as a market solution for farmers who are too small to sell into the current commodity market, but too large to sell at farmers markets or other direct-to-consumer outlets. Farmers "of the middle" comprise the majority of U.S. farmers, provide the greatest socioeconomic and environmental benefit to rural communities, and are rapidly disappearing. Researchers and practitioners are now calling for new business and marketing approaches, such as investment in the development of values-driven value chains, along with research and policy initiatives, to help rebuild this important agricultural and community sector.

Hospitals seeking food differentiated by origin and quality are promising players in emerging mid-scale value chains. As hospitals push distributors for source information, identify local suppliers, develop product specifications, negotiate new contract terms, and create policies and procedures that mandate local food purchasing, they are leading the development of local food value chains. Investing in farm-to-hospital work may help build strategic alliances that support the purchasing of significant volumes of local food, and that return a greater portion of the price to farmers than the commodity market. But as the Agriculture of the Middle scholars point out, collaboration and mutual support at each level of the chain are critical.

VII. Conclusion

Hospitals seeking local food represent large potential markets for local food, but only if new market structures and relationships emerge that can link producers and hospitals in effective distribution systems. Local products are part of the growing market for differentiated, high-quality food that provides meaning and connection for consumers, but the current food distribution system does not yet support significant access to this food for large public and nonprofit institutions. Large-scale efforts will be required to bring producers, hospitals, and intermediaries together for collaborative planning and action. Analysis of needs for product development, regional processing and distribution infrastructure, and marketing resources is critical for hospitals and other institutions to become substantial markets for small and mid-scale producers. Research into new business structures and markets, advocacy for policies and funding, and educational initiatives for producers and food service operators are essential. Practitioners are needed to cultivate and facilitate alliances among the food and health sectors, work with those in the public health, ecological agriculture, and rural development communities, and engage food service distributors in local food value chains

The observations and recommendations we present here are an attempt to convey the vast knowledge and experience that has been amassed by a first generation of leaders of farm-to-hospital initiatives in the Bay Area. It is our hope that this paper provides some information and inspiration to explore, support, and expand their work.

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