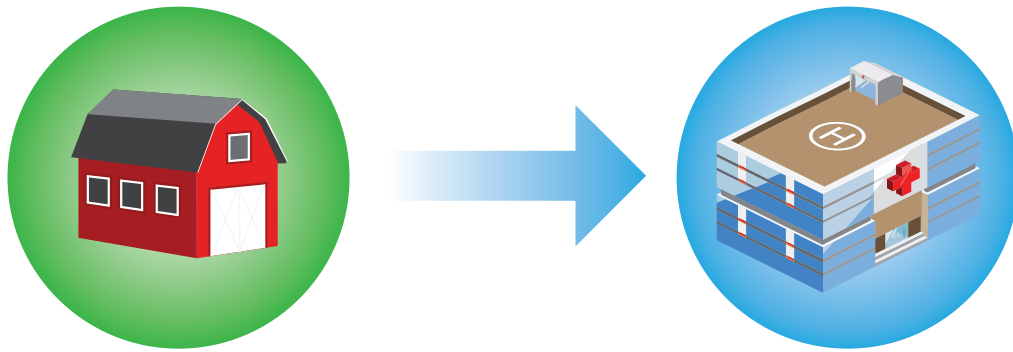


Health Care and Healthy Food: An Examination of Sustainable Food Purchasing Practices in U.S. Hospitals

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Executive Summary:

Health Care and Healthy Food: An Examination of Sustainable Food Purchasing Practices in U.S Hospitals looks at the ways influential supply chain players such as hospitals and Group Purchasing Organizations can facilitate innovative food purchasing strategies. The report discusses the growing demand for healthier, sustainably produced foods in hospitals, and outlines how traditional food procurement methods have failed to take human, and environmental health into consideration. It also summarizes new food procurement models, such as Regional Food Hubs, currently being undertaken by hospitals across the country. Drawing on interviews with hospital foodservice representatives at 20 hospitals in six states, and an in depth case study of Boulder Community Hospital in Boulder, Colorado, this study examines barriers currently preventing hospital systems from pursuing environmentally preferable purchasing in the foodservice department.

Regional Food Hubs provide a sustainable alternative to traditional food procurement models that can be scaled up to fit the needs of individual regions while maintaining the integrity of the food supply chain. This study examines their potential benefits for each aspect of the supply chain, and gives specific recommendations as to how they can be applied to healthcare organizations, distributors, and purchasing organizations.

The health care industry is responsible for maintaining the health of our communities. A holistic approach to healthcare must take preventative measures into account. Traditionally, hospital food is notoriously unsatisfactory, but the health care community is beginning to see the financial, health, and community related benefits to purchasing healthy and sustainably produced food. This study seeks to advance the literature on sustainable food purchasing programs and give recommendations to hospitals not only on how they can make internal changes, but also how they can use their collective purchasing power to influence large-scale reform of the food chain.

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Introduction:

The health care industry is one of the three largest industries in the United States employing over 14 million people in 2008.¹ The nation's hospitals, representing over 32% of the health care labor market, are responsible for the caring for the sick and injured, as over 34 million people received inpatient care at a hospital or health care facility in 2010.² As leaders in their community, hospitals must also be responsible for maintaining and promoting healthy lifestyles. As environmentalism has become a serious societal concern over the past 15 years, the healthcare industry has slowly started to adopt sustainable practices.

More so than other industries, the alignment of the ethics of the health care industry and the sustainability movement has made the health industry an ideal candidate to adopt environmentally friendly practices that fit with hospitals' mission of maintaining healthy communities. The prevalence of hospital sustainability programs in the United States is rapidly increasing as more health systems start to prioritize environmental concerns. Recycling programs, water conservation, green cleaning, and energy management are all worthy causes for hospitals to pursue, and much progress has been made in the past ten years in terms of waste and energy use reduction.³ However, as pro-environmental activities continue to grow, it is important to step back and evaluate the progress of these programs and assess their depth.

One of the most resource intensive aspects of hospital administration—food purchasing—is just now starting to adopt sustainable strategies. Hospital food is the next step in the sustainability roadmap for hospitals. We are at a time in the United States when 68% of the population is considered obese or overweight.⁴ As the nation faces

unprecedented levels of obesity and other dietary conditions, one of hospitals' responsibilities is to address these issues.

Unfortunately, as budgets become more pressed, and hospitals look for ways to cut costs, often the first to go are food services. In some instances hospitals will even have fast food in the cafeteria.⁵ As centers for holistic care, hospitals need to start properly addressing the problem of food as they would address other health concerns. Traditional food procurement strategies rely on unsustainable agro-business operations and large Multinational Corporations, failing to take human and environmental health into consideration. Pilot programs run by large hospital systems like Kaiser Permanente (KP) such as Farm-to-Hospital show that hospitals are making strides on their own, but in order to bring systematic change to the health care system, institutional transformations must occur.⁶ Only after this shift can fresh, local, and organic food be a financially and logistically viable option for healthcare facilities.

Leveraging Group Purchasing Organization (GPO) contracts may be one way for the health care sector to procure more sustainable food. These third party organizations negotiate contracts between suppliers, manufacturers, and healthcare systems, and act as middlemen in the supply chain, relying on low unit transaction costs that arise from economies of scale.⁷ In other words, GPOs cluster hospitals together in order to provide materials, food, medicine, and surgical supplies at cheaper prices to their member hospitals. This paper will analyze the unique position of Group Purchasing Organizations in the healthcare supply chain, evaluate their effectiveness as purchasing facilitators, and suggest ways that GPOs can work with food services providers and hospitals to create efficient, environmentally friendly purchasing strategies. It will also

address the question of whether GPOs are the most effective method in implementing sustainable behavior. It will look at the Farm-to-Hospital movement advanced by systems such as Kaiser Permanente, and evaluate the effectiveness of small-scale, local food initiatives. While there have been multiple success stories in regards to hospital food, some argue that small scale initiatives lack the ability to be scaled up and implemented in multiple hospital systems across the country.⁸ This paper will compare small-scale local contracts to the bundled, large-scale contracts accessible to GPOs, and assess the value offered by purchasing via economies of scale.

Background

In the summer of 2010 I had the opportunity to intern for Kai Abelkis, the Sustainability Coordinator of the Boulder Community Hospital (BCH) in my hometown of Boulder, Colorado. I quickly learned the importance of Kai's position at BCH, an institution known in Boulder, as well as in the health care community, as one of the most sustainable hospitals in the country. Everyday we would visit every department of the hospital collecting used batteries, Styrofoam, and electronics to bring to the local recycling center. Since no one would pick it up, Kai and I would throw it all into the back of an unused laundry truck and drive down to the local recycling center, sometimes three or four times a week.

During my time at BCH I was continually impressed with the sustainable culture that they have developed over time. Daily, we would get calls from various hospital departments, clinics, or offices saying that they had an old computer monitor, expired IV bags, and even old broken dentist chairs. Employees could have simply thrown these

items away, but because of the culture that characterizes BCH, they knew to call us and that we would know how to properly dispose of them.

Nevertheless, as I ate my first lunch in the gorgeous, light filled, LEED Silver certified hospital with recycling and compost bins abound, the food did not seem to fit in with the surroundings. There was a salad bar, and it offered a wide selection of foods, but I had a hard time reconciling the options in front of me with my resolute belief that hospitals should be a model of what healthy eating is: models of how people, especially those who are ill, should be treating their bodies holistically. The food at Boulder Community Hospital, while perfectly acceptable, did not represent the example of best practices that I had come to expect.

It is this question that has motivated my research into intricacies of food procurement, processing, and distribution in the health care supply chain, and it is this question that drives me to find a better, healthier, and more sustainable solution to the question of hospital food.

Methodology

This paper will analyze the relationship between hospitals and GPOs and suggest ways that they could work together to catalyze the large-scale implementation of sustainably produced, healthy food options in healthcare facilities. The market for locally sourced, nutritious food in health care is rapidly incubating, and accessible qualitative data on hospital purchasing environments is needed to color this rapidly growing field. In order to collect an in depth assessment of the demand for healthy food, this study includes ten thorough semi-structured interviews with representatives from almost every aspect of the food supply chain.

Over a period of seven months I interviewed hospital food procurement officials, GPOs, farm-to-school policy advocates, Regional Food Hub policy advocates, foodservice representatives, and a representative from the organization Health Care Without Harm. These interviews are substantiated and compared alongside a case study at Boulder Community Hospital (BCH) in Boulder Colorado. In this case study, interviews were conducted with the hospital CEO, the Director of Purchasing, the Foodservice Director, and the Sustainability Coordinator. By analyzing the practices of BCH, a hospital on the forefront of sustainable practices in healthcare, this paper will document best practices and assess the current barriers to foodservice sustainability in a progressive hospital setting. For definitions and background research, it will draw on the work done by the advocacy organizations Health Care Without Harm (HCWH) and Practice Green Health (PGH), documenting the successes they have had, and furthering their definition of sustainability in health care.

The paper will also analyze interviews with different hospital foodservice representatives from 20 hospitals conducted by Kendra Klein, a doctoral candidate at the University of California at Berkeley. Conducted for her upcoming dissertation entitled *Beyond Nutritionism: The Ecological Food Movement Goes to the Hospital*, the interviews focus on hospital personnel's experience with finding and purchasing local and organic foods in a healthcare setting. Done in conjunction with Health Care Without Harm's Healthy Hospital Initiative, Klein obtained interviews with nine California hospitals, five from Oregon, four from Washington, one from Wisconsin, and one from Vermont between 2009 and 2011. Categories of the interviews include:

- Flexibility in food purchasing
- Rigidity in food purchasing
- Flexibility in food supply chains
- Rigidity in food supply chains
- Barriers and challenges
- Benefits and drawbacks of middlemen
- Future and goals
- Motivations
- GPO Rebates
- GPO and distributor contracts

Klein generously allowed me to review interview transcripts and analyze them in the findings section of this study.

It should be noted that these interviews were conducted predominantly with progressive hospitals, most of which are pursuing best practices for their food purchasing efforts; the interviews are used here not as a nationally representative cross-section, but as illustrations of what is currently possible in today's health care climate. Through an analysis of the work currently being done at BCH, in conjunction with campaigns by HCWH and PGH, this paper seeks to advance the knowledge of sustainable food purchasing in healthcare, and suggest ways that keys players can work together to facilitate its growth.

Defining Sustainability in Healthcare

“Sustainability” has become a loaded term over the last 15 years. The phrase has become so prevalent in every day life that businesses now use it as a “buzzword” to describe their operations, even if they are actually doing very little by way of environmentalism or social responsibility.⁹ Thus, if this paper seeks to address the lack of “sustainability” in hospital food service, it is important to ground the term in a practical setting.

Given the unique character of each healthcare system and the resources available, sustainability in healthcare has taken on the idea of the triple bottom line: people, planet, and profit.¹⁰ As community organizations, health care facilities are always trying to align

the ideals of an organization with those of the surrounding community. One of the country's largest service industries, U.S health care represents more than 17% of gross domestic product. Hospitals use more energy than any other commercial building type, spending over \$6.5 billion on energy in 2009.¹¹ Given the vast amount of resources the industry uses, combined with its ongoing commitment to community values, it seems a natural progression that as environmental concerns become more pressing, hospitals would try to reflect these concerns in their daily operations.

However, as in many others, in the healthcare industry the term “sustainability” continues to be beholden to cost savings. While most admit that it remains a pressing concern, the general sentiment among healthcare professionals is that projects “must align with the ever-changing strategic imperatives of the organization,” making both “financial and strategic sense.”¹² Thus, sustainability in the healthcare setting has revolved around cost savings as well as environmental equity. Recently, environmental strategies in hospitals have involved four categories: energy management, water conservation, waste management, and green cleaning.¹³ Reports show that an ever-increasing amount of healthcare facilities have started to look at these four categories when analyzing their operations.

According to the 2010 Health Care Facilities Sustainable Operations Survey, 69% of hospitals now measure energy savings, 61% measure waste reduction savings, and 41% measure water savings.¹⁴ These numbers show two trends that are emerging in healthcare. First, in order to reduce waste and energy use, one must be able to measure it. Hospitals are now measuring their energy use, making tangible the industry's steps towards sustainability by way of increased technological infrastructure and more

sophisticated measurement tools. As noted in College of William and Mary Professor, Dr. Tonya Boone's study entitled, "Creating a Culture of Sustainability," measuring energy and waste more sustainably is critical for "building organizational capabilities that could be applied to other areas, such as environmentally responsible purchasing and food management."¹⁵ Second, as community organizations, hospitals are extensions of communities and these numbers show that individuals are starting to care more about the health of their local communities, and are pushing their hospitals to adopt sustainability measures.

Practice Green Health and Health Care Without Harm

Two organizations that have helped coordinate the nationwide sustainability movement in health care are Health Care Without Harm (HCWH), and Practice Green Health (PGH). HCWH is a not-for-profit coalition of over 470 health organizations that assembles and distributes critical information on best practices in sustainability and social responsibility. PGH is a fee-for-service membership organization that provides information and assistance to hospitals and healthcare partners.

Both are organizations dedicated to a holistic restructuring of the healthcare industry to bring sustainability issues to the forefront. Practice Green Health's mission statement is testament to their dedication to not only increase sustainability, but also to generate communication and education within the healthcare industry: "Our mission is to collaborate and provide education, tools and information about the best environmental practices to help healthcare organizations supercharge their operational efficiency, increase regulatory compliance, and improve the health of their communities."¹⁶ Similarly, HCWH seeks to "transform the health care sector so that it is ecologically

sustainable and no longer a source of harm to human health and the environment.”¹⁷ I will use these definitions of sustainability to set the parameters for this paper.

As little as five years ago hospital sustainability was a relatively nascent concept. This is beginning to change. In April 2012, eleven hospital systems representing over 500 health care facilities, in partnership with HCWH and PGH, signed on to the Healthier Hospitals Initiative.¹⁸ The project seeks to provide a comprehensive and holistic approach to re-framing health care sustainability, providing valuable information and advice on energy, waste, social responsibility, and food purchasing to all hospital systems across the country via their website. Over the next three years, the initiative endeavors to enroll over 2,000 health care facilities, bringing together not only the collective knowledge of each organization, but also their purchasing power in order to effectively change the health care industry.

It is estimated that on average, hospitals purchase close to \$300 million in supplies and materials each year.¹⁹ Everything from surgical supplies to linens to food must go through the purchasing department, and must be contracted from suppliers upstream in the supply chain. If the healthcare industry is going to institutionalize sustainability and holistically address the problem of environmental degradation and declining health, it must start to take into consideration every aspect of the supply chain. Projects like the Healthier Hospitals Initiative reveal that hospitals are beginning to work with GPOs, NGOs and manufacturers on issues such as mercury elimination, excessive product packaging, and the elimination of hazardous chemicals in products. As the movement progresses however, it is critical that food purchasing in health care is not overlooked. As hospitals continue to feed over 14 million employees every day, and take

care of millions more ill patients, food quality must become a priority and an established aspect of sustainability campaigns.²⁰

Sustainability, Health, and Food

The current health care business model promotes treatment over prevention;²¹ however, the industry is beginning to understand the connection between human health and the environment. Sustainability in health care must move beyond waste and energy reduction to incorporate a holistic definition that takes into account the entire supply chain and the health of the surrounding communities. It must look not only at cost savings, but also at the promotion of healthy lifestyles and the facilitation of communication between all components of the system. By choosing sustainably produced foods hospitals will lower patient and staff exposure to pesticides and hormones and boost local economies. As Moira Beery of Occidental College's Urban & Environmental Policy Institute and Kristen Markley of the Community Food Security Coalition point out, the promotion and prevention objectives of hospitals, together with their strong community ties, represent a tremendous opportunity to expand and institutionalize healthy eating.²²

There is debate between food and healthcare professionals as to what "sustainably produced food" should mean, given there is no one prevailing definition. Local, organic, and sustainable are all terms that are often used interchangeably with each other. Organic food may be produced without pesticides or hormones, but it may be grown 2,000 miles away in unsafe working conditions. A community farmer may grow a batch of local spinach, but in an unsustainable manner. While each of these methods have benefits and disadvantages, this paper will use the term "healthy food" to describe the work currently

being done around hospital food. This term generally refers to food that is not processed, made from scratch, local (when possible), organic, and produced sustainably. The goal of this research is not to prove that one of the above methods is better than the other, but rather to advance the promotion of healthy food in the health care community.

In a 2006 report entitled, “Redefining Healthy Food: An Ecological Health Approach to Food Production, Distribution, and Procurement,” Director of Health Care Without Harm’s Healthy Food in Healthcare Initiative, Jamie Harvie, summarizes the optimal characteristics of a healthy food system:²³

- Proximate²⁴
- No chemical contaminants
- Non-exploiting labor standards
- Environmentally beneficial or benign
- Geographically and monetarily accessible
- Encourages an understanding of food culture
- High animal welfare standards
- Part of a balanced diet

This paper will use these categories to define “healthy food,” and will seek to enhance to the literature surrounding the growing movement to redefine food supply chains.

Traditional Food Procurement

Today’s current industrial food system is failing to take public health into consideration, and hospitals are in a unique position to catalyze a systematic change as organizations dedicated to maintaining the health of their communities. Currently, five corporations control 75% of the global vegetable seed market, four control over 80% of the world’s beef packaging, and consolidated firms now manage more than 80% of the farmland in the United States.²⁵ In the last two decades the distance from farm to market has increased by 20%, with most food travelling between 2,500 and 4,000 miles before reaching a plate.²⁶

The US food system accounts for an estimated 10.5% of the nation's energy use and 19% of its fossil fuel consumption.²⁷ As Jamie Harvie, Director of HCWH's Healthy Food in Health Care Initiative argues in his essay entitled "A New Healthcare Prevention Agenda," the increasing centralization of production and decision-making has resulted in a food system that is highly linear, concentrating, rather than redistributing wealth. Over the past few decades, Harvie maintains, we have seen an exponential growth of large packing plants, confined animal feeding operations, and national distribution centers. Instead of promoting a food system that is "highly fragile to predicted disruptions" such as climate change, we must promote one that is preventative in nature, "providing the capacity for self-renewal."²⁸

As large community organizations with limited operating budgets, health care facilities have not taken food into account as an approach to preventative healthcare or sustainable operations until recently. This means that often the food procurement function of hospitals only takes cost into consideration. Presently, it is cheaper to buy produce grown unsustainably 2,000 miles away than it is to use local produce grown miles from one's institution. The rise of industrial agriculture has forced the proliferation of national vendors and distributors capable of handling large transactions across large geographic areas. Many organizations have appeared in order to manage and navigate the increasingly complicated maze of food purchasing.

GPOs are one of these institutions. Through these groups, hospitals will typically contract with one distributor such as US Foods or Sysco. Distributors like US Foods are responsible for finding and contracting with food vendors, and in turn, provide institutions with a list of contracted items from which hospitals can choose.

GPOs will then give their member hospitals a catalogue with the available purchasing options. Because the distributors are international organizations, contracts are often limited to name brand companies who can afford to pay the service charge required by most distributors. This means that while hospitals will have an array of choices, few will be from small local producers, organic farmers, or anyone without the high cost margins needed to contract with national distributors.

The four key players in the food supply chain—hospitals, GPOs, distributors, and vendors—all have different operating motives, which often conflict with one another. GPOs are looking for hospitals to buy the largest amount of contracted items possible, while hospitals need to buy what is most economical. This makes buying the cheaper and usually healthier contracted items more enticing to hospitals. The healthcare food supply chain needs to be simplified and reorganized, elevating institutional priorities that have a higher ethical standard. As healthcare facilities start to demand healthier food, these four players will need to start working together to facilitate the creation of a more viable food system, one that promotes equity, sustainability, and health instead of reduced transaction costs, biological manufacturing, monoculture, and exploitation.

Facts about distributors

Sysco-

- ⊕ **\$37 billion in sales in 2010**
- ⊕ **45,000 employees**
- ⊕ **180 locations worldwide**
- ⊕ **Over 400,000 customers**
- ⊕ **Contract with over 400 hospitals**

US Foods-

- ⊕ **\$19 billion in sales in 2010**
- ⊕ **25,000 employees**
- ⊕ **60 locations**
- ⊕ **Offer over 350,000 brand products**
- ⊕ **Contract with over 300 hospitals**

Source: Sysco.com,
USFoods.com

Healthier, Sustainable Alternatives

A growing number of programs are currently in use by hospitals and hospital systems that are beginning to change the dynamic of food purchasing in health care. Kaiser Permanente (KP), one of the country's largest hospital systems, serving 8.5 million members with 36 hospitals and over 167,000 employees, is spearheading the movement for healthy food in hospitals.²⁹ Their large size and significant purchasing power has allowed the hospital system to experiment with sustainable purchasing projects that smaller hospitals may not have the staff, or budget to try.

In 2003 Dr. Preston Maring started the first ever farmers' market at a San Francisco Kaiser Permanente Hospital. Since that time KP has started over 50 farmers' markets in eight states.³⁰ The markets are not used for patient food, nor is the food served in the cafeteria. For KP, the markets have been an essential way to connect the organization with the community. They support local farms, promote healthy eating in the community, and send a message that Kaiser is committed to preventative healthcare. Their efforts have even spawned sustainable purchasing programs and farmers' markets in hospitals in over 15 states across the country.³¹³²

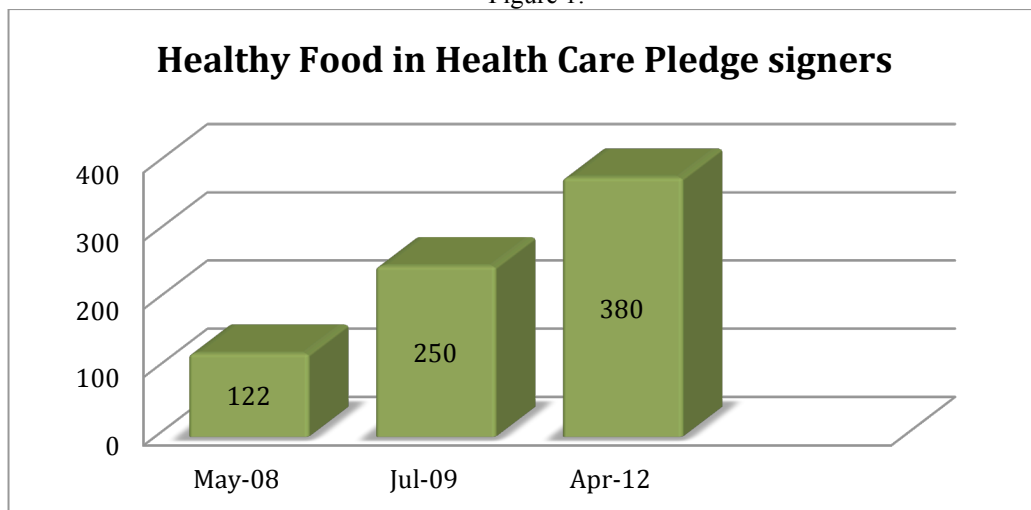
KP's farmers' market initiative not only spawned the growth of their sustainable food-purchasing program, it has branded them as a leader in health care as well as in the communities they serve. Most importantly, they have started reconnecting food to human health; people that visit the Kaiser Permanente farmers' markets are immediately reminded that the hospital is a center for preventative health care, and a place where anyone can come to live and eat healthy. Health Care Without Harm has since

developed a fact sheet on establishing a farmers’ market on hospital grounds, available on their website.³³

However, while farmers’ markets are a much-needed step in the right direction, they fail to address the inherent problems of the industrial food system on a systematic scale. For hospitals to truly be effective agents of change, it is imperative that they start serving local and sustainably produced foods to patients and in hospital cafeterias. For this to occur, hospitals need to work with other supply chain players like GPOs and distributors to standardize, manage, and facilitate contracts with vendors of healthy food.

Already, 380 hospitals and health systems, or 7% of the nation’s hospitals, have signed on to HCWH’s Healthy Food in Health Care Pledge. This pledge commits the organization to taking active steps towards creating a sustainable food-purchasing program. More than just internal adjustments, this means working with GPOs and distributors to generate a more sustainable procurement system. As the figure below shows, with the help of organizations like Health Care Without Harm, the market for healthy and sustainable foods in hospitals is rapidly getting stronger.

Figure 1.



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Regional Food Hubs

Another possible answer to the growing demand for healthy food are delivery systems known as Regional Food Hubs (RFH). The Regional Food Hub Advisory Council, made up of stakeholders from each part of the food system, defines a Regional Food Hub as “a business or organization that carries out or actively coordinates the aggregation, distribution, and marketing of primarily source-identified local and regional food products from small to midsized producers to wholesalers, retailers, and/or institutional buyers.”³⁵ Regionally specific, RFHs connect small and midsized growers to institutional buyers while upholding stakeholder values, reducing inefficiencies, and streamlining distribution and processing.

The most important aspect of RFHs is that they are scalable and can incorporate the beneficial components of our current food system without compromising environmental or human health. As will be

“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 exploration of the alternatives.”

- Elizabeth Sachs and Gail Feenstra

discussed in the recommendations section of this paper, RFHs have the potential to connect small local farms with institutional buyers while maintaining the efficiencies provided by organizations such as GPOs. The health care food system is complex and will require input and assistance from every key player if organized change is to occur. GPOs will continue to be a larger player in the health care market, and it is vital to understand their importance in the system so that hospitals can leverage their purchasing power to facilitate positive change.

Group Purchasing Organizations

While large hospital systems with a lot of purchasing power like KP have successfully implemented small-scale changes to their food systems, such as hosting farmers markets and sourcing local produce, these hospitals are vastly outnumbered by those that have made no changes to their menus. If sustainably produced food is going to be brought to healthcare facilities on a large scale, hospitals and hospital systems are going to need to work with GPOs to curate effective, efficient, and environmentally friendly food purchasing solutions. Group Purchasing Organizations are a dominant player in the healthcare industry and have been for over 50 years, and managed properly, they can be a helpful resource to hospital personnel. This section of the paper will recount a history of their place in healthcare, a summary of the functions they perform, and some of the criticisms that have been levied against them by hospitals and regulatory officials.

History of GPOs

Lawton Burns of the Wharton School defines a GPO as, “An organization whose primary product or service is the development of purchasing contracts with product and non-labor service vendors that its membership can access.”³⁶ By pooling together hospitals, GPOs negotiate contracts with suppliers and provide discounts to their member hospitals and hospital systems via economies of scale. Aggregating purchasing volume, GPOs use the added leverage of multiple hospital accounts to negotiate discounts with manufacturers, distributors, and other vendors.³⁷ Today it is estimated that GPO contract covered purchases account for over 250 billion dollars, but it did not always look like this.

The Hospital Bureau of New York created the first group purchasing organization in 1910. The sole purpose of this organization was to use the collective buying power of the hospitals in the area to obtain lower prices for shared services such as laundry. Their proliferation across the country, however, did not occur until much later. By the 1970's, with the establishment of Medicaid and Medicare, there were only 40 hospital GPOs in the United States.³⁸ Yet, from 1974 to 2011 the number of GPOs in the U.S jumped from 40 to over 800, in part due to the growth in the number of suppliers.³⁹ Today, the Group Purchasing Industry looks nothing like its roots, where GPOs were created by hospitals to facilitate purchasing. GPOs are now, for the most part, privately owned entities with their own agendas not necessarily beholden to the hospitals they represent.

Current GPO Structure

Today, the structure of the Group Purchasing Industry is complex, with many different players, taking many different forms. Of the 5,000 health care facilities in the United States, it is estimated that 96% belong to one or more GPO.⁴⁰ However, the oligopolistic nature of group purchasing is such that only a few large GPOs are responsible for the vast majority of purchasing contracts in the country. The largest six GPOs, Novation, Premier, HealthTrust, MedAssets, Broadlane Group, and Amerinet control over 90% of all GPO based contracts. Novation for example, the country's largest GPO, acts as the supply contracting company for 1,700 hospitals and 25,000 other health care organizations, purchasing over \$37 billion annually from 600 different suppliers.⁴¹ Premier Group, the second largest GPO in the industry serving over 2,300 hospitals, claimed to have saved its members \$74 million in purchases in 2008.⁴² It is

clear from these statistics that GPOs have evolved into what some claim to be the most important aspect of the healthcare supply chain.

Hospital GPO relationships can take many forms. There are three types of Group Purchasing Organizations in the healthcare industry: for-profit organizations such as MedAssets, which run independently of hospital systems and are owned by a third party; not-for-profit organizations such as Integrated Delivery Networks (IDNs), where the member hospitals are all part owners; and lastly, a hybrid of the two such as Premier and Novation, which have participation from both members and owners as shareholders.⁴³ This paper focus primarily on GPOs such as Novation where member hospitals pay a monthly fee in exchange for the services the purchasing organization provides.

It is important to note that GPOs have become businesses that strive to achieve their own financial goals, as well as those of their members. All three different kinds of group purchasing structures gain most of their revenue from administrative fees levied on suppliers. These fees allow GPOs to charge up to 3% of the volume purchased by hospitals. In this system, GPOs have incentive to encourage hospitals to buy on contract, as they receive more money from the suppliers. However, GPOs also gain revenue from membership dues. A GPO such as Novation, whose members pay a monthly fee but are not required to buy on contract, incentivizes contract compliance in a number of ways. One such way is tiered pricing, where hospitals are offered tiered rebates based on the percentage of the total hospital purchases contracted through the GPO.⁴⁴ This system is as beneficial to small hospitals as it is to large systems because rebates are based on percentage of purchases, not total purchase volume.

In a GPO like Novation, almost all profits gained from administrative fees and membership dues get distributed back amongst its members in the form of percent of purchase and multi-product discounts.⁴⁵ Thus, in a perfectly efficient system where every hospital retains contract compliance, discounts to members are extremely significant. Yet, due to a lot of varying factors, many hospitals continue to buy off-contract to obtain certain products. This has forced GPOs to market themselves as something more than simply cost reducers.

Going Beyond Cost Savings

As healthcare systems grow and small hospitals join Integrated Delivery Networks to help with purchasing needs, GPOs have had to identify other value added services that they perform besides cost efficiency, to differentiate themselves in the marketplace.⁴⁶ These value-added services are perhaps the most important aspects of Purchasing Organizations in today's health system, and illustrate the most potential to aid in the institutionalization of sustainable food practices.

This potential is seen, primarily, in that GPOs save hospitals time. The process of finding appropriate vendors, comparing prices and quality across the marketplace, and negotiating with suppliers and distributors is a time consuming, labor-intensive process. Furthermore, making informed purchasing decisions requires vast knowledge of the marketplace and a well-curated network of suppliers. "By purchasing through the GPO, the hospital will save money by not having to employ the necessary support staff to test, research, negotiate, and purchase items on their own."⁴⁷ Group Purchasing Organizations provide a network of people who work with hospitals and suppliers to provide these services. GPOs will survey the marketplace to assess where clients will

get “the best price for the best product,” and inform hospital systems of the choices that they have.⁴⁸ As prices fluctuate and new products enter the market, GPOs help because have the time and the personnel to keep hospitals current so they can make informed purchasing decisions. Because purchasing organizations receive more money from suppliers if hospitals maintain their contract compliance, GPOs have an independent incentive to seek out the most attractive suppliers, increasing efficiency for all three parties involved in the transaction.

Secondly, GPOs provide product standardization. As Eugene Schneller writes in his book *Strategic Management of the Health Care Supply Chain*, “Small and rural hospitals seem to be especially vulnerable to supplier pricing strategies in a marketplace characterized by inequities in knowledge, money, and managerial skills.”⁴⁹ An organization such as Novation, whose estimated membership in 2007 was around 32,460 hospital and non-hospital members, can be a great asset to small hospitals and small hospital systems.⁵⁰ A small community hospital with limited personnel and limited resources can use Novation’s database of suppliers as a guide.

Novation, through constant testing and reassessment of their contracts, engages in benchmarking and gives this information to its members. Thus, if a food supplier in Texas starts offering cage free eggs, Novation has the ability to note this as a best practice in the industry, and has a responsibility to inform its members about it. This communication between hospital and GPO happens upwards of 25 times a year.⁵¹ Again, all parties stand to gain from this transaction: innovative suppliers offering an improved product or service realize that GPOs streamline their interactions with hospitals, as well as provide marketing;⁵² GPOs have incentive to practice benchmarking

because hospitals will be more likely to buy on contract; and finally, hospitals benefit from the vast system of knowledge created by the benchmarking the GPOs undertake.

Criticisms of GPOs

The valuable services that Group Purchasing Organizations provide make them seem like an attractive option to hospitals and consortiums alike. However, especially in the last ten years, GPOs have been under governmental and consumer scrutiny for anticompetitive activity and a lack of cost savings, respectively. In 2002 the Group Purchasing industry went before Congress to evaluate whether their practices violated antitrust laws. Congress deemed the industry exempt from anti-kickback laws and granted it safe harbor under the condition that they form written agreements with suppliers that administration fees will not exceed 3% and if they do, they must expressly inform the supplier.⁵³ The industry responded to this government scrutiny by creating a voluntary code of conduct, created by GPOs, enforced by GPOs, to keep organizations in check. However, some, like Professor of Corporate Social Responsibility and Management, Prakash Sethi argue that this is simply to forestall more governmental oversight, and it prevents the possibility of these organizations becoming more transparent to public scrutiny.⁵⁴ This code of conduct, while extensive, falls short of mandating any specific progression towards more sustainable actions. Consequently, without pressure from member hospitals and suppliers, GPOs may not feel the need to update their practices.

Most importantly, however, as Sethi states, “The current industry structure and concentrated market share by a small number of dominant players poses high barriers to entry to new companies from outside the industry.”⁵⁵ In other words, while GPOs

provide essential information to hospitals about market conditions and quality suppliers, many of these suppliers are large industry distributors such as US Foods or Sysco, which, in the past, have not taken sustainability or proximity into account. Thus, small food vendors not on GPO contracts often have a tough time selling to hospitals that belong to GPOs.⁵⁶ Large distributors often do not have the flexibility or the capacity to carry more sustainably produced products. Sustainably produced items, whether latex free surgical gloves, or arsenic free chicken, often cost more than the standard product, and are often not available in extremely large quantities. Because of this, distributors do not want to contract with producers that cannot supply in bulk, and hospitals cannot afford the higher price of the more sustainable product. Until recently, there were almost no GPO contracts with sustainable food producers. However, in 2006 Premier's foodservice committee, made up of member foodservice directors, implemented a plan to provide member hospitals with precut organic produce. Premier has been developing this program ever since, and now offers members a list of their organic options.⁵⁷

To summarize, GPOs act as middlemen between suppliers and healthcare facilities. This unique position presents both a set of opportunities and a set of obstacles in the way of implementing healthier, more sustainable food options in hospitals. On one hand, they are powerful organizations that operate with limited obligations to hospitals, and are protected from antitrust laws.⁵⁸ On the other hand, if hospitals, GPOs, and suppliers work together, purchasing organizations can use their unprecedented access to information and purchasing power to facilitate the implementation of sustainable foodservice options.

The Benefits of Environmentally Preferable Purchasing (EPP)

Conventionally, private sector purchasing decisions are not made to promote social, economic, or political objectives.⁵⁹ Although, in recent years, companies have started to realize that the purchasing department is the gatekeeper of the organization, and has the power to determine the quality of the materials that enter it. In his paper entitled “Socially Responsible Organized Buying,” M.E. Drumwright defines sustainable purchasing as that which “attempts to take into account public consequences of organizational buying or bring about positive social change through organizational buying behavior.”⁶⁰ Organizations, especially in a publically scrutinized industry such as healthcare, are realizing that the “environmental impact of one company’s supply management function can spread beyond its own supply chain.”⁶¹ As more and more hospital systems engage in EPP, they have the power to create a green multiplier effect wherein suppliers will be encouraged to make more sustainable products, and GPOs will be encouraged to seek out new sustainable companies to please their members.

Healthy, local, and organic food is a nascent market in healthcare. The stress of patient care, time constraint pressures, lack of affordable options, and the comfort of the familiar often prevent hospitals from pursuing sustainable options.⁶² Nevertheless, there are steps that hospitals can take to work with GPOs, distributors and suppliers to make what is healthier, cheaper as well. The next section will address the steps that both hospitals as well as GPOs must take in order to implement sustainable food service programs on a large scale. An industry case study on GPOs, published by Eugene Schneller in 2000, shows that of the sites surveyed, only 32% used GPO contracts to purchase food items.⁶³ Yet, a 2011 study by Elisa Huang et al. entitled “Sustainability in

Hospital Foodservice,” reveals that composting and serving local and organic foods is the sustainable practice hospitals undertake the least frequently, lagging far behind recycling, waste, and energy reduction.⁶⁴ Schneller’s study states that hospitals often go off GPO contract to purchase their food supplies, instead choosing to contract directly with suppliers. Huang’s study exposes that even though hospitals forego GPO contracts when it comes to food, they are not doing so in pursuit of local or organic options. Here, Group Purchasing Organizations present a unique opportunity to help institutionalize healthy food in hospitals. If GPOs use their strong presence in the marketplace to find and contract with local vendors, and incentivize sustainably produced food, this nascent market will develop and prices will come down. As the findings of this study will show, this can only happen if hospitals actively express interest in more sustainable products.⁶⁵

Healthy Food in Healthcare: An in Depth Look

The findings of this study indicate two things. First, there is rapidly growing demand in health care for the institutionalization of healthier food systems. Second, and most important, there are several key internal and external variables that present challenges to moving this system forward on a large-scale basis. At over \$12 billion a year, there are many factors that contribute to the complexity of the health care food and beverage market.⁶⁶ Hospitals and their Group Purchasing Organizations make up only part of a long food chain that will take time and concerted effort from key players to change. However, an increasing number of hospitals and health systems are managing to transform internal procurement strategies, and advocate for change up and down the supply chain. This section will outline the salient issues surrounding the healthy food in

health care movement, discuss their impact, and present anecdotes as to how some hospitals and hospital systems have managed to negotiate them.

It should be noted that the case study on Boulder Community Hospital is meant to ground and contextualize these findings in a broader setting. Many of the hospitals discussed in these results are either large health systems such as Kaiser Permanente and Dignity Health, or located in a region well suited for sustainable purchasing. Systems like KP have the institutional advantage of being large organizations with considerable purchasing power. Additionally, California, where almost all KP facilities are located, is leading the country in environmentally preferable food purchasing. While Boulder Community is a progressive hospital, it lacks both the inherent purchasing power of KP, as well as its geographical favorability, making it more representative of the average American hospital.

Variables Within Hospitals

Before hospitals can start to advocate for systematic change, it is important that each has a firm understanding of their own internal operations, what resources they have, and what environment they are working in. This section outlines the key factors that contribute to, or inhibit the purchasing of healthy foods.

Hospital Food Infrastructure

One of the most important challenges facing hospital foodservice today is a lack of sufficient infrastructure and personnel to adequately meet the increased effort and time required to accommodate local food purchasing systems. A hospital's mission is to deliver high quality health care in the most efficient, and cost-effective means possible. In harsh economic times, foodservice departments, frequently isolated from other

aspects of hospital purchasing, are often one of the first departments to receive budget cuts. Because labor costs comprise 60% to 70% of a foodservice budget, it is not uncommon for staff to be limited to one manager who oversees one or two supervisors and a small number of line-cooks considered to be, and paid as unskilled workers.⁶⁷ For this reason, long-term goals and projects are often not economically or temporally viable in the eyes of foodservice departments.

Compounding the issue, hospital kitchens are increasingly ill equipped to handle the conventional method of food preparation. Because of highly centralized markets and distribution points, it has become much more economical for hospitals and hospital systems to receive their food already prepared from a central vendor or distributor and simply warm the food once it arrives on site. Many hospital kitchens do not even have proper cooking devices such as ovens and ranges. There are currently three models of foodservice production systems in use by most hospitals:⁶⁸

- *Conventional:* In this system all production is done on site. This means that items are stored, refrigerated, cooked, and heated on hospital grounds. This method is resource intensive, requiring skilled laborers capable of handling and preparing a range of food items, and for this reason is no longer commonly used.
- *Commissary:* In this system, a centralized procurement and production facility is shared between a group of hospitals or a hospital system. These commissaries often employ skilled laborers capable of handling and preparing food items. Prepared foods are then distributed to the participating hospitals and heated on site. This method has been successfully adapted to include local and organic produce in a variety of health care settings, most notably in Northern California

Kaiser Permanente Hospitals. Here, an external contract with a commissary allows patient meals for 21 KP hospitals to be prepared in a central location, distributed, and warmed on site. Not every hospital in KP's system has a built out kitchen, but this system of food delivery allows for local and organic produce to be integrated through an external contract with a progressive distributor.⁶⁹

This also enables a high degree of control over the menu, as is necessary when preparing meals for patients who may have special needs.

- *Ready-prepared:* This is the most common type of production system, which involves the reheating and reassembling of partially cooked, frozen food items. This system is the most economical, requires the least amount of skilled labor, and has evolved in the face of increasing labor costs and budget constraints.

One of the main reasons cited frequently by hospital food service representatives for a lack of local food purchasing is that they do not have the personnel or the equipment to handle the increased effort.⁷⁰ In most cases, local produce is only available in its raw form, meaning unwashed, uncut, and unprepared; these tasks would have to fall into the hands of hospitals, which do not commonly have the available resources to prepare the food.

Occasionally, the entirety of foodservice management is contracted out to a private company such as Sodexo or Aramark. Companies like these often win their contracts with hospitals by promising to keep costs per patient down.⁷¹ In these instances, it may be difficult to reconcile a hospital's sustainability goals with the need to maintain a certain price.

Restricted Menus and Divided Service

Unlike other institutions that have adopted sustainable food purchasing strategies such as schools and universities, hospitals have to cater to a diverse and unique group of clientele who require strict diets. While the hospital cafeteria comprises 60% to 70% of its total budget, it still has to provide food and service to its patients, who often require specialized menus.⁷² Consequently, when planning menus, something that usually takes place up to a year in advance, hospitals have to take into consideration an amalgamation of factors including projected health risks, dietary concerns, food safety issues, and contamination risks. Kathleen Reed, Director of National Nutrition Services for Kaiser Permanente explains that at KP hospitals, cafeteria and patient food are often run through different contracts, using different procurement and preparation methods. For their 21 northern California facilities, their patient food is delivered through a commissary as described above. However, they obtain their cafeteria food through two separate contractors that must submit bids explaining how their operation is local, sustainable, or organic.⁷³

Media perpetuates the assumption that sustainable purchasing will cost more and require more effort, but this is not always the case. The inflexibility of hospital menus means that foodservice cannot easily adapt to changing conditions, for example, produce that may not be in season, or a shortage of a certain vegetable. However, some hospitals such as Swedish Covenant Hospital in Illinois have increased the flexibility of their menus, in part due to active and knowledgeable foodservice directors, such that the seasonal and local produce that they buy often “elicit prices comparable to non-organic, non-seasonal produce.”⁷⁴

In the traditional procurement method where one hospital contracts with one GPO which contracts with one distributor, which contracts with one or two prime vendors, these risks are relatively easy to manage. Yet, every added step to this system has the potential to add another level of risk. If a food service director is forced to start contracting with multiple local vendors, it becomes much more difficult to manage health risks, insurance regulations, and other factors that large industrial food systems are quite efficient at mitigating. However, as hospital systems like Kaiser Permanente prove, it is possible to institutionalize healthy food, even under these conditions.

Purchasing Power

Over 545,000 different health care related institutions and over 5,000 hospitals exist in the United States.⁷⁵ Each one differs in its size, scope, and purchasing capabilities. Some systems such as Kaiser Permanente and Dignity Health (formally Catholic Healthcare West) are so large and have so much inherent purchasing power between their organizations, that their purchasing decisions can actually influence the market;⁷⁶ so when Dignity Health decides that it no longer wants to sell milk with rBGH, their distributors and vendors listen to them. But what if you represent a small hospital system, or even a small hospital, how can you, as a small player, influence the food chain? This is the question that keeps resurfacing throughout this study.

As noted earlier, almost all hospitals belong to a GPO, most of which require their members to use a particular distributor. For example, if a hospital uses the GPOs Premier or Novation, they are required by their contract to use US Foods as their primary distributor. These distributors only contract with a preset amount of vendors, selling a preset variety of foods, and limiting access to small local vendors. If a

foodservice director of a small hospital system wants to start using locally grown spinach not provided on the distributor contract, they often do not have the time or resources to find, obtain, and manage a new contract.

The alternative is to ask their GPO and their distributor to look into contracting with more local vendors, but without the support of multiple hospitals, these large buying institutions do not have the monetary incentive to do so. Nevertheless, trends like this are starting to reverse as more and more hospitals are beginning to actively ask their GPOs for more sustainable products.⁷⁷ This will be discussed in further detail in the external variables sections of the paper.

Organizational Support is Critical

For healthy food to become institutionalized in a health care setting, it is imperative that all members of the community—most importantly top administrators—realign their goals to prioritize healthy eating. This study found that hospitals that have taken active steps to highlight their food procurement strategies are significantly more advanced in their sustainability efforts. While most of the interviews in Klein’s study were done with hospitals that have fairly mature sustainable purchasing programs, a common theme was that the foodservice department had the institutional backing of hospital administrators. Most importantly, these hospitals have allocated the necessary time, money, and personnel required to effectively purchase local and sustainably produced food.

Traditionally, people do not come to hospitals for the food. In this sense, hospital foodservice has not been seen a marketable aspect of hospital operations. Foodservice departments in health care settings are often understaffed, under funded,

and unable to pursue new innovative strategies for purchasing. Some foodservice representatives interviewed by Kendra Klein replied that until recently, food has not been a part of hospitals' "sustainable story." Because most communities have not started to associate food with public health, hospitals have not seen it as necessary to actively pursue. In Kendra Klein's interviews, one California based foodservice representative describes the lack of institutional organization around food issues, and how that affects his purchasing ability:

The hospital doesn't know what it wants. My team and I are working together; HCWH will come in and make recommendations. Everyone is trying to garner support and create a platform. We're not there yet. If one person said here's my vision and what I'll do, it's subjective and it changes and what if they leave. It's fly by night. So there's no mantra where we're all going to do one thing until you get to the FoodBuy level where they commit to sustainable seafood and they virtually eliminated farm-raised salmon from 4,500 locations across the United States.⁷⁸

Without an organized purchasing policy, hospital foodservice directors are at the mercy of the budget they are allotted by the hospital. Kilowatt-hours saved by a photovoltaic array, or pounds of waste reduced by recycling look very good on paper, and are easily marketed to the public as tangible steps toward sustainability. Purchasing "healthy food" is much harder to quantify, especially when there is no set definition on what healthy really means, or how it may be beneficial.

One exception to this is HCWH's Balanced Menus Challenge. Aimed at reducing the amount of meat in hospitals, this initiative gives participating organizations a score sheet to review their purchases and send their purchasing data to HCWH. The advocacy organization then analyzes the data to quantify the effect new purchasing strategies have on environmental and human health and hospital budgets.⁷⁹

In the hospitals interviewed for this study, as well as in case studies done by organizations such as Health Care Without Harm, a main reason cited for the growth of sustainable purchasing programs is strong organizational backing. When asked by Kendra Klein about her purchasing motivations, one foodservice director describes that it is simply a part of her hospital's mission:

I think it's primarily because our whole mission has been preventative health and keeping people healthy. I think we're a lot different from other health care systems. I think it just makes sense to keep your population healthier. I mean, for everyone. It benefits the environment, like all these initiatives that we're doing. They benefit the environment, the economy. All that money that's spent on healthcare, it's just kind of a waste to spend it on things that we can prevent. And just for people's quality of life. I think also because we're a really mission-driven organization.⁸⁰

As this sentiment describes, the strength of a food-purchasing program depends on the amount of time, money and commitment hospital administrators are willing to allot it. If food is not seen as a priority in terms of preventative health care, organizations will not treat it as a viable solution to the growing health problems in society. One of the most successful ways that some hospitals have organized their efforts around food is to create a food mission statement. In many cases, momentum to create mission statements like these is garnered through medical staff and other hospital personnel. At Boulder Community Hospital in Boulder, Colorado the recycling program, one of the most extensive in the country, started when two nurses asked their CEO to introduce a recycling program. After a year of personal effort from the nurses, BCH adopted the program as a hospital-wide initiative. Stories like these show the importance of cooperation within hospitals and hospital systems, and highlight the need in health care for more active community engagement.

This study found that until 2007 there had been a noticeable lack of support, not only from hospital administrators, but also from health care professionals and organizations. Just five years ago the American Public Health Association passed the policy statement “Toward a Healthy, Sustainable Food System,” and in subsequent years, the American Medical Association, and the American Nurses Association have released similar documents.⁸¹ These and other reports show that the health care industry is beginning to realize that healthy food in hospitals is a logical step in furthering its mission of preventative care. As this movement matures, and more hospital systems start engaging in best practices for hospital design and food procurement, it is critical that health care systems increase the flow of information not only internally, but also between hospital systems and the surrounding community.

Hospitals Engaging the Community

Hospitals’ roles in their respective communities have the potential to be more than just caregivers. More and more, hospitals are actively engaging community members through innovative tactics such as farmers’ markets, cooking showcases, and nutrition classes. Kaiser Permanente, which is actively pursuing non-traditional local purchasing strategies, is characterized by non-hierarchical structures that facilitate communication between personnel, departments, and the community. Highlighted in Figure 3 shown below, the hospital system has just announced the winners of their Small Hospitals Big Idea campaign. This yearlong competition awarded design teams that created a space, which incorporated elements fostering “human-to-human” collaboration, “blurring the lines between the community and the traditional hospital setting.”⁸²

One of the winning design firms, Aditazz describes its design as an "agora space-
-a multi-use outdoor room where the community can put on farmers' markets,
performances, art shows, and more. To the West of the agora on the ground floor of the
hospital, patients and staff can watch a spectacle of healthy food preparation and the
smell of freshly baked breads emanating from the open kitchen."⁸³ The design reflects
Kaiser Permanente's commitment to preventative healthcare, and illustrates the ways in
which communities are rethinking the role that hospitals can play. Opening the hospital
cafeteria to the surrounding community is an important step in hospital operations. It
not only begins to show people the connection between human health and the
environment, but also increases hospital visibility, marketing the hospital as more than a
place for the sick, but a place for the healthy as well.



Figure 3: Proposed "Agora Hospital" design by Aditazz for Kaiser Permanente

Most representatives see their hospitals as community organizations. As such,
there is a resounding sentiment among healthcare professionals, and among a growing
number of foodservice representatives, that it "simply makes sense" to support local

health and the local economy. In response to Klein's question on why he is pursuing healthier and local food choices, one foodservice director summarizes the sentiments of a growing movement:

First of all, I believe it's the right thing to do. I think morally and ethically it's the right thing. And also, I think there's just been a huge push lately and a lot of people are more aware. There's just more of an awareness than there ever has been, just what's best for the world, what's best for people, and what's best for the community. I think just more information is available to us now than ever. You can't ignore...If you don't at least accept that this is kind of a direction that we're going, everyone else is going to pass you up.⁸⁴

Aside from patient and community satisfaction, interviewees also revealed that pursuing sustainable food purchasing has garnered a great deal of other positive outcomes: positive publicity for the hospital, improved community involvement, more visible nutrition education programs, boosted employee morale, and differentiation from competitors. While hospitals are community organizations, they are still always looking for ways to innovate and stand out in an extremely large field of competitors, and new food purchasing strategies are one way that hospitals are doing that.⁸⁵

In some cases, switching to local purchasing even decreased procurement costs. Large systems such as Kaiser Permanente are often comprised of more than just a hospital program. Kaiser is a hospital, a health plan, and a for profit medical group. Because they own their own insurance, they have actually seen their costs go down due to preventative care measures. By investing in healthier food, patients, staff, and community members are healthier, get sick less, and thus spend less on insurance costs.⁸⁶

Key Considerations for Hospitals and the Supply Chain

Healthcare organizations are not an isolated unit in the food system. They rely on a multitude of vendors, purchasing organizations, and distributors for their food purchasing programs to run smoothly. If healthy food is going to be institutionalized in healthcare facilities across the country, it is imperative that all key players in the supply chain incorporate sustainable measures in their practices. Most importantly, this study found that the most effective way to incentivize sustainable purchasing practices for distributors and GPOs is for hospitals to start demanding these products.

Group Purchasing Contracts

GPOs have a complicated but important role in the hospital food supply chain. Contrary to what was initially expected, the vast majority of people interviewed for this research view these organizations as an essential part of purchasing procedures. Their unique position as facilitators in the hospital supply chain makes them prime candidates for targeted reform that can affect the entire food system. There are three main reasons interviewees cited as beneficial aspects of their relationships with their respective GPO:

1) *Cost Savings*

Of the \$12 billion health care food market, GPOs contribute an estimated \$2.75 billion in purchased food, making them hard to ignore as key players in the industry.⁸⁷

However, there was not a single food service

representative interviewed who thought the GPO system was an unsustainable model of procurement, or that it had the potential to become one. The reason? Hospitals believe

“The GPO helps us maintain a budget. Without a budget, we can’t exist as a hospital.”

-Anonymous Foodservice Representative

that GPOs save their organization a considerable amount of money by aggregating demand for a product, contracting with a select group of distributors, and guaranteeing a certain purchase volume. A small hospital, through their contract with their GPO can then purchase food at the same price as extremely large systems such as Kaiser or CHW. The cost savings that GPOs claim to achieve has made them a popular purchasing model, especially for commodity products that all hospitals need such as canned foods, condiments, and other non-specialty items.

It should be noted that in 2002 the Government Accountability Office undertook research to determine whether the savings GPOs claim to create is a self-promotional tool, or an actual benefit of GPO service. The study and follow-up report found the evidence to be inconclusive, as the purchasing procedures were too complicated to determine if GPOs actually save hospitals money.⁸⁸⁸⁹

2) Time Savings

More than just saving money, the specialized work that GPOs do can save hospitals a significant amount of time in their procurement function. Without GPOs, hospitals and foodservice departments are required to find and contract with suppliers on their own time, using their own internal personnel. Thus, if a hospital needs 1,000 pounds of chicken for the year of 2012, they would need to go out and survey the marketplace, sometimes having to contract with multiple suppliers for one item just to fill their quota. This requires a lot of time and effort on the part of the foodservice department. Instead, membership based GPOs such as Novation charge a small membership fee for which they provide an array of services that the hospital no longer has to cover. Novation's staff will survey the market, manage all foodservice contracts

(that are bought through them), and provide hospitals with a concise list of information that streamlines the procurement function considerably. One foodservice representative describes to Klein his GPOs importance in his hospital's daily operations:

They also have people that...I may have 10 choices for each product. Every month, they send out these items. See, they will electronically go through my shopping or my order guides and see that I'm using this item. Then they tell me if I went on contract and bought this item, which is a contract item, I will save this much over a year. So I can actually look at everything that I'm buying and they can calculate if I went to a different product, how much I'm going to save. They give me a lot of information on product handling. They'll give me alerts for produce alerts. Anything that's happening in the produce market, meat market, anything in food, they'll keep me alerted. If there's recalls, who is recalling what? They're doing a lot of the legwork for you.⁹⁰

As foodservice departments continue to be subject to budget cuts and financial pressures, GPOs are able to provide services that make up for what is lost. It is important to note that GPOs like Novation are not for-profit organizations.

Theoretically, every dollar they make gets put back into their member hospitals in the form of rebates, although GPOs have come under criticism for the opaqueness of their rebate systems.⁹¹ Regardless of rebate return rates, GPOs work for hospitals and are therefor at the will of their member organizations. This has important implications when trying to address the problem of hospital food. While GPOs have been slow to actively respond to a conspicuous lack of healthy food options, most cite that this is because their members have not been asking for it.⁹² This problem of the lack of communication between hospitals and their GPOs will be discussed further in the recommendations section.

3) GPOs provide a lot of Information

From the testimony above, it is clear that GPOs can provide a significant amount of value added services outside of cost savings. One of the most important functions

that they perform is provide up to date, concise information to their member hospitals about available options, market price fluctuations, and new items. However, there are two drawbacks to the information they provide. First, most GPOs, Novation and Premier for example, require their member hospitals to use US Foods as their primary distributor, meaning that 80-90% of all purchased food goes through US Foods. As one foodservice director mentioned, USF only contracts with a limited amount of vendors, most of which are neither local nor sustainable. As a result, hospitals will have access to an organized list of information easily accessible through an online catalogue, but they may be limited in the categories of foods they can buy, the quality of these foods, and from whom they can buy them.⁹³

Secondly, because these large purchasing organizations and distributors use online purchasing catalogues, the size of the vendors with which they are able to work is limited. A 50 acre family farm producing organically grown spinach may have enough product to provide a hospital with a year's worth of food, but because small farming is primarily a low-tech industry, most farms of this size do not have the ability to put their selection up in an electronic format.⁹⁴ Nor do small farmers have the resources to properly market their product to institutional clients.⁹⁵ This type of system encourages distributors like USF to continually contract with large industrial vendors who have the resources to market themselves.

Most of the time, these catalogues do not provide any information aside from nutritional value and cost. There is no information on where the product was grown, whether or not it is organic, or free of antibiotics and hormones.⁹⁶ Thus, even if small

local farms were represented in the catalogue, hospitals would have no way of differentiating them from other, unsustainably produced food.

It is significant that small farms might not have the ability to provide the discounted price that GPOs have become so adept at providing. For example, USF can go to Tyson chicken and pledge that through their GPO contracts they can provide Tyson with X amount of guaranteed purchases. Because of this assured bulk purchasing percentage, they can offer that chicken at a lower price to their member hospitals. Small farms simply do not have enough supply for this to be economically viable.

Transaction Fees and Distributor Contracts

The industrial model of food procurement is characterized by consolidation, cost reduction, and maximizing efficiency. Because of this, there is an array of different contract agreements that take place between multiple key players along the supply chain that facilitate the movement of goods and service. As mentioned earlier, hospitals that use Novation or Premier must also contract with US Foods as their “prime vendor.” These two to three year contracts stipulate that hospitals must purchase between 80% and 90% of their food through USF, which sources products from producers, manufacturers, wholesalers, and other distributors.

It is not uncommon for small regional distributors to be subsidiary companies of organizations such as USF. This is an important step in terms of making locally sourced items available on GPO contracts. For example, one of the largest food distributors in the world, Sysco, recently purchased Lee Ray Taratino Produce in Northern California and renamed the company Fresh Point. Because of this purchase, hospitals using Sysco as their prime vendor now have the option of sourcing local produce from this regional

vendor all the while remaining compliant with their GPO contract.⁹⁷ Even Sysco admits that these partnerships do not represent “high volume business for them, but because so many of their customers have asked for it, they have even developed a template that [their] local operating companies can use to work with small and mid-sized farms in their areas, adapting the approach to fit the character of the local market.”⁹⁸

Although for this to happen, hospitals have to tell their prime vendors what they want in terms of local and sustainable food. If they do not, there is no incentive for companies like Sysco to contract with small regional organizations. One interviewee discussed that it is not yet a high enough societal priority for it to be profitable. “As a society, we’re not at the point of saying fresh, local, sustainable is a cost-value tradeoff, so we need to find either more intrinsic value, or more support for the health and wellness benefit and the local benefit.” Nevertheless, there are a growing number of cases where aggregated demand from a number of hospitals and hospital systems has successfully acquired sustainable products on prime distributor contracts.⁹⁹

GPOs regain the profits lost through their rebates and low prices by charging vendors and manufacturers a transaction fee, which can be another large barrier in getting small regional vendors contracted with large distribution companies, as one foodservice representative explains to Kendra Klein:

My personal thought is that it will be difficult for the GPO to respond, because they’re dealing with a national contract. In all the hospitals that Novation and VHA serve, what incentive do you have to spend thousands of dollars in time to talk to the local farmer down the street and not only help contract with that farmer, but help get that farmer into US Foods, which is another whole dynamic. Because now US Foods has to stock it and has to receive it in a certain way and they can’t be flexible, so they need to up charge or pass along costs to the farmer in some way.¹⁰⁰

The costs that get passed on to the farmer in these situations are often too much for a small farmer to afford. A farmer with a 50-acre farm may not even want to sell his or her product to a wholesale distributor because the price points are too low. Instead he or she may choose to sell products more directly, at a farmers' market for example, where growers can get the most amount of money for their product.¹⁰¹ The current food chain perpetuates a system that incentivizes purchasing from industrial suppliers whose main goal is profit and cost efficiency, making it more economically viable, and more efficient to leave small, regional, and organic food producers out of the process. Until there is an industry-wide value shift wherein preventative care becomes important enough to be a profit opportunity for GPOs and distributors, it is unlikely that more and more sustainable food producers will be able to break into the market.

Food Safety and Certifications

As may be imagined, hospital food is subject to a high degree of federal and state regulatory accountability.¹⁰² These regulatory standards also present a challenge to incorporating more locally grown food into hospital cafeterias. A significant amount of small and medium sized farmers do not have the required certifications necessary to sell to healthcare organizations. While there are ways around obtaining United States Department of Agriculture (USDA) certifications, information on how to become accredited is not readily available to farmers who often do not want to go through the effort of paying for a certification that may or may not make them eligible to sell to hospitals. In Klein's interviews, one hospital representative expressed his frustration with USDA accreditation services, reiterating that his hospital accepts third party inspection reports, but that most small farms are unaware of this:

I think philosophically we're going to have to sit down and say how important is the USDA grade on some of these items? Are there some other ways to get around it? I don't know the answer to that... However, if you can show me that you've got maybe some in-house testing, I can maybe forego USDA certification if you had some testing of your product that you can provide to us on a regular basis to give us that level of safety. That testing is inherently much cheaper than getting to be USDA certified. I think that's something farmers need to really stop and think about it. What does the institutional customer want, instead of always assuming that we want the USDA certification? You can bring a third party in there on a regular basis and show us inspection reports and all that, I'd be willing to consider buying from you.¹⁰³

Some distributors, under pressure from their contracted hospitals, have begun working with local farmers under the pretext that they are certified by a legitimate accreditation service. For example, Sysco Minnesota customers can order regional sustainable food from local growers, most of whom are certified by the eco-label program Food Alliance Midwest.¹⁰⁴

Yet, in general, there remains a seemingly archaic level of rigidity in the hospital supply chain. The fluidity of information that new technological advances have brought to many industries has not yet penetrated hospital purchasing, especially when it comes to food. As will be addressed in the recommendations section, there needs to be more resources available in a central location for farmers, vendors, distributors, GPOs, and hospitals that facilitates the advancement of best practices around the country.

The opportunities and barriers discussed in the section above reflect the majority of challenges hospitals currently face as they try and break into the market for local and sustainably produced food. The following case study at Boulder Community Hospital is used here to reinforce the themes illustrated above, and to demonstrate the major challenges facing an average hospital in the United States.

Case Study: Boulder Community Hospital

Overview

Located in Boulder, Colorado, the non-profit Boulder Community Hospital (BCH) system consists of two hospitals and 14 physician clinics. Between the facilities they employ 2,300 people including 500 physicians covering about 250 beds in total. With an operating budget of about \$250 million a year, BCH can be considered a small network.¹⁰⁵ The hospital has served the city of

Boulder since 1922, and remains the predominant hospital system for the city's 97,000 inhabitants.¹⁰⁶

Through interviews with the Hospital's CEO David Gehant, the Foodservice Director Susan Boaz, the Purchasing Director Mike Joost, and the Sustainability Coordinator Kai Abelkis, this study sought to reaffirm or contradict the findings discussed above, and ground them in a broader contextual setting. Many of the examples discussed in this study represent best practices for the healthcare community, and are not representative of the majority of hospital systems in the country. Boulder Community Hospital, while on the forefront of many sustainability issues, is a small hospital with limited purchasing power and limited access to locally grown food. For these reasons, it provides a suitable template for applying best practices from around the nation.

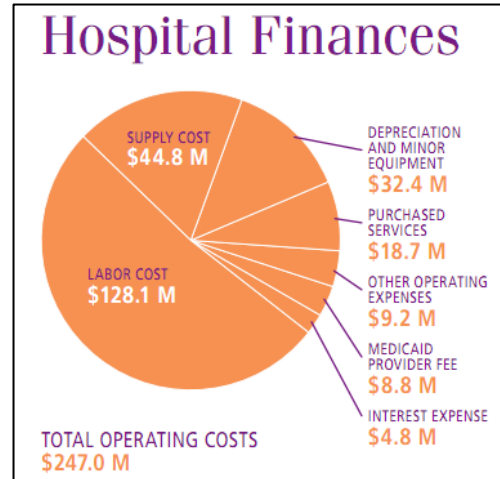


Figure 2: "2010 Community Report." Boulder Community Hospital

Sustainability Efforts at BCH

Home to the University of Colorado, as well as many green industries such as the National Renewable Energy Laboratory, the city of Boulder is notorious for the environmental consciousness of its inhabitants. This sustainable mindset has translated into the city infrastructure, spawning extensive bus and cycling programs, as well as many renewable energy projects. To reflect these values, for the past 15 years BCH has initiated a considerable amount of sustainability projects, making them an industry leader on almost every sustainability issue.

In response to changing community values in 1995, the board of directors developed a statement of principles—a vision for their future in sustainability—that would guide their decisions regarding purchasing, waste, and energy.¹⁰⁷ Since that time, they have built the country's first LEED Silver certified hospital with photovoltaic panels, which over 80 engineers and architects have come to look at in hopes of duplicating.¹⁰⁸ Using Namaste Solar, a local Boulder company, the hospital supported the local economy while increasing environmental awareness in the city. They have developed a system-wide recycling and composting program, one of the only in the country that recycles Styrofoam. They have developed a program that sends unused medical equipment to health facilities in Mante, Mexico. The hospital was the first organization in the country to give Ecopasses (bus passes) to employees.

Most importantly, through their efforts, Boulder Community Hospital has developed what Sustainability Coordinator Kai Abelkis calls a “culture of sustainability.” Abelkis himself is a product of an environmental initiative at the hospital. When two nurses successfully started a recycling program at BCH in 1999,

they needed someone who could run and manage the program. Abelkis came to the hospital as a part time recycling coordinator working ten hours a week. After two years, he was overseeing so many ongoing projects at the hospital that BCH hired Abelkis as a full-time employee under the title, Sustainability Coordinator. His presence in almost all hospital functions has since led to him becoming a household name around the organization.

Abelkis's job is to communicate with every department to ensure that they are being as efficient, smart, and aware of sustainability issues as possible. Most of this, Abelkis says, is management and education. If someone does not know what to do with a used battery, they bring it to him to dispose of it properly. As he iterated in an interview, "I fundamentally believe that if health care or any other organization is truly serious about integrating sustainable operations into their community, they need someone at the helm. Just like any other, infection control, quality control, safety, you always have to have someone accountable."¹⁰⁹ Abelkis's job is to be the person who someone comes to if they need information, or if they have an idea but do not know who to pitch it to. The implementation of this position has worked incredibly well for BCH in terms of its sustainability efforts.

BCH sustainability as an agent of community change

Like other hospital personnel interviewed for this study, Abelkis firmly believes that as a community organization, it is a health care facility's obligation to do no harm, "not only inside the four walls, but outside as well."¹¹⁰ The hospital CEO reaffirmed this commitment in this pledge: "It is very important to me to try and align the goals of an organization with individuals, and a part of the fabric of the Boulder community is

sustainability.”¹¹¹ Other motivations cited by BCH employees for the hospital’s sustainability efforts include cost reductions, positive community publicity, and improved employee morale.

The hospital’s commitment to the Boulder community is extensive and ongoing. The hospital has built three bus shelters for the city, and worked with them to create their Climate Action Plan. BCH is

“It is vey important to me to try and align the goals of an organization with individuals, and a part of the fabric of the Boulder community is sustainability.”

-BCH CEO David Gehant

an ongoing partner in Boulder’s Bike to Work Day, and they have utilized local landscaping companies to build Xeriscape gardens around the hospital as well as the city. Abelkis has worked with over ten BCH suppliers to design more sustainable products, whether that means less packaging, recyclable to-go containers, or the elimination of harmful chemicals. Lastly, over 400 hospitals have come to BCH in the past 15 years to learn about their sustainability program, making the hospital a true force in the community on sustainability advocacy.¹¹²

Abelkis’s position was one of the first in the country in the field of health care, and since his start he has sat on multiple green committees and boards including one for BCHs GPO Novation. When this started in 2003, he explains, Novation was unaware of what Environmentally Preferable Purchasing was, so they turned to him and asked how they could improve. Abelkis summarizes how he views BCH’s role in the supply chain in this excerpt from our interview:

So, what I learned in my hospital is that I can deal with what I get when it comes down the pipe and into my house but if I am going to be really effective I not only have to do that, but I also have to, in some ways, guide upstream and look up stream to help in that direction. So, that was one of the first things I did was to reach out to the GPO that we belong to which is Novation.¹¹³

Interviewees at BCH were adamant about conveying that Novation is not a business, but rather a service that the hospital hires to help them “navigate through the maze of purchasing.” It is clear that the hospital has recognized its ability to influence not only its patients and staff, but also the surrounding community and other health care organizations when it comes to sustainability. However, because food purchasing was never included in the hospital’s original sustainability mission statement, the hospital’s sustainable food procurement program lags far behind other hospital sustainability efforts. The next section outlines the foodservice function at BCH, and details the many components that have prevented its progress towards sustainability.

Food at Boulder Community Hospital

The resounding theme of the study at BCH is that the sustainable culture that thoroughly characterizes their operations has not yet translated to food purchasing, which can be attributed to two main factors. First, there has not yet been enough institutional support from employees or management to garner the backing necessary to actively pursue a sustainable food purchasing strategy. Second, Boulder Community Hospital is just one part of a complicated and bureaucratic food supply chain that requires the cooperation of multiple players for any measurable accomplishments to be achieved.

The Foodservice Function at BCH

Between three campuses, the hospital employs 64 foodservice employees, who make all meals from scratch to serve in all locations. Their cafeteria represents about 60% of their spending which is close to the national average.¹¹⁴ Like 450 other health care organizations in the United States, BCH uses the third party operator Aramark

Healthcare Management Services to run and manage their foodservice department.¹¹⁵ Consequently, instead of a head chef or nutrition specialist, the head of the foodservice department works for Aramark, and does not have the technical knowledge or skills to manage a sustainable food-purchasing program. The Director of Foodservice, Susan Boaz, had little information in regards to her sustainable purchasing efforts, even refusing an interview on multiple occasions. The lack of leadership in the foodservice department at BCH, combined with their slow progress in innovative food policy, highlights the importance of a dedicated and knowledgeable staff in pursuit of sustainable strategies. It should be noted that Ms. Boaz has since been terminated from the hospital for undisclosed reasons.

When asked what the main purchasing goals for the Boulder Community Hospital were, Boaz responded that they are to “meet the nutritional needs of our patients and provide high quality experiences to all of our guests, within the established budget.” This sentiment successfully characterizes the prevailing attitude toward food purchasing within the foodservice department at BCH. Until very recently, food at the hospital has only been viewed within the limitations of maintaining a budget, and not as a marketable aspect of preventative healthcare. As Kai Abelkis, Sustainability Coordinator for the hospital stated “the challenge with any hospital food is that it is not a moneymaker, but you do not want it to be a money loser.”¹¹⁶ When thought of in this way, food becomes a figure on a list of expenses instead of a path to maintaining a healthier community, explaining why the foodservice department at BCH operates within a limited budget and with limited staff. As hospitals look for ways to cut costs in hard economic times, foodservice departments are often the first to get slashed.¹¹⁷ Boaz

iterated that the biggest challenges to her daily operations were minimizing cost fluctuations and controlling food safety issues, illuminating that small hospitals continue to face major budget issues, preventing the perusal of innovative and sustainable programs.¹¹⁸

GPOs, Distributors and Contracts

Because BCH is a member of the GPO Novation, they are required to use the national distributor US Foods. USF is a large national company that offers over 350,000 national brand products to their members.¹¹⁹ Unfortunately however, there are not many sustainably produced and organic food options within their proprietary contracts. The result is that hospitals like BCH, who are required by their GPO contract to purchase at least 75% of their food through US Foods, find it difficult to source reasonably priced healthy food options within the bounds of their contracts.

Currently, BCH only deals with ten vendors outside of their GPO contract. This is in part due to their need to maintain 75% compliance with their Novation contract, but also due to the increased effort finding and managing vendors requires. Boaz was adamant about the benefits of Novation in terms of finding the most economical contracts, even going so far sometimes as to contact Boaz personally when better options become available.¹²⁰ Much like the majority of hospitals researched for this study, all employees of BCH believe that their contract with their GPO Novation has saved them significant amounts of money and time, and has brought them new and helpful information they could not have obtained themselves. Kai Abelkis also sits on Novation's sustainability advisory committee, which is responsible for making both

internal and external operations of Novation more sustainable. From his unique position, Kai views Novation as a “platform” for BCH to approach vendors:

So Novation is sort of a platform for us to go to our vendors. We just actually had a competition where we chose a vendor who was really trying to be sustainable and we asked these questions. If I ask a vendor these questions, they may go, oh, Novation is asking these questions. If Premier asks that question, If Kaiser Permanente asks that question. If all of these people start asking that question then all of a sudden people start going well, why are you asking this question? And the way culture works is there are different institutions and organizations that raise those questions, and that language has been out there for a long time now, that they will start going, huh, maybe we should start looking into sustainable practices.¹²¹

Because GPOs are positioned as middlemen in the supply chain, interacting with every key player, Abelkis believes they present a tremendous opportunity to be a driving force for change in the food system. However, as both Abelkis and a representative from Novation have admonished, hospitals need to start asking for more sustainable products before sustainability will be a profitable business venture for GPOs to pursue.¹²²

Companies like US Foods are starting to contract with smaller, regional vendors in order to supply facilities with more local products. Yet today, areas with more sustainable farm infrastructure such as Northern California are having more success with the program, as it is easier to source local produce.¹²³

Moving Forward

Boulder Community Hospital is getting ready to expand its Flatiron campus and move all beds to one central facility. During this process they will be switching their patient menus from a standard mealtime model to a 24/7 a la carte menu, widely considered to be best practices in health care. The switch entails that the organization need to reorganize their foodservice department to accommodate for the increased occupancy. David Gehant, CEO of the hospital, believes this is the perfect time for BCH

to bring food issues to the forefront of their agenda. Until this point, Gehant says, “the hospital has not designated [food] as an institutional priority, and then funded it with the resources to get out there and make it happen.”¹²⁴ Similarly to Kaiser Permanente, BCH spends over \$1 million a month on health insurance premiums for their employees, meaning the more health services they consume, the more BCH ends up paying. Gehant argues that the hospital could save a significant amount of money building and maintaining a healthier workforce, using food as a preventative healthcare measure.

While BCH has not made specific plans for how they intend to address issues surrounding food purchasing, Gehant is resolute in his stance that food is going to move to the center of focus in their daily operations. They are continually trying to purchase more Colorado based products, such as yogurt and some produce, and are increasing their vegetarian and heart healthy menus.

The real challenge, as Abelkis noted, is going to be changing the way the hospital community views food away from seeing it as a simple necessity, and towards a view that recognizes it as an opportunity for the hospital to be a leader in the local community. BCH is the archetype facility for a multitude of sustainability milestones, and a model for best practices; food is the logical next step in their approach to environmental and community health issues. While Abelkis believes that there is not quite enough infrastructure in place to make healthy food available on a large scale basis, he is adamant about the need for community members, hospital employees, and patients to continue to push the conversation around food further:

Do we as an organization fundamentally believe that healthy eating means healthy living?... Well I read it, I heard about it, I talked about it, our GPO wants it, Kai wants it, this hospital wants it, ok well that's that natural progression. And that is our job is to make it so that it is so natural to go sustainable. When you get past the rhetoric and all the other things, if you fundamentally think

about it all businesses want to be sustainable. Maybe not all, but most, right? Ok well take that to the next level, that is all we're asking.¹²⁵

In the following section, this paper will give recommendations on how BCH might take steps to advance the Regional Food Hub movement in Colorado, furthering their sustainability efforts and using their community influence to help build the infrastructure and support needed to make healthy food in health care a reality.

Recommendations

The information provided above details the current landscape of healthy food initiatives currently being undertaken by progressive hospital systems around the country. These systems vary greatly in size and structure, and no single set of recommendations will apply to all. However, there are convincing and applicable solutions to many of the problems hospitals currently face regarding food purchasing that can be widely applied to most systems.

While Group Purchasing Organizations represent a powerful force in the food supply chain, they simply do not currently have the economic incentive to actively pursue local and sustainable food purchasing strategies. For systemic change to occur, hospitals and hospital systems need to be the champions for this cause, pushing not only themselves, but also their GPOs, distributors, and vendors towards a more holistic approach to food purchasing. The following recommendations outline steps that hospitals can take within their four walls as well as outside of them, that will further the institutionalization of healthy food in healthcare.

Recommendations for hospitals

It is important that internal operations be well suited for sustainable food purchasing before hospitals can act as an effective advocate for change. There are a

number of infrastructural, staffing, and policy related advances that can aid in a hospital's ability to effectively and affordably purchase healthy food for their patients, staff and surrounding community.

1) Build support across all hospital departments

The most important aspect of advancing healthy food purchasing is to make sure that all departments of the hospital can be involved in advocating, planning, and procurement. While some sustainability initiatives in hospitals have been implemented from the top down, employees outside of the food service departments or the top administrator's office initiated a significant number of projects in this study. Boulder Community Hospital may not have had a recycling program if the hospital had not let two nurses bring the case to the hospital CEO. Doctors and nurses who are trained to promote health and wellness are in a unique position to give insightful ideas to foodservice personnel; most of the time however, these departments have no contact with one another.

a) Pressure administrators

Hospitals are community organizations, and therefore aim to be as responsive to community issues as possible. Whether you are a nurse, a purchasing official, or a community member, making a formal request to hospital administrators is an effective way to actively pursue an issue. CEO of Boulder Community Hospital David Gehant cited a lack of community and organizational pressure as a reason for the hospital's slow progression towards a healthier food program.¹²⁶ It is easy to view the CEO as the only person in the hospital who can make effective decisions, but it is important to remember

that administrators respond to continued and organized political pressure: if it becomes a large enough issue at the hospital, administrators will have no choice but to act.

b) Start an internal Food Committee

Establishing an inter-departmental food committee is an excellent way to connect disparate hospital departments and increase awareness around the organization. The committee will be able to go beyond vague requests for “more healthy food,” and set realistic goals and parameters for sustainable food procurement. Because there will be representatives from a number of hospital departments, each will be able to offer insights on how a certain purchasing decision may effect hospital operations. For example, when Kai Abelkis joined the GPO Novation’s sustainability committee in 2003, the organization was able to adopt a unified sustainability policy that has dictated its internal and external operations since.¹²⁷

c) Develop a cohesive food purchasing policy

The most salient barrier to healthy food purchasing for the majority of hospitals examined in this study is a lack of a comprehensive food purchasing policy. For example, since 1995 Boulder Community Hospital has had a “sustainability mission statement” that has set parameters for their daily operations over the past 17 years. The list of achievements and goals has spawned recycling programs, the installation of the biggest commercial photovoltaic array in Colorado, waste reduction campaigns, and an educated and knowledgeable workforce. On the other hand, the mission does not cover food purchasing, and as a result, the “culture of sustainability” surrounding BCH has failed to include food as a vital aspect.

According to Kulick, developing a succinct food purchasing policy not only increases awareness within the organization, it:¹²⁸

- Sends a message to producers, suppliers, and distributors about the growing need for more locally and sustainably sourced food
- Institutionalizes purchasing preferences so the effort is not lost when a key advocate leaves
- Shows a high level of commitment to preventative healthcare
- Establishes criteria for future contract language, RFIs, and RFPs

Appendix A provides a sample purchasing policy created by the organization Health Care Without Harm regarding the purchasing of meat and seafood without hormones or antibiotics. The sample policy standardizes the values of the hospital, and makes clear to suppliers that they must respect these values.¹²⁹

2) Hire, train, and educate foodservice representatives

If a hospital is serious about increasing its local and sustainable food percentage, hiring skilled and knowledgeable directors is an important step. In the interviews done by Kendra Klein, as well as case studies around the country, a common theme of mature purchasing programs is that they have a dedicated member at the helm guiding hospital decisions regarding food. At Dominican Hospital in Santa Cruz, California, the arrival of chef Dean Bussiere as the Director of Foodservice has ushered in completely redesigned patient menus sourced either from nearby farms or from the hospital's onsite garden.¹³⁰

In cases where the foodservice department is outsourced to a third party operator, hiring a director that is focused on community health can be a challenge. Unlike restaurants, foodservice directors at hospitals may only be trained for institutional settings where cost is the main concern. Hiring new employees can be expensive, so hospitals should consider this only when restructuring the foodservice department, or when an

employee leaves. With this in mind, hospitals should try when possible to hire foodservice directors with a strong commitment to community health.

Restructuring staff can be expensive and time consuming, especially if there is already a well-developed food purchasing program. In these cases, employee education is critical in advancing the healthy food movement. When switching to more local, whole, and unprocessed foods, one of the largest concerns among foodservice workers is the staff's lack of training and knowledge about food preparation.¹³¹

In their study of Northern California Hospitals, Sachs and Feenstra found that line chefs are frequently treated as unskilled workers, and often times are not given much, if any, nutrition education.¹³² Hospitals should hold training sessions for staff where they can learn the benefits of locally and sustainably produced foods. While these training programs can be initially expensive to put on, some institutions, like the Ventura Unified School District in Los Angeles, have found that buying bulk products and using their workforce more efficiently has actually saved them money. The Ventura Unified School District organized training sessions for their foodservice workers so they would know how to handle and prepare the whole fruits and vegetables the district was receiving from their participation in the Farm-to-School program. The school district, which serves 7,000 meals a day, initially did not think they could handle the increased workload, but has since successfully switched to scratch cooking exclusively.¹³³

3) Measure, prioritize, and reform the foodservice function

Before hospitals move towards sustainable purchasing campaigns, it is important that they measure its potential benefits. By asking questions, hospitals can quantify and measure the information into useable data. Useful questions would include: how much

staff would need to be added to start using whole vegetables instead of processed ones?; what are the added costs of moving from one national distributor to five local distributors?; and, what are the added benefits, monetarily and otherwise, of switching to organic fruits? Hospitals run on tight budgets, and administrators will want concrete data that conclusively demonstrates how a new system is better than the old one.

Hospitals conduct economic analysis for every department to figure out how best to reduce costs. One of the most prominent arguments against sustainably produced foods is there is no quantifiable data on its benefits. Hospitals may find that using GPO contracted bananas saves them \$10,000 over the course of a year, but there is no information on how much they would save on health insurance costs by providing organic fruit. Qualitative data on employee moral, patient satisfaction, and community involvement needs to be taken into account in hospital decision-making.

Another effective form of measurement is to develop a GPO and distributor “score-sheet” that measures how well a GPO is upholding a hospital’s values. Many such score-sheets are available for economic criteria such as the one developed by Dennis Kaldor et al. in their essay entitled “Evaluating Group Purchasing Organizations.”¹³⁴ However, few have been developed regarding sustainability, especially surrounding food. The advocacy organization Practice Green Health recently released a set of “standardized environmental questions” for medical products that hospitals can demand from their GPOs.¹³⁵ Similar standardized questions must be developed for food purchasing in order to inform suppliers, encourage collaboration, and accelerate demand.

a) Prioritize

In their analysis of food purchasing in Northern California hospitals, Elizabeth Sachs and Gail Feenstra raise an important point: “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.”¹³⁶ As shown by initiatives such as Kaiser Permanente’s Small Hospitals Big Ideas campaign, hospitals can use the foodservice function as a medium for community involvement, employee education, and health and wellness campaigns. Viewing foodservice in this way allows hospitals to market themselves to the surrounding community.

“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.”
-Sachs and Feenstra

b) Reform

Elmhurst Memorial Hospital in Illinois recently opened the Wildflower Café, an organic eatery on hospital grounds that serves local and sustainably produced foods.¹³⁷ Aside from providing healthier options to patients and staff, the café has actually started drawing new patrons to the hospital to eat. Initiatives like this prove that as communities begin to value healthy food, hospitals can turn sustainable purchasing into a marketable aspect of operations, even gaining revenue from patrons they would not have drawn otherwise.

4) Communicate directly with GPOs and distributors

Group Purchasing Organizations and distributors would not exist without the hospital systems they serve; it is not hospitals that are beholden to these organizations but

the other way around. However, innovative ventures like the healthy food movement are not profitable for these organizations unless a large percent of their members start to demand them. In 2011, food and nutrition services accounted for just two percent of the GPO Novation's total spending.¹³⁸ Without a push from hospitals, these organizations have little incentive to reform their food purchasing practices. There are a number of ways for hospitals to demand measurable steps toward sustainability from their distributors that will begin to institutionalize healthy food in health care:

- a) Clearly state sustainability criteria in requests for proposals, and requests for information. Formal requests show the hospital is committed to these values and expects the same from their supply partners. BCH has begun to do this with their suppliers, successfully reducing a significant amount of waste caused by products like excess packaging, and surgical blue-wrap.¹³⁹
- b) Start an inter-hospital food committee that aggregates regional demand for healthy food, and collectively brings this information to regional distributors. Reasonably, hospitals have more power as a group than standing alone. Linking with other hospital systems encourages the communication of best practices and increases political power. The Healthier Hospitals Initiative is doing just this; linking regional hospitals together to facilitate benchmarking of best practices around the country.¹⁴⁰ St. Joseph's Health System in California has teamed up with other regional hospitals to ask Sysco Foodservice to contract with more sustainable suppliers.¹⁴¹
- c) Join your GPOs sustainability committee. If it does not have one, see if you can start one. Not only will this make a statement to your GPO, working with them to find a viable solution is a concrete way to advocate for your hospital's value system.

Sustainability Coordinator at BCH, Kai Abelkis's help on the Novation's green committee has successfully created contracts with sustainable suppliers, and increased Novation's internal sustainability.¹⁴² Food committees have potential to work in much the same fashion.

Recommendations for the Food Supply Chain

Clearly, hospital systems are just one piece of a very complex food chain. Even if every hospital in the country had the resources, time, and money necessary to implement a local purchasing campaign, many institutional barriers would still remain. GPOs, distributors, vendors, farmers, and advocacy organizations all play a part in getting food to hospital cafeterias, and if institutional reform is to occur, all aspects of the supply chain need to be in concert with one another.

As will be discussed in this section, Regional Food Hubs (RFHs) represent a reorientation of the supply chain such that all aspects of health, community involvement, cost, and sustainability are taken into account. The recommendations below outline organizations and efforts currently adopting holistic values presented by movements such as RFHs.

Regional Food Hubs

It is this "systems thinking" approach to food purchasing that allows an idea like RFH to become a reality. Applied appropriately, RFHs have the potential to support local agriculture, provide institutions with affordable and healthy food, and increase efficiencies in the food chain. RFH are still a nascent concept, and the health care industry can play a crucial role in their development.

The Regional Food Hub Advisory Council in Los Angeles is in the process of meeting with supply chain stakeholders to assess the demand for local food and to develop purchasing and distribution strategies for participating institutions. As organizations that require vast amounts of food purchasing, hospitals need to be a part of the RFH conversation. The section below outlines the benefits that Regional Food Hubs can bring to each stakeholder in the health care food supply chain, and recommends ways that Boulder Community Hospital can be involved in building support for a RFH in Colorado.

RFHs and Farmers

Farmers have the most to gain by implementing this system, which is designed to increase access to small and midsized farms. As noted in the findings section, there are a number of barriers preventing small farmers from accessing institutional buyers that would allow them to grow their business, and make the profession of farming a viable option for young adults.

Funded through a small membership fee, farmers would pay to be a part of the Regional Food Hub Network. Through this online system, farmers gain

“Without a RFH small farms do not have the level of efficiency to be able to play in the institutional market.”

-Sharon Cech, Regional Food Hub Advisory Council

access to a bevy of services and information they may previously not have had the money or time to afford. One of the most significant problems with small farmers is that they often do not have accurate and up-to-date information on their product supply, choices, and inventory, especially in electronic format. In a RFH system, farmers would be paired with a food hub representative who would help them update information, and educate

them on how best to market their products. This would greatly reduce the information inefficiencies currently stopping institutional buyers from committing to buying local products.

The RFH system also allows each farmer to have a “farmer profile” that would highlight the beneficial aspects of their farm, specify any sustainability measures, and outline the farmer’s value system, making it easy to pair farmers with likeminded organizations. Through the online hub system, farmers gain access to increased market visibility and new marketing tools that would be inaccessible without the RFH framework.

Perhaps most importantly, the online system would host a set of information on items such as food safety certifications, instructing the farmer which ones are necessary in order to sell to certain institutional buyers. Farmers looking to sell to health care organizations would have easy access to this information, and could plan accordingly, thus greatly reducing inefficiencies caused by lack of information, and communication of needs between the buyers and suppliers.

RFHs and Health Care Systems

Hospitals use organizations like GPOs because they make purchasing cheap and easy. They take the guesswork out of sourcing, and they ensure that all hospital products will be acquired on time at a reasonable price. A RFH has the potential to address these issues without compromising the integrity of the supply chain. By pooling together local growers on an online marketplace, the food hub allows hospitals to purchase in bulk from multiple suppliers at once through one simple transaction.

If a hospital in Los Angeles needs an order of 500 pounds of romaine lettuce, for example, they log onto the food hub marketplace with which they have a company profile that outlines their values and purchasing policies. The hub then matches the hospital with as many local growers as are needed to fill the demand. If a hospital has a certain relationship with a specific farm or farmer, they can enter this information into the system and it will take it into account when sourcing the product.

When the hospital gets the receipt for their transaction, all of the information about growing conditions, in addition to where it was packaged, washed, and distributed is available, making it much easier to track food from farm to table. This information will also make it easier to market hospital food because, unlike national distributor catalogues which currently give little to no information about food's growing conditions or sustainability measures, the hospital will have a great deal of data with which they can measure, and decide whether their purchasing decisions have benefitted the hospital.

In summary, RFH systems provide hospitals with increased access to local markets with stable supply conditions, transparent operations, and nutritional, labor, and sustainability information. Therefore, it strengthens the local economy while supporting fair labor, and increasing the market for healthy and sustainable food in the greater food supply chain.

RFHs, Distributors, and GPOs

In the current supply chain structure, distributors and purchasing organizations have little incentive to actively pursue small regional vendors. Small farms often do not have enough supply to meet large-scale demand, and may not have up-to-date information about available supply. Regional Food Hubs pool regional vendors together

in the same way the GPOs pool hospitals together, achieving lower price points through economies of scale, the difference being that everything would be sourced locally from farms with transparent community values.

If a distributor such as US Foods were to contract with a regional food hub, they would easily be able to keep up-to-date information on their member catalogues.

Hospitals looking for vendor contracts would be able to see where food was grown, under what conditions, and using what sustainability measures, making small farms appeal to large-scale distributors because more and more hospitals are asking for this information, and a Regional Food Hub would be an important systematic solution to the growing need for healthy, locally sourced food.

Regional Food Hubs and Boulder Community Hospital

Given the lack of organized infrastructure for small local farms in Colorado, BCH has an opportunity to be a champion for the RFH model. Similar to Abelkis's belief in the need for a leader to guide sustainability decisions in the hospital, Sharon Cech of the Occidental College Urban and Environmental Institute and member of the Regional Food Hub Advisor Council stresses the importance of an organizer when it comes to RFHs. With a concerted effort, BCH is in a position to be this organizer.

The first steps when thinking about creating a RFH is to ensure that there is enough demand for local produce, and to guarantee that creating one will not infringe upon local markets that may already be in place.¹⁴³ The organization Real Food Colorado has begun to organize regional farms in relation to Farm-to-School programs in the Boulder/Denver area.¹⁴⁴ By giving their input, BCH can play a valuable role increasing the viability of a Colorado RFH, opening the market to other large buying

institutions like hospitals. There are important steps that BCH could take in order to achieve this goal.

1) Establish a clear and comprehensive sustainable purchasing policy for the hospital.

As mentioned earlier, BCH can then take this policy to potential suppliers to ensure that the food they are getting meets the standards set by the hospital. Creating a clear policy would also establish BCH as a leader in the Colorado market offering subsequent hospitals the opportunity to follow their lead, and propagate demand for healthy food.

2) Meet with regional hospitals to assess the demand for local food. The Denver Children's hospital, National Jewish Hospital, and Kaiser Permanente facilities have all created sustainable purchasing programs, in part due to BCHs early efforts. Kai Abelkis, along with the foodservice director should meet with representatives from these hospitals to review best practices, and aggregate data on local farms.

3) In conjunction with the advocacy group Real Food Colorado, BCH should start gathering data on food system stakeholders. Because Abelkis sits on the Novation green team, he can bring this information to the GPO. This would involve the company in the conversation, as Novation could be an important asset in the regional food hub model. As a purchasing organization, they have the available time and resources to work with regional food hub advocates, but only if there is demand from their member hospitals.

4) Work with involved stakeholders to create a preliminary document that outlines the need for healthy food, why it is important to community organizations, and the steps that have already been taken to achieve these goals. Producing a document will give

the surrounding community tangible progress to build off of as programs like these mature.

The Future of Regional Food Hubs

While iterations of RFHs are being tried in cities such as Los Angeles, Sharon Cech noted that they are still a nascent concept. More information needs to be collected in each specific potential region from all food system stakeholders before the concept can move forward. Funded by small transaction fees and membership dues, the food hub system seeks to standardize the procurement, distribution, and processing of local and healthy foods, but is dependent on commitment from farmers, institutional buyers, and distributors. The Regional Food Hub Advisory Council in Los Angeles for example, includes nine members representing different components of the supply chain and they are collaborating to find viable, cost effective ways to make the food hub a reality.

As more organizations and farmers sign on to the project, it becomes more affordable, provides a greater variety of options, and becomes more institutionalized into the food supply chain. It is crucial that hospitals, as active community members, participate in conversations regarding RFHs and give valuable input as to how it may adversely effect or benefit health care organizations as the concept moves forward.

Conclusion

Health care systems are in a unique position in the food supply chain to act both as advocates for change, and as catalysts for this change. The nature of their profession, and the alignment of the ideals of the sustainability movement with healthcare make the industry a perfect candidate to model a new system of healthy eating habits. The industry's large purchasing presence means that vendors, GPOs, and distributors have to

listen to its input, and in turn reform their practices to meet the needs of hospitals. In the past, the health care industry played a key role in social and political campaigns against things like tobacco, lead paint, and mercury. Today's issue is food, and it is important that health care is committed to values of health, fair labor, sustainability, and locality.

This study has sought to contribute to the growing literature surrounding health care food purchasing practices, and advance the discussion of how it can best be implemented systematically. Moving forward, more information must be collected on the feasibility of local and sustainable purchasing in geographically specific regions, processing and distribution infrastructure, and cost effectiveness. As the literature on the topic grows, it is critical that all components of the food supply chain voice their opinions and give valuable data on how changes to the system would affect their organization, farm, business, or hospital system.

Appendix A:

Sample Procurement Policy: Purchasing Meat, Poultry, Dairy and Seafood Produced Without Inappropriate Antibiotic Use¹⁴⁵

I. POLICY

As part of its commitment to pursue practices and policies that promote a healthier environment for patients and the community at large, [INSTITUTION] will work to purchase meat, poultry, dairy and seafood (including finfish and shellfish) products produced with reduced amounts of antibiotics.

II. PURPOSE

To provide guidelines for purchasing meat, poultry and seafood products produced with reduced amounts of antibiotics. Health-care facilities purchase significant quantities of foodstuffs. Buying meat, poultry, dairy and seafood products produced with fewer antibiotics therefore helps expand the market demand for these products, stimulating production and ultimately driving prices down. The declining effectiveness of antibiotics in treating bacterial infections is a worsening crisis in human medicine. Overuse of these precious medicines drives this decline. Overuse occurs not only in human medicine, but also in agriculture. By buying foodstuffs produced with fewer antibiotics, hospitals therefore may indirectly help to keep the antibiotics used by healthcare providers more effective.

By some estimates, the majority of antibiotics now used in the United States are given as feed additives to livestock and poultry for "nontherapeutic" purposes – i.e. not to treat sick animals, but rather to promote slightly faster growth and to compensate for crowded, stressful, and unsanitary conditions in which animals are often raised. Most of these antibiotics are medically important, i.e., are identical to those used in human medicine or belong to classes of compounds that are used in human medicine. (As of March 2004, the following antibiotics are both approved for nontherapeutic use in animals and fall within classes of compounds approved for use in human medicine: penicillins, tetracyclines, macrolides, streptogramins, aminoglycosides, sulfonamides, bacitracin, and lincomycin (an analogue of clindamycin).)

The American Medical Association, American Public Health Association, and dozens of other health organizations have called for an end to the routine use of medically important antibiotics as nontherapeutic feed additives, while the European Union has banned use of medically important antibiotics as growth promoters and has committed to terminate use of remaining antibiotic growth promoters in 2006. In addition, the U.S. Food and Drug Administration (FDA) has proposed to ban use of fluoroquinolones for use in treating sick poultry based on a determination that such use contributes to

development of fluoroquinolone-resistant *Campylobacter*, a leading cause of severe food-

borne illness.

For both clinical and practical reasons, these Guidelines focus on initially reducing nontherapeutic use of medically important antibiotics, and on reducing use of fluoroquinolones in poultry consistent with the FDA proposal. From a clinical perspective, medically important antibiotics are of greatest concern because resistance to them has particular impact on patient care. However, other antibiotics are also of concern, for two reasons: first, their use in animals may indirectly increase resistance to human antibiotics (because many resistance genes are linked) and second, antibiotics not currently approved for use in human medicine may one day become so (as happened in the late 1990s when a modified version of the feed additive virginiamycin was approved for human use as dalbapristin/quinupristin).

From a practical perspective, the Guidelines focus on nontherapeutic antibiotics because doing so provides an opportunity to reduce agricultural use of antibiotics substantially and quickly: nontherapeutics account for the vast majority of agricultural antibiotic use, and can be eliminated without adverse impacts by improving animal-husbandry practices. Finally, supplies of meats and poultry raised without routine nontherapeutic use of medically important antibiotics are increasingly available; in particular, such chicken is already widely available. Likewise, most major chicken producers have already announced that they have discontinued use of fluoroquinolones in chicken produced for human consumption.

III. GUIDELINES

A. Responsibilities

To minimize inappropriate use of antibiotics, personnel involved in food purchasing decisions will use these guidelines when making food-purchasing decisions involving meat, poultry, dairy, and seafood.

B. Purchasing Guidelines

In complying with this policy, [INSTITUTION] will strive to make purchases as follows

1. [Institution] will regularly and consistently inform suppliers of meat, poultry, dairy, and seafood products of their preference for purchasing products that have been produced without nontherapeutic use of antibiotics, particularly those that belong to classes of compounds approved for use in human medicine.

2. Opportunities will be prioritized as follows:

- a. Unless these products are not available to the institution because of local supply constraints, chicken will only be purchased if it has been produced:

- i. without the non-therapeutic use of antibiotics that belong to classes of compounds approved for use in human medicine; and

ii. without any use of fluoroquinolone antibiotics.

b. Poultry other than chicken will receive a purchase preference if it has been produced without the non-therapeutic use of antibiotics, particularly those that belong to classes of compounds approved for use in human medicine.

c. Meat, dairy, and seafood products will receive a purchase preference if they have been produced without the non-therapeutic use of antibiotics, particularly those that belong to classes of compounds approved for use in human medicine.

3. [INSTITUTION] will also encourage its meat, poultry, dairy, and seafood suppliers to minimize use of antibiotics, particularly those that belong to classes of compounds approved for use in human medicine, to the extent practicable for therapy and non-routine prophylaxis.

Definitions:

Antibiotic: This policy uses the term antibiotic to have the same meaning as the more technical term "antimicrobial." Antimicrobials are substances of natural or synthetic origin that kill or inhibit the growth or multiplication of bacteria (adapted from American Veterinary Medical Association Judicious Therapeutic Use of Antimicrobials, <http://www.avma.org/scienact/jtua/jtua98.asp>). However, the term antibiotic does not include ionophores or other compounds from classes of drugs not used in human medicine that are used as coccidiostats.

Nontherapeutic: This policy uses the term "nontherapeutic" to mean administration of antibiotics to an animal or groups of animals for purposes other than disease therapy or non-routine disease prevention as defined herein.

Disease Therapy: The use of antibiotics, under the direction of a certified veterinarian, for the specific purpose of treating animals with an established disease or illness. Once the treatment is over and the animal is cured, the application of the antibiotic ceases. (Adapted from the World Veterinary Association's Prudent Use of Antibiotics Global Basic Principles and Canadian Committee on Antibiotic Resistance, <http://www.ccar-ccra.org/agriglos-e.htm>.)

Non-routine Disease Prevention: The use of antibiotics where it can be shown that a particular disease is present on the premises or is likely to occur because of a specific, non-customary situation. (Adapted from WHO Global Principles for the Containment of Antimicrobial Resistance in Animals Intended for Food, http://www.who.int/emc/diseases/zoo/who_global_principles.html)

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