Menu of Change

Healthy Food in Health Care

A 2008 Survey of Healthy Food in Health Care Pledge Hospitals

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Health Care Without Harm

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Health Care Without Harm is a global coalition of more than 473 organizations in 52 countries working to assure that the health care sector is no longer a source of harm to human health or the environment.

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FOREWORD

Until recently it was rare to find health care professionals who expressed any public interest in our food system, let alone in the agriculture that produced our food. Certainly no one from the health community expressed any interest in being involved in farm policy, like the Farm Bill. All that has changed. Health care professionals and nutritionists as well as conservationists and environmentalists have all been at the table proposing changes in the 2007 Farm Bill because they saw themselves having a critical role to play in shaping our food and health policies. And they now recognize that how we farm can have a profound effect on the health of the environment and our own health. In fact they ended up calling the 2007 Farm Bill the *Food* and Farm Bill. So it is such a delight to see this report which clearly points out these connections, together with some practical suggestions for improving our farm, food and health policies that could benefit all Americans. In fact, given the suggestions in this report, I would not be surprised if, by 2012, we will be calling it the Farm, Food and *Health* Bill.

Of course this report is not just about changes we could make in public policy. It is also about how we can all become involved in crafting a new farm, food, and health culture that many believe could improve the health of our entire biotic community, including the human species.

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Introduction

In 2005, Health Care Without Harm (HCWH) was approached by several of its health care partners interested in collaborating on healthcare food. Clearly, our industrialized food system, the way in which we produce and distribute food, is failing to protect public health. Poor nutrition is a risk factor for four of the six leading causes of death in the United States—heart disease, stroke, diabetes and cancer. Nutrition-related chronic diseases are placing new demands on an already overburdened health care system, and taking their toll on human productivity and quality of life.

This industrialized food system favors the production of animal products and highly-refined, calorie-dense foods, rather than fresh fruits and vegetables, whole grains, and other high fiber foods important for health. It is a food system misaligned with the US dietary guidelines. Moreover, hidden behind these nutritional imbalances and inextricably linked to them, is a food system largely reliant on methods of production and distribution that negatively affect human and environmental health.

> "Another [way for hospitals and health care facilities to become "greener"] is by serving fresh, local, or organic foods to patients, staff members, and visitors. Hospitals should buy meat and poultry raised without non-therapeutic antibiotics, use milk produced without recombinant bovine growth hormone, and replace unhealthy snacks found in many vending machines with healthy choices. Hosting farmers markets, either on hospital grounds or nearby, is another appealing option."
>
> Ron Davis, M.D., AMA President
> AMA eVoice • April 24, 2008

As we began work together, a consistent theme began to emerge. The voice of the individual hospital calling for more nutritious, local sustainable foods was lost in the din of the business as usual supply chain. The Healthy Food in Health Care Pledge was introduced as a means to aggregate this clarion call for change and to demonstrate to society at large healthcare's willingness and commitment to build models for change. We are now witnessing this change. As of May 2008, over 122 hospitals have signed the Pledge. We are witnessing hospitals that have removed their deep fryers, others that have established farmers' markets, and others that are buying fresh, local, sustainably grown produce to serve to their patients, staff and visitors. In the apparent absence of legislation protecting our antibiotic toolkit, hospitals have begun sourcing meat and poultry produced without the use of unnecessary antibiotics. Others are providing milk and other dairy products produced without the use of the hormone rBGH (recombinant bovine growth hormone), banned for use in almost all other industrialized countries. The elimination of processed foods and the addition of whole grains are now evident on some hospitals' menus. Across the country, health care organizations are implementing policies and programs that demonstrate a commitment to "First, do no harm" by treating food and its production and distribution as preventive medicine that protects the health of patients, staff, and local and global communities.

This first report provides a snapshot of what these leaders have accomplished. Their stories and data were submitted voluntarily. Unfortunately, size limitations precluded us from profiling all the facilities submitting stories. Those profiled were selected based on criteria which included geographic representation, hospital size, and unique programs. Not all hospitals implementing these favorable changes decided to submit a profile.

Without question, other hospitals and health systems that have not yet taken the Pledge are making similarly important changes in food service operations. And as we learn more about their work, we will highlight it and share their stories and progress. This report is designed to draw attention to and praise those that have made a public commitment by signing the Pledge and to recognize the strength of a shared voice. They are demonstrating leadership by sending an important signal to the marketplace and policy makers about the link between food, food production, and health; they are building and realizing models for us all.

Please join us in acknowledging them for their leadership.

Healthy Food in Health Care Pledge

The Healthy Food in Health Care Pledge is a framework that outlines steps to be taken by the health care industry to improve the health of patients, communities and the global environment.

As responsible providers of health care services, we are committed to the health of our patients, our staff and the local and global community. We are aware that food production and distribution methods can have adverse impacts on public environmental health. As a result, we recognize that for the consumers who eat it, the workers who produce it, and the ecosystems that sustain us, healthy food must be defined not only by nutritional quality, but equally by a food system that is economically viable, environmentally sustainable, and supportive of human dignity and justice. We are committed to the goal of providing local, nutritious and sustainable food.

Specifically, we are committed to the following healthy food in health care measures for our institution. We pledge to:

Increase our offering of fruit and vegetables, nutritionally dense and minimally processed, unrefined foods and reduce unhealthy (trans- and saturated) fats and sweetened foods.

Implement a stepwise program to identify and adopt sustainable food procurement. Begin where fewer barriers exist and immediate steps can be taken, such as the adoption of rBGH free milk, fair trade coffee, or selections of organic and/or local fresh produce in the cafeteria.

Work with local farmers, community-based organizations and food suppliers to increase the availability of fresh, locally-produced food.

Encourage our vendors and/or food management companies to supply us with food that is produced in systems that, among other attributes, eliminate the use of toxic pesticides, prohibit the use of hormones and non-therapeutic antibiotics, support farmer and farm worker health and welfare, and use ecologically protective and restorative agriculture.

Communicate to our Group Purchasing Organizations our interest in foods whose source and production practices (i.e. protect biodiversity, antibiotic and hormone use, local, pesticide use, etc) are identified, so that we may have informed consent and choice about the foods we purchase.

Develop a program to promote and source from producers and processors which uphold the dignity of family, farmers, workers and their communities and support sustainable and humane agriculture systems.

Educate and communicate within our system and with our patients and community about our nutritious, socially just, and ecologically sustainable healthy food practices and procedures.

Minimize and beneficially reuse food waste and support the use of food packaging and products that are ecologically protective.

Report annually on implementation of this Pledge.

Signed _____ Date _____

Health Care Without Harm

Healthy Food in Health Care Pledge Signers

As of May 12, 2008

A total of 122 facilities have signed the Pledge. They are:

Bartels Lutheran Retirement Community - IA
Fletcher Allen Health Care - VT
Good Shepherd Medical Center - OR
St. Luke's Hospital - MN
Hackensack University Medical Center - NJ
Oregon Health and Science University Hospital - OR
Fairview Hospital - MA
Cooley Dickinson Hospital - MA
Sinai Hospital - MD
Baystate Health - MA
Advocate Lutheran General Hospital - IL
The Center for Discovery - NY
Spaulding Rehabilitation Hospital - MA
Littleton Regional Hospital - NH
Swedish Covenant Hospital - IL
Carroll Hospital Center - MD
Holy Redeemer Health System - PA
Thomas Jefferson University Hospital - PA
Abington Memorial Hospital - PA
Children's Hospitals and Clinics of Minnesota - MN
Children's Hospital and Regional Medical Center - WA
Parkview Adventist Medical Center - ME
Berkshire Medical Center - MA
Anne Arundel Medical Center - MD
Michael R. Myers Hospital - IA
Overlake Hospital Medical Center - WA
Children's Hospital of Pittsburgh of UPMC - PA
University of Washington Medical Center - WA
Regis Care Center - NY
Cooper University Hospital - NJ
Northeastern Vermont Regional Hospital - VT
Dartmouth-Hitchcock Medical Center - NH
New Milford Hospital - CT
Cancer Treatment Center of America at Midwestern Regional Medical Center – IL
Northwest Hospital & Medical Center – WA
Drake Center – OH
Mercy Medical Center – MD
Bronson Methodist Hospital – MI

Mid Coast Health Services

Mid Coast Hospital - ME
Mid Coast Senior Health Center - ME
Thornton Oaks Retirement Community - ME

MultiCare Health System

Tacoma General Hospital - WA
Mary Bridge Children's Hospital - WA
Allenmore Hospital - WA
Covington Outpatient Center – WA

Christiana Care Health Systems

Christiana Hospital - DE
Wilmington Hospital - DE

Covenant Health Systems

St. Joseph Manor Health Care - MA
Youville Hospital & Rehabilitation Center - MA
Youville House - MA
Mary Immaculate Health/Care Services - MA
Youville Place Assisted Living Residence - MA
Maristhill Nursing & Rehabilitation Center - MA
St. Mary Health Care Center - MA
St. Joseph Healthcare Nashua - NH
St. Andre Health Care Facility - ME
St. Mary's Villa - PA
Sisters of Charity Health System - MA, including:
St. Mary's Regional Medical Center
St. Marguerite d'Youville Pavilion
Marcotte Congregate Housing

Aurora Health Care

Aurora St. Luke's Medical Center - WI
Aurora Sinai Medical Center - WI
Aurora West Allis Medical Center - WI
Aurora St. Luke's South Shore - WI
Aurora BayCare Medical Center- WI
Aurora Lakeland Medical Center- WI
Aurora Medical Center, Hartford - WI
Aurora Medical Center, Two Rivers - WI
Aurora Medical Center, OshKosh - WI
Aurora Medical Center, Kenosha - WI
Aurora Memorial Hospital of Burlington - WI
Aurora Psychiatric Hospital - WI
Aurora Sheboygan Memorial Medical Center - WI

St. Joseph Health System, Sonoma County

Santa Rosa Memorial Hospital (3 campuses) - CA
Petaluma Valley Hospital - CA

John Muir Health System

John Muir Health, Concord Campus - CA
John Muir Health, Walnut Creek Campus - CA
John Muir Behavioral Health Center - CA

Cascade Healthcare Community

St. Charles Medical Center - Bend, OR
St. Charles - Redmond, OR

Catholic Healthcare West System Facilities

Arroyo Grande Community Hospital - CA
Bakersfield Memorial Hospital - CA
Barrow Neurological Institute - AZ
CA Hospital Medical Center - CA
Chandler Regional Hospital - AZ
Community Hospital of San Bernardino - CA
Dominican Hospital - CA
French Hospital Medical Center - CA
Glendale Memorial Hospital and Health Center - CA
Marian Medical Center - CA
Mark Twain St. Joseph's Hospital - CA
Mercy General Hospital - CA
Mercy Gilbert Medical Center - AZ
Mercy Hospital of Folsom - CA
Mercy Hospitals of Bakersfield - CA
Mercy Medical Center Merced Community Campus - CA
Mercy Medical Center Merced Dominican Campus - CA
Mercy Medical Center Mt. Shasta - CA
Mercy Medical Center Redding - CA
Mercy San Juan Medical Center - CA
Mercy Southwest Hospital - CA
Methodist Hospital of Sacramento - CA
Northridge Hospital Medical Center - CA
Oak Valley District Hospital - CA
Saint Francis Memorial Hospital - CA
San Gabriel Valley Medical Center - CA
Sequoia Hospital - CA
Sierra NV Memorial Hospital - CA
St. Bernardine Medical Center - CA
St. Elizabeth Community Hospital - CA
St. John's Pleasant Valley Hospital - CA
St. John's Regional Medical Center - CA
St. Joseph's Behavioral Health Center - CA
St. Joseph's Hospital and Medical Center - AZ
St. Joseph's Medical Center - CA
St. Mary Medical Center - CA
St. Rose Dominican Hospitals - Rose de Lima Campus - NV
St. Rose Dominican Hospitals - San Martín Campus - NV
St. Rose Dominican Hospitals - Siena Campus - NV
Woodland Healthcare - CA

Key Considerations

Industrialized Agriculture and Health

- Our industrialized food system, the way in which we produce and distribute food, is failing to protect public health. Poor nutrition is a risk factor for four of the six leading causes of death in the United States—heart disease, stroke, diabetes and cancer. Nutrition-related chronic diseases are placing new demands on an already overburdened health care system, and taking their toll on human productivity and quality of life. A wide variety of less appreciated health crises resulting from current industrialized agricultural practices are equally at play.
- The World Health Organization (WHO) has stated that, "There is clear evidence of the human health consequences due to resistant organisms resulting from non-human usage of antimicrobials" (WHO, 2003). Yet, it is estimated that more than 70 percent of all antibiotics consumed in the United States are used as feed additives for poultry, swine, and beef cattle for nontherapeutic purposes (Mellon, Benbrook, and Benbrook, 2001).
- The US Institute of Medicine/National Academies of Science states, "Clearly, a decrease in antimicrobial use in human medicine alone will have little effect on the current situation. Substantial efforts must be made to decrease inappropriate overuse in animals and agriculture as well" (Institute of Medicine, 2003). More than 300 organizations, including the American Medical Association and American Public Health Association have advocated ending the nontherapeutic use of medically important antibiotics as feed additives.
- In 2003, the American Public Health Association (APHA) passed a resolution urging federal, state, and local governments and public health agencies to institute a "precautionary moratorium" on the construction of confined animal feedlot operations (CAFOs) because of health concerns (APHA, 2003). These included runoff, community impacts, air-quality concerns, worker health and safety, and issues of antibiotic resistance.
- Pesticide contamination begins in the womb, where metabolites to common pesticides have been found in meconium (Whyatt and Barr, 2001) and in fetal cord blood (Houlihan et al., 2005). Pesticides and their metabolites are now routinely part of the human body burden, the load of chemical contamination carried by human populations.
- Concentrations of atrazine, alachlor, and broadleaf pesticide 2,4-D in rainwater have been reported to exceed the safe drinking-water standards (Gilliom, Alley, and Gurtz, 1995). A 1994 study estimated that 14.1 million Americans drank water contaminated with the pesticides atrazine, cyanazine, simazine, alachlor, and metolachlor (Wiles et al, 1994).
- A comprehensive literature review of pesticides by the Ontario College of Family Physicians has determined that, "The results of the systematic review do not help indicate which pesticides are particularly harmful. Exposure to all the commonly used pesticides … has shown positive associations with adverse health effects." The literature does not support the concept that some pesticides are safer than others; it simply points to different health effects with different latency periods for the different classes (Sanborn et al, 2004).
- According to the US Environmental Protection Agency (EPA), approximately 70 percent of the 8.7 billion broiler chickens produced annually are fed arsenic (Wallinga, 2006).
- The distance from farm to market has increased about 20 percent in the last two decades, with much food traveling between 2,500 and 4,000 miles before it reaches the plate (Pirog et al, 2001).

Visions of a Healthy Food System

- If we are looking at food production per acre in tons, calories, or dollars, the polycrop is far more productive for all farm sizes (US Department of Agriculture 2002).
- Studies have demonstrated that farms that rely on fewer inputs (petroleum-derived fertilizer, pesticides, etc.) are more efficient in use of land, nutrients, and energy and cost less to maintain than chemical-intensive monocultures (Halweil 2004).
- A recent study revealed detectable metabolites of organophosphate pesticide (OP) residues in children eating a conventional diet. Once these children were placed on an organic diet, there were no detectable metabolites. Placed back on a conventional diet, the metabolites were again detected. (Lu et al. 2006)
- In the World Health Organization review of Denmark's elimination of nontherapeutic antibiotic use, a dramatic decrease in resistant bacteria was observed in animals, meat, and humans. In addition, eliminating the routine use of antibiotics in livestock reduced human health risks without significantly harming animal health or farmers' incomes (Wegener 2003).
- A comprehensive review of scientific studies demonstrates higher nutrient levels in organic produce (Benbrook et al, 2008).
- Grass-fed cattle almost always produce steak and ground beef lower in total fat than conventional beef and tend to result in steak with higher levels of omega-3 fatty acids and other beneficial nutrients. Pasture-raised dairy cows similarly tend to produce milk with higher levels of essential fatty acids. (Clancy 2006)

- A study by the Leopold Center has demonstrated that, by eating five half-cup servings of local vegetables daily, Iowans would not only fulfill the requirements of the food pyramid, but would provide a net economic stimulus of more than 4,000 jobs to the State of Iowa (Swenson 2006).

Public Health and Health Care Call for Change

- A 2007 American Public Health Association policy urges support of environmentally sound agricultural practices to reduce contamination, resource use, climate change, in addition to improved food labeling for country-of-origin and genetic modification, and a ban on nontherapeutic antimicrobial and arsenic use. It recognizes the urgency of transforming our food system to promote environmental sustainability, improve nutritional health, and ensure social justice.
- A 2007 California Medical Association resolution encourages hospitals to adopt policies and implement practices that increase the purchasing and serving of food that promotes health and prevents disease. Included are meat and dairy products produced without nontherapeutic antibiotics, meats derived from non-CAFO sources such as free-range animals, food grown on non-industrial agricultural operations such as small and medium-sized local farms, and food grown according to organic or other methods that emphasize renewable resources, ecological diversity, and fair labor practices. It calls on physicians and other health care professionals to serve as models and educators by participating in and promoting a healthier and more sustainable food system.
- As of March 2008, over 119 hospitals have signed The Healthy Food in Health Care Pledge, recognizing that for the consumers who eat it, the workers who produce it and the ecosystems that sustain us, healthy food must be defined not only by nutritional quality, but equally by a food system that is economically viable, environmentally sustainable, and supportive of human dignity and justice. They commit to the goal of providing local, nutritious and sustainable food.

Healthy Food in Health Care Pledge Survey Results

- Facilities range in size from 25-900 bed facilities and represent both hospitals and long term care facilities. Geographically, pledged facilities represent facilities stretching across nineteen states from California, the Northwest through to the Midwest, Mid-Atlantic and Northeast. These facilities serve from 40 to 2000 patient meals per day and from 70 to 7000 meals daily to staff.
- 72% reported that they are purchasing local and/or third party certified produce for their food service operations. Seventy-seven percent of these facilities reported that they purchase 10-40% of their produce annually from these sources.
- 81% are purchasing rBGH-free milk. Ninety percent of those reporting purchase 80-100% of their fluid milk from rBGH-free sources. Twenty-eight percent plan to increase their purchases of rBGH-free milk.
- 25% purchase rBGH-free yogurt. Forty-eight percent reported that they buy 60-100% of their yogurt rBGH-free and 36% plan to begin or increase purchases of rBGH-free yogurt.
- 44% of the facilities report that they are purchasing meat produced without the use of hormones or antibiotics, and another 47% have plans to do so.
- 39% are purchasing sustainably harvested seafood, and another 33% intend to do so. Some facilities are testing or serving fish known to be low in mercury.
- 36% of respondents reporting that they are purchasing third party certified eggs, primarily certified cage-free eggs and that 46% purchase eggs almost exclusively from these sources.
- 67% of respondents reported that they are purchasing third party certified coffee. For the purposes of this survey, we recognized four third party certification systems. These included Bird Friendly, Organic, Fair Trade and Rain Forest Alliance certifications. Of those reporting, 42% reported that 80-100% of the coffee that they purchase falls under these criteria.
- Where disposables are needed, 50% of facilities have implemented a partial transition to biobased food serviceware for disposable needs and another 47% have future plans to make the transition to biobased, from petroleum derived disposable products. Of those using biobased food service ware, 83% of the facilities are using compostable products, yet only 22% of those facilities are composting these items.
- 100% of facilities reported that they have increased fresh fruit and vegetable offerings, reducing use of processed foods (77%) and reducing products with high fructose corn syrup (43%). 87% of facilities are increasing their whole grain menu offerings by adding organic and whole grain cereals, breakfast bars, and whole-wheat pizza.
- 25% of facilities surveyed run a farmers' market or farm stand on their campus. Community supported agriculture (CSA) distributions are another way for staff and/or community members to have access to farm fresh produce. 25% of responding facilities currently host a CSA site, while 53% of respondents are introducing either a farmers market or CSA program.
- Of the 60% of facilities that are composting food waste, 34% compost pre-consumer kitchen waste, 20% compost post-consumer patient tray and 17% compost cafeteria food waste. The remaining facilities surveyed have future plans to begin a compost program.

Background

Over the last sixty years or so, we have witnessed a tremendous shift in the nature of farming. Today, agricultural practices follow an industrial model, divorced from the feedback loops regulating natural ecological processes and systems. We have seen a shift from animal husbandry to meat production, diverse farms to highly specialized monocultures, pasture-based livestock management to confinement-based feedlot operations. This industrial agricultural experiment has fundamentally interrupted natural ecological processes and disrupted ecological health. The result is a food system with a predominance of large single farms producing single commodities requiring intensive inputs of pesticides, artificial hormones, antibiotics, water, electricity and petroleum based fertilizers. Moreover, our society has been transformed from one in which most people ate whole local foods to a one that eats highly processed and packaged foods transported over great distances.

We are now experiencing the strains of this experiment throughout our healthcare system. While obesity is one health crisis, a wide variety of hidden health crises resulting from current industrialized agricultural practices are equally at play. These impacts to human health from current food production and distribution methods are both direct and indirect, and include impacts to socio-economic health, exposure to toxic pesticides, air and water pollution, high sugar and high fat foods.

In the fall of 2007, the American Public Health Association passed a policy statement "Towards a Healthy, Sustainable Food System" (APHA, 2007) which clearly laid out some of these public health concerns. They included, but were not limited to:

Antibiotic Resistance

One of the most important advances in treating infectious disease has been the development of antibiotics. Alarmingly, these compounds are now threatened by a global crisis of antibiotic resistance. Currently, 60,000 Americans die annually from resistant infections (Centers for Disease Control, 2004). The Congressional Office of Technology Assessment calculated that, as of 1995, resistance by just six types of bacteria increased hospital treatment costs by $1.3 billion annually (Shea, Florini, and Barlam, 2001). It is estimated that $30 billion is spent on the cumulative effects of antimicrobial resistance each year, including multiple-drug regimens, extra hospital days, additional medical care, and lost productivity (American College of Physicians, 1999). The US Institute of Medicine/National Academies of Science states, "Clearly, a decrease in antimicrobial use in human medicine alone will have little effect on the current situation. Substantial efforts must be made to decrease inappropriate overuse in animals and agriculture as well" (Institute of Medicine, 2003). Yet, it is estimated that more than 70 percent of all antibiotics consumed in the United States are used as feed additives for poultry, swine, and beef cattle for nontherapeutic purposes (Mellon, Benbrook, and Benbrook, 2001). That is, they are used to promote growth and to compensate for diseases caused by poor animal husbandry, the very conditions provided by Confined Animal Feedlot Operations (CAFOs). There is a strong consensus that agricultural usage of antibiotics contributes to antibiotic resistance in humans. The World Health Organization (WHO) has stated that, "There is clear evidence of the human health consequences due to resistant organisms resulting from non-human usage of antimicrobials" (WHO, 2003) and the Infectious Diseases Society of America states that a "perfect storm is blowing in the field of infectious diseases" (Infectious Diseases Society of America, 2004). More than 300 organizations, including the American Medical Association and American Public Health Association have advocated ending the nontherapeutic use of medically important antibiotics as feed additives. While some producers have begun to reduce their use, this is difficult to independently verify, as there are no regulations that track usage. Moreover, because as much as 75 percent of an antibiotic may pass undigested through an animal, its waste can contain antibiotics as well as antibiotic-resistant bacteria and their genes (Campagnolo and Rubin, 1998). Furthermore, antibiotic-resistant bacteria can move off the production facilities into communities via food, water, direct animal contact, and other pathways.

Water Pollution: Animal Wastes and Nutrients

The concentration and relocation of animal production to the Southeast and Western regions have created extreme manure problems in those areas, and the loss of pastures, and crop rotations has depleted soil fertility in the Midwest. In response, petroleum-derived nitrogen and other fertilizers are often added to soils, frequently in excess amounts. Poor nitrogen retention by corn and soy rotation results in contaminated surface waters that migrate to the Gulf of Mexico, where nitrogen creates massive annual algae blooms. These blooms metabolize all available oxygen, leaving a 20,000 square kilometer dead zone in the Gulf (Rabalais, Turner, and Scavia, 2002). Thirteen percent of domestic drinking-water wells in nine Midwestern states had nitrates exceeding the safe drinking-water level of 10 mg/l (Henderson 1998). According to the EPA, hog, chicken, and cattle waste has polluted 35,000 miles of rivers in twenty-two states and contaminated groundwater in seventeen states (Environmental Protection Agency and US Department of Agriculture, 1998). Runoff includes hormones, antibiotics, arsenic and other additives. According to the US Environmental Protection Agency (EPA), approximately 70 percent of the 8.7 billion broiler chickens produced annually are fed arse-

nic (Wallinga, 2006). The animal density within CAFOs creates tremendous logistical concerns. So much animal waste is created that local soils have little capacity to absorb it all, creating water-quality and drinking water effects. In 2002, both the Michigan Medical Society and the Canadian Medical Association called for moratoria on new CAFO construction (Michigan State Medical Society, 2002). In 2003, the American Public Health Association (APHA) passed a resolution urging federal, state, and local governments and public health agencies to institute a "precautionary moratorium" on the construction of CAFOs because of health concerns (APHA, 2003). These included runoff, community impacts, air-quality concerns, worker health and safety, and issues of antibiotic resistance.

Pesticides

Over half a century ago, farmers raised crops without synthetic pesticides. Today, the entire web of life is contaminated. From a human perspective, this contamination begins in the womb, where metabolites to common pesticides have been found in meconium (Whyatt and Barr, 2001) and in fetal umbilical cord blood (Whyatt et al 2004). Human infants are literally bathed in pesticides prior to birth as they go through intricate developmental processes and continue into life through exposure to pesticide contaminated air, water, and food. Pesticides and their metabolites are now routinely part of the human body burden, the load of chemical contamination carried by human populations (Environmental Defense, 2005).

Environmental exposures are widespread. For example, concentrations of atrazine, alachlor, and broadleaf pesticide 2,4-D in rainwater have been reported to exceed the safe drinking-water standards (Gilliom, Alley, and Gurtz, 1995). A 1994 study estimated that 14.1 million Americans drank water contaminated with the pesticides atrazine, cyanazine, simazine, alachlor, and metolachlor (Wiles et al, 1994). Extensive herbicide use in agricultural areas (accounting for about 70 percent of total national use of pesticides) has resulted in widespread contamination of herbicides in agricultural streams and shallow ground water. Farm-worker and community exposures are another concern. Use of agricultural chemicals known to cause cancer in California increased 127 percent from 1991 to 1998. Farm workers have a 59 percent to 70 percent greater risk of cancer (Reeves, Katten, and Guzman, 2002). Genetic engineering promoted to farmers as a means to reduce pesticide applications is in fact having the opposite effect. It is estimated that since the adoption of GE crops in 1996, we have observed a 122 million pound increase in pesticide use in the US and use of even more toxic pesticides (Benbrook, 2004).

The Ontario College of Family Physicians has completed a literature review of pesticides and determined that, "The results of the systematic review do not help indicate which pesticides are particularly harmful. Exposure to all the commonly used pesticides … has shown positive associations with adverse health effects." The literature does not support the concept that some pesticides are safer than others; it simply points to different health effects with different latency periods for the different classes (Sanborn et al, 2004). It urges a focus on reducing exposure to all pesticides, rather than targeting specific pesticides or classes. It also clearly points out that the severity of pesticide-related illness necessitates prevention, which is much more proactive and powerful than attempting to treat exposure. They encourage family doctors to learn about high-risk groups (women during childbearing years, occupationally exposed patients, children) and to then teach methods to reduce exposures. Finally, they suggest that physicians come together to convey health concerns to politicians who make regulatory decisions relative to pesticide use and public health (Sanborn et al, 2004).

Energy Intensity

Actors in the transformation of our food system have included technological improvements, infrastructure investment, and until recently, cheap fuel costs. From 1993 to 2001, we experienced increases in food export and import of 25 percent and 57 percent respectively (Mamen et al, 2004). The distance from farm to market has increased about 20 percent in the last two decades, with food traveling between 2,500 and 4,000 miles before it reaches the plate (Pirog et al, 2001). Food in the United Kingdom travels 50 percent farther on average than it did two decades ago (Jones, 2001), and trucks moving food account for 40 percent of all road freight. These are not for niche products, but include food staples such as apples, cheese, and garlic. In the US, the average prepared meal includes ingredients produced in at least five other countries (Pirog, 2003). As one would imagine, on-farm fossil-fuel use includes machinery such as tractors and refrigeration. But the largest fossil-fuel source is the manufacture and transport of nitrogen containing fertilizers (Soil Conservation Council of Canada, 2001). Much of the food system's fossil fuel energy goes into manufacturing fertilizers and pesticides (Pementel, 2006). It has been calculated that the use of imported ingredients for a basic diet can increase energy use and greenhouse gas emissions by 400 percent (Carlsson-Kanyama, 1998). While food will still need to be transported to urban areas, clearly a decrease in quantity and quality of food-miles emissions is imperative. Importantly, 75 percent of consumers prefer that their food be domestically grown (Wimberley et al, 2003). Meat production, promoted in the US through agricultural policies, is a particularly powerful contributor; the Food and Agriculture Organization of the United Nations (UN FAO) estimates that approximately 18% of all greenhouse gas emissions worldwide come from livestock production (Steinfeld H et al, 2006). The issue of climate change is complex, but one thing that we can say with relative certainty regarding agriculture and climate change is that at least in the near term, climate change will bring us more unstable climates—more droughts and more floods. Such climate instability will make specialized mono-cultures very vulnerable. When you have 92% of all cultivated land in just two crops (corn and soybeans) as is the case in many areas of the country, you need climates that ar consistently favorable to those two crops to maintain productivity.

Towards a Healthy Food System

No matter how we try to distance our food production from natural processes, in the end, the foods we produce are dependent upon delicate players in a complex system that has evolved over eons of time. Pollinators, nitrogen-fixing bacteria, microbes, temperature and light variations, etc., all play a role in intricate biological processes. For approximately the last sixty years, we have experimented with an attempt to impose an industrialized approach to agricultural production and the larger food system in which it is contained—and the system has responded with antibiotic-resistant bacteria, morbidity and mortality from nutrition-related diseases, water and air pollution, and food marketing. From a public health perspective, our current system has failed miserably.

The comprehensive APHA policy urged support of environmentally sound agricultural practices to reduce contamination, resource use, climate change, in addition to improved food labeling for country-of-origin and genetic modification, and a ban on nontherapeutic antimicrobial and arsenic use. It recognized the urgency of transforming our food system to promote environmental sustainability, improve nutritional health, and ensure social justice.

In 2007, the California Medical Association endorsed a similar resolution. It encourages hospitals to adopt policies and implement practices that increase the purchasing and serving of food that promotes health and prevents disease. Included are meat and dairy products produced without non-therapeutic antibiotics, meats derived from non-CAFO sources such as free-range animals, food grown on non-industrial agricultural operations such as small and medium-sized local farms, and food grown according to organic or other methods that emphasize renewable resources, ecological diversity, and fair labor practices. Finally, it calls on physicians and other health care professionals to serve as models and educators by participating in and promoting a healthier and more sustainable food system.

We need to build on what we know works, and try new approaches for food production and distribution in which health is a primary focus. Such a system will be preventive in nature and provide the capacity for self-renewal. By recognizing the linkages between human and global ecology, we can envision a food system that works to support health.

Visions of a Healthy Food System

- By defining production of a particular type of crop per acre, large farms with monocultures will necessarily be more "productive." If we are looking at food production per acre in tons, calories, or dollars, the polycrop is far more productive for all farm sizes (US Department of Agriculture 2002).
- Studies have demonstrated that farms that rely on fewer inputs (petroleum-derived fertilizer, pesticides, etc.) are more efficient in use of land, nutrients, and energy and cost less to maintain than chemical-intensive monocultures (Halweil 2004).
- A variety of studies from around the world reveal that organic farming (farming without synthetic inputs) can produce as much as and sometimes much more than conventional farms (Halweil 2006).
- A recent study revealed detectable metabolites of organophosphate pesticide (OP) residues in children eating a conventional diet. Once these children were placed on an organic diet, there were no detectable metabolites. Placed back on a conventional diet, the metabolites were again detected. (Lu et al. 2006)
- A World Health Organization review of Denmark's elimination of nontherapeutic antibiotic use, a dramatic decrease in resistant bacteria was observed in animals, meat, and humans. In addition, eliminating the routine use of antibiotics in livestock reduced human health risks without significantly harming animal health or farmers' incomes (Wegener 2003).
- Grass-fed cattle almost always produce steak and ground beef lower in total fat than conventional beef and tend to result in steak with higher levels of omega-3 fatty acids and other beneficial nutrients. Pasture-raised dairy cows similarly tend to produce milk with higher levels of essential fatty acids. (Clancy 2006)
- A study by the Leopold Center has demonstrated that, by eating five half-cup servings of local vegetables daily, Iowans would not only fulfill the requirements of the food pyramid, but would provide a net economic stimulus of more than 4,000 jobs to the State of Iowa (Swenson 2006).

The Healthy Food in Health Care Pledge - Survey Findings

In mid-February, all of the 112 Pledged facilities (individually or through their system contact) were sent a letter inviting them to take part in our online survey and to submit a facility story for this report. Ultimately, 94% of those invited decided to participate. In our request, we indicated that any quantitative data would be aggregated and that we would select representative facility "stories," as potential report profiles. In addition, we asked facilities to share with us any photographs of their initiatives. We then used the submitted stories and information from recent HCWH roundtables and conferences to flesh out and illustrate the aggregated quantitative survey results. Except for one question on compostability of biobased food serviceware, all respondants answered all the questions. Sixty-seven percent of the 105 represented facilities submitted a "story." Unfortunately, size limitations precluded us from profiling all the facilities submitting stories. Those profiled were selected based on subjective criteria which included geographic representation, hospital size, and unique programs.

As the Healthy Food in Health Care Pledge is a living document, the list of Pledged facilities has grown since we solicited participation. As of May 12, 2008, 122 facilities have signed the Food Pledge. The survey results represent data collected from the 105 of our 112 pledged facilities (or through their systems). Illustrative text may include information from hospitals that signed the pledge after the survey was closed.

Facility Information

Facilities involved in the Healthy Food in Health Care Survey range in size from 25-900 bed facilities and represent both hospitals and long term care facilities. Geographically, pledged facilities represent facilities stretching across nineteen states from California, the Northwest through to the Midwest, Mid-Atlantic and Northeast. These facilities serve from 40 to 2000 patient meals per day and from 70 to 7000 meals daily to staff.

Sustainable Procurement

One of biggest hurdles facing food service directors interested in sourcing nutritious, local and sustainable foods is the limited disclosure about food production practices, ingredients and food source from their suppliers and within their product catalogues. For example, it is currently very difficult to tell from a product catalogue if a particular brand of chicken was fed arsenic. When information is available from the supply chain, it is typically as a result of direct facility, local producer relationship, or through identification of "third party certified" eco-labels and those label claims allowed by USDA or FDA. To simplify data collection the following sustainable criteria were used:

1. Third party certified ecolabels: USDA certified Organic, Food Alliance Certified, Rainforest Alliance Certified, Protected Harvest, Fair Trade Certified, Bird Friendly, Certified Humane Raised and Handled, Animal Welfare Approved, Salmon Safe, Marine Stewardship Council.

2. Label claims allowed by USDA or FDA: "Raised without antibiotics" or "No antibiotics administered" (poultry and meat products); "Raised without added hormones" or "No hormones added" (beef and lamb only); "No genetically engineered ingredients" (products made from corn, soy, canola or their derivatives); "rBGH-free", "rBST-free", "Grass-fed" (products from ruminants such as beef cattle, dairy cattle, lamb).

Sustainable and Seasonal Produce

Purchasing locally-grown produce, ideally directly from producers, is one of the key strategies in moving toward a sustainable hospital food program. Local purchasing helps support local economies, builds a higher level of trust regarding product quality and food safety, and often results in fresher, healthier food as compared to meals produced with foods that have traveled thousands of miles to reach the plate. It is often the first place facilities choose to start implementing change.

Across the country, a majority of facilities (72%) reported that they are purchasing local and/or third party certified produce for their food service operations. Seventy-seven percent of these facilities reported that they purchase 10-40% of their produce annually from these sources, and

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33% have plans to expand their sustainable purchasing in this area. St. Luke's Hospital in Duluth, MN, purchases local produce for their salad bar and cafeteria from a nearby producer, and provides organic fruit in the cafeteria. Last year, their local salad bar saved money over what they would have paid through their distributor. Cancer Centers of America, Overbrook, Washington University Medical Center, and Adventist General are examples of facilities serving a range of organic choices. North Eastern Vermont Medical Center purchases locally grown organic vegetables in the summer. Bartels Lutheran Retirement Community purchases 25% locally, and freezes foods for the winter. Hackensack University Medical Center has included fresh produce on all menus, and highlights the organic foods on patient menus with a butterfly symbol. Parkview Adventist Medical Center serves only 100% local, organic food September through November in its café. Mid Coast Hospital is seeking to focus on purchasing those fruits or vegetables not on the "dirty dozen" list.

Local availability of foods is often dictated by the season. For example, in many growing regions, berries are plentiful in the summer months, while apples are harvested in the fall. An important strategy to increase local foods in menus is the adoption of seasonal menus. At Good Shepherd, chefs plan menus based on the season, leaving room for variability (for example using the term "seasonal vegetables" on their menu) and find creative ways to use ingredients that are available at that particular time of year. Almost two-thirds of the facilities (63%) reported that they have now added seasonal menu items to support the incorporation of locally produced, seasonally available foods. Another quarter (26%) reported future plans to do so. In Fall 2007, Anne Arundel Medical Center featured a healthier daily menu item in their cafeteria using seasonal foods and noticed a significant increase in sales. Oregon Health Sciences University has a farmers market on-site and plans to implement seasonal and special recipes this year to utilize even more market produce.

Fluid Milk

Dairy is another component of food procurement in which facilities are making some impressive changes. Most facilities are taking the first step by switching to dairies that have eliminated the use of the hormone rBGH. While milk produced without rBGH will not by itself make a dairy sustainable, in many respects it is a perfect first step. In general, milk produced without rBGH is no more expensive than conventional milk. Most industrialized countries prohibit the use of rBGH because of animal welfare and human health concerns; a variety of surveys have also concluded that consumers want milk produced without this hormone. Hospitals and other medical care facilities around the country are taking this information to heart. Of the institutions replying to the HCWH survey, 81% are purchasing rBGH-free milk. Twenty-eight percent plan to increase their purchases of rBGH-free milk.

Medical centers all over the country are moving in this direction, including hospitals in Minnesota, Pennsylvania, Maine, Oregon, and California. Aurora Health Care in Wisconsin, which operates 17 facilities, went rBGH-free as of Feb. 1, 2008. Cooper University Hospital in Camden, NJ, introduced rBGH-free milk on March 20, 2008. Land O'Lakes, a large mid-west dairy, recently informed St. Luke's Hospital in Duluth, MN, that all its milk and cream is now produced without rBGH, after the hospital had switched to an alternative source of rBGH-free dairy approximately one year ago.

Yogurt and Other Dairy Products

Many hospitals that go rBGH-free start with fluid milk and then take steps to convert other dairy products to rBGH-free, often moving to yogurt, since there are a number of rBGH-free yogurts available nationwide. Of those institutions reporting, 25% are already purchasing rBGH-free yogurt. Forty-eight percent reported that they buy 60-100% of their yogurt rBGH-free and 36% plan to begin or increase purchases of rBGH-free yogurt. Fifty-three percent are purchasing other rBGH-free dairy products, and 33% plan to increase these. Fletcher Allen Health Care has been able to source an rBGH free mozzarella cheese.

Advocate Lutheran General Hospital in Chicago has gone one step further by serving organic yogurt. Organic dairy products, by definition rBGH-free, also require that no pesticides have been used for feed and no antibiotics administered to the cows.

rBGH and Sustainable Dairy Production

Recombinant Bovine Growth Hormone, (rBGH or rBST[1]), is a synthetic hormone given to dairy cows to increase milk production. In many ways, it is a perfect metaphor for a dairy production system completely divorced from health. Introduced into dairy production in the US in 1993, rBGH is a genetically engineered animal drug injected into cows to increase their milk production. Though approved by the Food and Drug Administration, rBGH has adverse impacts on animal health, and human health concerns about the use of rBGH remain unresolved. Most industrialized nations of the world do not allow the use of rBGH in dairy production based primarily on animal and human health concerns. These include Canada, Australia, New Zealand, Japan, and all 25 nations of the European Union. To make dairy production ecologically sustainable and economically viable, there is much more that needs to be changed than the elimination of rBGH from production practices. Yet, it is an important first step in the necessary ecological reforms to dairy production.

Meat and Poultry

With the intensive use of antibiotics in meat and poultry production, it should be no surprise that the healthcare community is shifting their purchasing away from production practices that promote antibiotic resistance. One method of addressing these issues is to work with a local farmer whose methods of production are transparent or from a source that provides information about how animals were raised. In the survey, 44% of respondents reported that they are purchasing meat produced without the use of hormones or antibiotics, and another 47% have plans to do so. Minnesota based St. Luke's Hospital is purchasing bison raised on a farm 15 miles from their facility. Vermont's Fletcher Allen and Swedish Covenant in Chicago are other examples of facilities purchasing locally raised grass-fed beef for some or all of their red meat purchases. Carroll Hospital Center in Maryland purchases local beef produced without hormones or the routine use of antibiotics. Similarly, Mid Coast Hospital has recently switched to a local beef producer who raises beef without hormone or antibiotics. Good Shepherd Medical Center purchases certain cuts of locally raised, grass-fed USDA inspected beef and, in a unique partnership with the producer, is able to make remaining cuts available to their staff.

Hormones are prohibited for use in poultry production, yet label claims of "no hormones used" are still used to suggest that these products are thus healthier. Healthcare is starting to change their purchasing of poultry products. Forty-two percent of the hospitals are purchasing poultry raised without antibiotics and arsenic, and another 56% have plans to implement these purchasing practices.

Seafood

Fish is another healthier choice that facilities are adding to their menus. The challenge many hospitals face is in developing menus that protect those fish species that are over-harvested, or that protect sensitive populations such as children and women of child bearing age from mercury contamination. Mercury is a problem in those fish highest on the food chain, such as tuna and swordfish. Thirty-nine percent are purchasing sustainably harvested seafood, and another 33% intend to do so. Appropriate for its patient population, Children's Hospital of Pittsburgh serves only seafood known to be low in mercury. Overbrook Hospital provides fish that is sustainably harvested and tested for mercury and PCBs through an outside supplier.

Eggs

In the spring of 2007, Chicago's Swedish Covenant Hospital became the nation's first hospital to formally announce an exclusively cage-free egg policy. The facility serves approximately 13,000 eggs annually. "Our hospital is focused on providing compassionate health care, and moving away from cage eggs is a good step in furthering that mission," stated Maria Simmons, manager of Patient Food Services for Swedish Covenant Hospital.

The trend in healthcare is expanding, with 36% of respondents reporting that they are purchasing third party certified eggs and that 46% purchase eggs almost exclusively from these sources. Included in the list of pledged hospitals purchasing cage free eggs is the University of Children's Hospital at the University of Pittsburgh Medical Center, and New Jersey's Cooper University Hospital, which on March 20th introduced a "spring menu" that included cage free eggs. Over 33% of respondents said they had future plans to introduce cage-free eggs.

Battery-Cage Eggs and Health

Most eggs produced in the United States come from industrialized factory farms confining hundreds of thousands—if not millions—of laying hens in overcrowded cages. About 95% of the nearly 280 million laying hens in the United States are confined in barren, tiny battery cages so restrictive that birds can't even spread their wings. Due to animal welfare concerns, countries such as Germany, Switzerland, Sweden, and Austria have banned battery cages. The entire European Union is phasing out their use by 2012. While cage-free does not necessarily mean free ranging, most cage-free hens, unlike their caged counterparts, are able to walk, spread their wings, dust bathe, perch, and lay eggs in a nest. Though cage-free hens often don't have outdoor access and are still raised in flocks of thousands, their ability to engage in these natural behaviors is an important improvement. As healthcare leaders, we have a duty to ensure that we build a society that cultivates a sustainable and compassionate world for future generations. By sourcing eggs from more humane sources, we're expanding our circle of health concern to the environment in which we live.

Coffee

Certified coffee was in wide use through the hospitals surveyed. In fact, 67% of respondents reported that they are purchasing third party certified coffee. For the purposes of this survey, we recognized four third party certification systems. These included Bird Friendly, Organic, Fair Trade and Rain Forest Alliance certifications. Forty-two percent

Cerrato Family and Fair Trade Coffee, Nicaragua

Photo courtesy of Equal Exchange

reported that 80-100% of the coffee that they purchase falls under these criteria, with another 39% having future plans to do so. OHSU, Thomas Jefferson University Hospital, Advocate Lutheran General, St. Luke's, Overlake, and Fletcher Allen Health Care are all examples of some of the hospitals providing certified coffees.

In the United Kingdom, the British Medical Association (BMA) has endorsed the work of the Fair Trade movement and has called on the BMA and all medical schools and hospitals in the United Kingdom to set an example by purchasing Fair Trade produce wherever such an alternative is offered.

While the original challenge faced by hospital interested in sourcing fair trade coffee was availability, it was replaced by another challenge. As the GPOs began to carry certified coffee, the necessary brewing equipment was not always available. (Most coffee brands are bundled with their specific equipment). Now this situation is beginning to change. For example, Catholic Healthcare West is now able to access fair trade coffee and equipment through their GPO contract.

Other Sustainable Foods

Beyond general questions around food, eggs, dairy and coffee our survey did not ask specific question on other sustainable foods. Yet, many facilities were proud to share what they were doing. A variety of hospitals are offering fair trade chocolates and organic teas. Others have switched from national bread or cookie vendors and are sourcing from local, independent bakeries for breads, granola, and/or cookies. A variety are serving organic cereals to their patients and offering them for retail in their cafeteria. Organic nuts, Food Alliance and Organic certified flours, organic canned goods, organic fruits and organic beverages are yet some of the other examples hospitals are using to support a healthy food system.

Food Service Ware: Reusables and Biobased

Disposable food service ware–plates, bowls, cups, cutlery, clamshells and other products–is widely used in hospitals. While disposable products provide some benefits to hospitals—ease of use, minimal maintenance and reduced dishwashing needs—there is a growing recognition that these products have adverse impacts on human health and the environment. In the survey, we found examples of hospitals switching from disposable to reusable dishware, and those that have decided to maintain their program of using reusables. In the survey, 78% of facilities are utilizing reusable food service ware where possible, and 19% reported they have future plans to increase use of reuseables.

Where disposables are needed, 50% of facilities have implemented a partial transition to biobased food serviceware for disposable needs and another 47% have future plans to make the transition to biobased, from petroleum derived disposable products such as Styrofoam. In those facilities that have made the switch to biobased food service ware, 83% of the facilities are using compostable products, yet only 22% of those facilities are composting these items.

Choosing Environmentally Preferable Food Service Ware

In recent years, biobased disposables have emerged as an alternative to traditional petroleum based products. These products are made in whole, or in part, from renewable materials, such as corn, potatoes, sugar cane waste and perennial grasses. The renewability of agricultural and forestry resources is a significant environmental attribute especially if they are later composted. However, there are distinct differences in how different biobased products are produced and disposed. Bio-plastic and fiber products made from conventionally grown agricultural crops can contribute to a wide range of adverse effects to the land, water and wildlife such as pesticide contamination and transfer of genes from genetically engineered crops. Or for example, a product's "Certification of compostability" —the ability of a given product to fully biodegrade in a commercial compost facility—not only increases the likelihood that a facility will accept these products, but also assures that products do not exceed limits on heavy metal content. For these and other criteria, it is important to choose biobased food service ware carefully.

Changing Menus: Nutrition and Whole Foods

The way in which hospitals and health care systems buy and provide food can help create a model for wellness at the individual, community, and national levels. Healthy food is defined not only by nutritional quality, but also by whether it is ecologically sustainable and socially responsible.

Facilities reported success in improving the health and nutrition of their offerings. One hundred percent of facilities reported that they have increased fresh fruit and vegetable offerings, reducing use of processed foods (77%) and reducing products with high fructose corn syrup (43%). Advocate Lutheran is one of the 87% of facilities that is increasing its whole grain menu offerings by adding organic and whole grain cereals, breakfast bars, and whole-wheat pizza.

University of Washington Medical Center switched all bulk oils and fats to trans-fat free products, primarily olive oil and canola oil, in June of 2005 and switched out over 400 other products. They discontinued offering deep fat fried items to their patients. This initiative had the added benefit of saving them from handling 6,400 lbs of frying oil annually. Both Northeastern Vermont Regional Hospital and Children's Hospital & Regional Medical Center are all part of the 51% of facilities that have eliminated use of trans-fats for frying purposes.

Overlake has phased in a whole grain bakery, and is moving away from processed gelatins, and other pre-packaged items. Good Shepherd found that they have been able to eliminate most canned and packaged foods such as canned soup, gravy mixes, and potato chips, thus eliminating many food additives such as MSG and gluten. Swedish Covenant features international menus, prepared in-house from scratch for Hispanic, Korean and Indian Muslim patients, and features items prepared with organic, sustainable and locally sourced ingredients. St. Joseph's is switching from frozen to fresh vegetables.

Facilities reported a number of strategies to successfully implement these nutritional changes. For example, they are increasing the availability of healthy options such as nuts and dried fruit and adding similar options at the salad bar.

It's All Good

OHSU has opened a healthy convenience store for staff and visitors called "It's All Good." Its standards align with the most sustainable practices, including preferences for organic and locally grown, GMO-free, high fructose corn syrup–free, trans-fat-free, no artificial colorings or dyes, and an emphasis on foods with high nutrient content.

In addition, they are encouraging the purchase of health options with special incentives including punch cards that provide a free fruit or yogurt with the purchase of five fruits or five yogurts, or the purchase one veggie at regular prices and receive a second at half price program, or a free fruit program for all employees. Other strategies include nutritional messaging or programs such as special days with no fried foods with "No Fry Zone" signage.

Farmers' Markets, Community Supported Agriculture

Hospital based farmers' markets and Community Supported Agriculture (CSA) programs are one way to realize a number of health goals for patients, staff and communities. By supporting farmers who raise produce more sustainably, hospitals are supporting conditions that are better for farm workers, for the consumer and the ecosystem as a whole.

Hospital Employee receives Community Supported Agriculture (CSA) Food Box

Elizabeth Sachs

Twenty-five percent of facilities surveyed run a farmers' market or farm stand on their campus. As part of their benefit package, one local grower gives employees of Children's Hospital of Pittsburgh access to the Good Apples Virtual Farmers Market, where they can shop online for everything from apples to zucchini—all fresh from Pittsburgh's historic Strip District—and they deliver presorted orders to the hospital once a week. Facilities such as Overlake Hospital and Medical Center are moving away from processed foods and exploring hosting a farm market or establishing a vegetable garden to get back to more natural production of foods. St. Joseph Health System, Sonoma County hosts an on-site farmer's market and CSA which also supplies produce for salad bar and café entrees.

CSA distributions are another way for staff and/or community members to have access to farm fresh produce. Twenty-five percent of responding facilities currently host a CSA site, while 53% of respondents, such as Sinai Hospital of Baltimore, Cooper University Hospital, Cooley Dickenson Hospital, and Aurora Health Care all plan for either a market stand or CSA in the coming year.

Hospital and Kitchen Gardens

Gardens can provide hospitals and long-term facilities with needed green spaces in addition to fresh vegetables, herbs and flowers. Thirteen percent of facilities already have on site gardens that supply fresh produce to the food service. St. Mary's Villa in Elmhurst, PA, is one of the 11% of respondents planning to add their own garden. They will be planting tomatoes, lettuce and other vegetables as a creative source for fresh produce. Abington Memorial Hospital plans to host an herb and flower garden on their grounds. St. Mary's Regional Medical Center sponsors fifteen gardens and green spaces in four diverse neighborhoods in Lewiston, Maine. Dominican Hospital has an onsite garden which supplies flowers and produce to its cafeteria while Fairview Hospital has established a program with a local school which is growing and supplying herbs for the hospital.

Sisters of Charity Lots to Gardens interns and volunteers

Healthy Vending

Vending machines provide a useful service to staff and visitors who rely on them for snacks when the cafeteria is not open. At Santa Rosa Memorial, the vending machine holds organic ready-to-microwave dinners for the night staff. In spite of their convenience, vending machines often offer high-sugar high-fat food choices. Knowing this, 47% of the facilities have added a minimum of 50% of healthy options to their vending machines, with offerings such as dried fruit, nuts, whole fruit, low-fat and low-sugar snacks, and water or juice beverages. Another 42% of facilities polled have future plans to improve the content of their vending machines. Children's Hospital of Pittsburgh has taken it one step further and eliminated vending machines altogether.

Food Waste Composting

A recent Cornell University Study reported that the United States is losing soil 10 times faster than the natural replenishment rate, reducing the ability of soil to store water and support plant growth. While composting alone will not reverse this trend, it seems illogical to bury the 12% of food waste contained with solid waste in a sealed landfill, when it could otherwise be composted and turned into beneficial organic matter. By composting organic waste, hospitals may avoid high per ton incineration or landfill disposal costs and tipping fees. Several facilities, while not specifically asked in our survey, reported food waste diversion programs like food banks. In these examples, leftover food from a cafeteria line, or canned food that is close to an expiration date is donated for use to nearby food shelves or food banks. These programs importantly support those who live without food security, but have the benefit of reducing and eliminating a future solid waste stream.

Hospitals have a variety of food waste streams, including patient food waste, cafeteria food waste and kitchen waste. Of the 60% of facilities that are composting food waste, 34% compost pre-consumer kitchen waste, 20% compost post-consumer patient trays and 17% compost cafeteria food waste. The remaining forty percent of facilities surveyed have future plans to begin a compost program. For several years, St. Luke's has been voluntarily composting food waste, currently representing about 40,000 pounds of compostable substance per year. This spring, their community will make food waste composting mandatory. Facilities can contract with waste haulers to take the organic matter to a central composting facility. At Aurora Health Care, on-site composting offers a way to utilize compost for kitchen gardens and landscaping, thereby saving on mulch, fertilizer and water costs.

Food Waste Compost and Climate Change

Nationally, food waste represents approximately 12% of total municipal solid waste. When landfilled, food waste can be a significant source of potent greenhouse gases. In modern landfills, garbage is typically enclosed in plastic liners. As a result, when land-filled food waste breaks down, it does so through anaerobic processes (without oxygen). Anaerobic degradation of food, unlike aerated compost piles, creates methane gas. Methane gas is 23 times more potent a greenhouse gas than the CO2, created through centralized compost programs. From a climate change perspective, other factors to consider with food waste include distance to the composting facility (versus landfill), differences in transport, and landfill gas collection system. The City of Portland, Oregon has calculated a net climate change reduction as a result of their food waste collection and composting program. http://www.portlandonline.com/shared/cfm/image.cfm?id=111051. Of course, there are other ecological health reasons to compost food waste. Yet, food waste diversion programs, where leftover food is donated to local food charities, and composting are important steps in minimizing a facilities carbon footprint.

Other Food Service Environmental Initiatives

Many hospitals shared how they were changing practices to reduce the quantity and toxicity of their waste. Dartmouth Hitchcock, Aurora Health Care, and Sinai Hospital of Baltimore all have found local groups that collect fryer oil, refine it and turn it into inexpensive, clean burning biodiesel, which can be used in any diesel engine. Other facilities are decreasing and reducing packaging as a means to minimize waste. Advocate Lutheran Hospital reduced their packaging waste by switching to condiments (ketchup, mustard and relish) purchased in bulk and switching to unbleached napkins. St. Luke's is using paperless patient trays saving money and reducing waste. Swedish Covenant's Green Team is contracting to recycle plastic and paper boxes, and plans to expand their recycling program in the future. Dartmouth Hitchcock and Sinai Hospital of Baltimore recycle cans, glass, and plastic bottles. Other facilities have introduced less toxic cleaners and energy efficient (Energy Star) equipment.

Elizabeth Sachs

Catholic Healthcare West System

Pat Burdullis, R.D., Supply Chain Management

CHW is a health system with 42 acute care facilities in three states. From the outset, Catholic Healthcare West has taken a system-wide approach to implementing its sustainable food goals. CHW operates under the framework of a corporate Food & Nutrition Vision statement, adopted in 2006, and echoing many of the goals articulated in the Healthy Food in Health Care Pledge. We use the vision statement to set our Food & Nutrition Sustainability goals each year.

Since creating the Vision Statement, we have implemented comprehensive changes across our system as well as at individual hospitals. As an example, during the past year, our produce contracts were awarded using "locally-sourced" as a key criterion during evaluation. Our produce vendors are also supplying merchandizing materials to promote the local farms that supply our hospitals. Fair Trade coffee is now served in numerous sites. Striving to reduce the amount of bottled water used in our facilities, we encourage returning to the old-fashioned approach: pitchers of water with glasses in our cafeterias and catered events. St. Mary's and Saint Francis hospitals in San Francisco have found that sharing the story behind these changes is one of the most effective ways to increase the visibility of their efforts. We put signs in the cafeterias of these hospitals explaining the changes, and next to filtered water drinking fountains (along with biodegradable cups).

One of the key benefits of instituting sustainability measures as a system is that our large size and substantial buying power allows us to positively influence manufacturing and distribution practices. We work with our vendors and manufactures to reduce the amount of cardboard and plastic being used in packaging our products. For example, our produce vendors strive to deliver the produce in reusable bins instead of cardboard containers. Facilities are also being asked to reduce the amount of Styrofoam in use, with a number of hospitals moving to paper and/or biodegradable products.

Dominican Hospital Onsite Garden

Mercy Hospital in Bakersfield, California, St. Rose San Martin in Las Vegas, Nevada and St. Joseph's in Phoenix, Arizona have made tremendous effort to use biodegradable serviceware. We could not have implemented these changes successfully without the educational materials we post in key locations accessed by both patients and staff. As early implementers, these hospitals have also had to rely on their creativity to deal with the cost increase of biodegradable products. The most compelling and straightforward solution can probably be found at St. Joseph's in Phoenix, where customers pay the direct cost of the take-out containers as they pay for their meals. Overall, we are seeing a lot of success with these changes despite the increased cost. And because we purchase on such a large scale, we are able to work with the vendors to supply sustainable products at more and more competitive prices over time.

Dominican Hospital in Santa Cruz, CA has been an important pioneer within CHW in the realm of sustainable food programs. Since the arrival of chef Dean Bussiere in 2005, the patient menus have been completely redesigned to feature flavorful and healthy recipes whose ingredients are often locally sourced from nearby farms – or, in some cases, from the hospital's onsite garden. Stemming from the positive changes brought by the food service program at Dominican, a number of other CHW sites now operate on-site gardens and composting programs.

CHW continuously works to more effectively and substantively implement our Food and Nutrition Vision Statement. We are now in the process of exploring a pilot program to purchase beef produced without the use of antibiotics. We communicate regularly with our Food & Nutrition Managers to review our programs and share best practices throughout the CHW system and coordinate closely with our GPO to expand contracts for environmentally friendly products.

Swedish Covenant Hospital, Illinois

Maria Simmons, RD, LDN, Manager of Patient Food Services

At Swedish Covenant Hospital, we believe in helping patients heal not only through our medical expertise, but also through the "extras" that can help them feel better overall. As we all know, food can be a great source of comfort, and wholesome, healthy foods play a vital role in patient recovery.

As the manager of patient food services and a dietitian, I became very interested in the health benefits of organic foods when awareness about it began to rise. I attended several seminars and worked with a local chef and partner of Swedish Covenant Hospital, to learn how to apply organics in the institutional setting such as the hospital.

Fortunately, Swedish Covenant Hospital's support of a healing, patient-centered environment through its affiliation with Planetree helped boost support of bringing organics to the hospital. The hospital's Nutrition Action Team as well as administration proudly supported the initiative, viewing it as part of a broad program aimed at providing a home-like atmosphere during the hospital stay. It's also a natural extension of our cultural foods menu which we implemented more than a decade ago to meet the needs of our diverse community.

The organic and cultural dishes are made fresh daily with items rotating throughout the week. While items such as grass-fed beef and organic eggs may be a little more expensive than their counterparts, we feel it's worth it to provide the health benefits of these organic and natural options. In addition, I've learned how to develop flexible menus using seasonal produce, which often elicit prices comparable to non-organic, non-seasonal produce.

Grass-fed beef. We serve pure grass-fed beef rather than conventional beef in most patient and visitor meals. This program began in June 2006 with a partnership with a local 100% grass-fed beef program. Grass-fed beef contains less total and saturated fat when compared to grain-fed beef. It is also higher in certain omega-3 fatty acids, thought to prevent heart disease, and does not contain any growth hormones or unnatural supplements.

Organic foods. Almost all of the fruits, vegetables, dairy products, grains and beef we serve to patients and visitors at Swedish Covenant Hospital are now organic. Thanks to our partnerships with a local food distributors, what began with organic fruits and vegetables has now grown to include organic eggs, dairy products, flour for bread baking and more. Soon, we'll be able to offer some meals that are completely organic.

Locally grown foods. Within the past couple years, we have been able to source locally grown organic food for our patients and visitors. Buying locally grown foods not only means we are supporting local farmers and the local economy, but it also cuts down on fossil fuel use and greenhouse gas emissions caused by transportation of food.

Our Nutrition Action Team consists of staff from nursing, community relations, business development and food services so that multiple perspectives are viewed when considering new food initiatives. We've received a positive patient response as well as unexpected media coverage including the American Dietetic Association's magazine and multiple newspaper articles. I've spoken at numerous events nationally in an effort to raise awareness and advocate for other health care institutions to implement similar organic food programs.

We are proud of our work with organic foods so far and are especially pleased in knowing that we are helping our patients eat the healthiest food they can. Moving forward, we hope to provide more local produce through family farms, increase organic offerings and identify more earth-friendly replacements for plates and silverware.

St. Joseph's Health System, California

Linda Hansen, Director of Nutrition Services

Inspired by FoodMed 2005, I applied for a $20,000 "Healthy Food Philosophy Grant" to institute sustainable food procurement pilot projects at our Sonoma County hospitals cafeterias in 2006-7. Our initial efforts centered around a general improvement of the quality of food served in our hospitals by transitioning from frozen to fresh vegetables, increasing the number of salads, fruits, vegetables, whole grains, and vegetarian choices on cafeteria and catering menus, and eliminating trans-fat cooking oils.

The overwhelmingly positive response was incredibly inspiring and allowed us to garner support from Administration to direct changes in the patient meal service the following year. In fact, we received an $85,000 budget increase for 2008 to continue to expand our sustainable food purchasing program.

Our facilities are lucky to be located in one of California's prime agricultural regions, offering access to a broad range of local vendors. We are proud to report that we now host an on-site farmers' market, we provide CSA boxes to hospital staff, and we serve produce from local farmers of the Sonoma County Growers Exchange in our salad bars and café entrees. Clover Stornetta Farms, a local dairy cooperative, provides us with milk produced without rBGH.

One key aspect of what has allowed us to accomplish as much as we have in such a short time is that MedAssets, our GPO, has a contract with United Natural Foods which allows us access to a much wider range of sustainably produced foods and products through our GPO contract. This relationship has been pivotal in creating another important staff benefit we have been able to offer. We now provide "Amy's" Natural, Organic products via vending machines for Night Shift staff, when they do not have access to the cafeteria food. We have also advocated Sysco Foodservice, our primary food supplier, to offer better availability and pricing for local, sustainably produced foods and biodegradable dinnerware, and will continue to do this with allies at other facilities that purchase from SYSCO in the coming year.

We are committed to integrating sustainability initiatives at our facility that connect to food service operations but have broader environmental and health benefits. To this end, we are eliminating Styrofoam products from cafeteria and patient trays, relying instead on compostable and recyclable serviceware. Our used oil is transformed into bio-diesel through a partnership with Yokayo Biofuels, Inc. This year, we began recycling all trash in the kitchen, and will be piloting a composting program with our waste management company. And most of our nursing units now have water machines with filters, reducing the use of bottled water.

Oregon Health and Science University, Oregon

Steven Hiatt, Director Food Service

For the past 4 years, Oregon Health and Science University Food and Nutrition Services in Portland, Oregon has been reworking its organizational structure, purchasing policies and programs to support and include sustainable food systems.

We have developed relationships with a local vegetable farmer who provides us with thousands of pounds of winter and summer squash, and a lamb farmer who raises about 2400 lbs for us, per year. We switched to Fair Trade Organic coffee in October 2005, purchase local hazelnuts and dairy, wild caught cod and halibut and sustainably raised chicken for some patient meals. One-hundred percent of our milk, approximately 80% of our yogurt and our local Blue cheese is rBGH free. We continually revisit our vegetarian options and strive to improve the nutritional content of our foods.

We started a farmers market on campus in May 2007. It serves mostly the staff, students, visitors, some patients and the surrounding community. Last year the F&N department purchased $2430 of produce directly from the market for retail café and plans to implement seasonal and special recipes this year to utilize even more market produce. We are planning a pilot project offering a standard produce bag for after-hours pick up. In addition, we recently opened "It's All Good," a healthy convenience store. Its standards align with the most sustainable practices including preferences for organic and locally grown, GMO/High Fructose Corn Syrup/Trans-fat/Artificial Colorings/Dye FREE and an emphasis on foods with high nutrient content.

Finally, we have nearly eliminated the use of Styrofoam, replacing items with compostable, bio-based foodservice ware. We currently compost all patient meals and all retail meals from one of our largest cafes. We are excited to look for more ways to integrate sustainable practices!

John Muir Health System, California

Alison Negrin, Executive Chef

Subsequent to our participation in FoodMed 2005, we developed a relationship with staff at San Francisco Bay Area Physicians for Social Responsibility (SFPSR), and decided to proceed with the development of a sustainable food purchasing program at John Muir by creating a hospital-wide food committee.

In March 2006, taking advantage of National Nutrition Month, we hosted a luncheon using local sustainable sources for the menu, and at the same time distributed surveys to solicit committee members. We also had a Grand Rounds presentation by SF PSR during that event. As a result, we now have an inter-departmental food committee comprised of dieticians, doctors, nurses, marketing and PR staff, employee wellness, employee education, food service managers, administrators, community benefit directors, purchasing and plant operations, that meets quarterly to create and implement ways to promote healthy eating and purchasing. The Food Committee developed a strategic plan with specific goals and objectives to guide its work. More recently, we also formed a Green Team to facilitate a broader range of environmentally sound practices for the John Muir hospitals.

Since the inception of the sustainable food program, John Muir's executive chef Alison Negrin has implemented a broad range of changes to improve the quality, health, and flavor of the food we serve. We have a new patient menu that features many foods prepared from scratch. We have substantially increased fruits and vegetables served to patients and in the cafeteria. We purchase locally-grown produce as much as possible. All of the milk we serve is rBGH-free, and we are in the midst of a locally-sourced, pastured-raised meat pilot project. As an employee benefit, we have also initiated a CSA program along with seasonal produce tastings.

Chef Alison Negrin receiving local produce delivery

Within our system, dietitians are a key source of information for staff and patients, and share details about our food program in the health system newsletter and intranet. We also focus on bringing this program to the broader community surrounding the hospital. For example, John Muir joined forces with the Walnut Creek Wellness Challenge bringing nutritional guidelines to schools and restaurants. A local high school garden program supplies our food operations with produce on a regular basis, and we host Walnut Creek's Farmers Market, which allows us to create access to healthier foods for the community, promote our commitment to purchasing locally and promoting healthier food and the opportunity to reach a larger audience about the health screenings and services we provide.

We are fortunate to be riding the crest of the sustainability wave in the San Francisco Bay Area and have joined forces with other hospitals to impact real change in sourcing. The Bay Area Hospital Leadership Team has made significant progress in bringing large vendors to the table to address access to sustainable products. We are also able to share resources thereby giving more business to smaller local businesses. The support we have received from the folks at SFPSR and Health Care Without Harm has inspired and motivated us.

Bartels Lutheran Retirement Community, Iowa

Robin Gaines, VP of Support Services

We began our program in 2000 and are currently buying 25% of all food purchases from local farmers. The facility has developed close relationships with various farmers in the community. Bartels is currently freezing fresh produce when it is in season for use during the long cold winter months when it becomes a special treat.

This year strawberries, corn, asparagus, and squash both summer and winter were frozen. For Valentines Day our residents had strawberry short cake using strawberries from last June. Our food is a treat for our residents. They know where the food comes from, it tastes better, and the nutrients are as fresh as they can be. The use of a local dairy continues to get fabulous reviews. Our residents enjoy the milk and milk products we are using. They state the milk really does taste different and is very good. We even have women who don't like milk try our milk and continue to drink it. We think this is because of the great taste and freshness of the milk.

We continue to buy two whole red Angus beef each month from a local farmer. These beef are raised humanely, without hormones and antibiotics in their food. Buying a whole steer has enabled us to have prime rib and fillet on the menu often. This is a big treat for our residents and staff.

For the year 2008, we will be looking at ways of composting kitchen waste. We are also looking for food and paper products that can be composted and have already started a program of recycling cans, paper and cardboard. We use china and glass whenever possible. Styrofoam plates and cups are not used for any of our staff meetings or in the ice cream parlor. We are also looking at developing some sort of temperature and light controlled area where we can store root vegetables after harvest in the fall.

In 2007, $70,000 stayed in our community and several surrounding counties as a result of our local purchasing. Local farmers will invest their money locally. Farmers that produce food 1500 miles away do not invest in Northern Iowa. I think the community supports us in our efforts to buy locally. They see it as an added value for their family members who live here. I think this added value has helped to keep our census steady.

While we were over budget in food last year, it was not because of the locally purchased food. It was due to high fuel costs and everything associated with purchasing food staples that can not purchase locally.

We continue to buy locally because it is important to support our community. It is important for the environment when we can buy strawberries within 20 miles of our facility and not 1500 miles. I like knowing that the beef we get is from one animal and not several 100. It is safe and I don't have to worry about a recall. I know the produce was picked within 24 hours of being delivered to the facility and at the height of its taste and ripeness. I know it is safe and handled with care. Bottom line, it is just the thing to do!

Freezing local produce for winter.

Fletcher Allen Health Care, Vermont

Diane Imrie, R.D., MBA, Director of Nutritional Services

Efforts to improve the sustainability of food services at Fletcher Allen have been happening for several years, and the scope of change has been very broad. We serve patient meals on two campuses, with our largest hospital offering Room Service to patients. As well, we have a variety of retail food service options, including five separate areas, on three different campuses. In total, we produce and serve over one million meals per year.

Given the complexity of our system, it takes a team approach to implement changes successfully. In April 2006, with the support of the management team in Nutrition Services, I signed the Healthy Food in Health Care pledge on behalf of the department. The main goal for 2006 was to implement our Nutrition Plan, which included offering more whole grain products, more fruits and vegetables, and healthier fats. We also focused on eliminating rBST from our milk supply, finding alternative supplies for yogurt and cheese, and reducing waste through better choices for disposables. The Nutrition Services management team was focused on our mission and began to consistently refer to the Pledge when making both purchasing and operational decisions.

In 2007, we implemented our second Nutrition Plan, and began to reach out to more local producers to increase the amount of locally produced food we serve. We developed relationships with four or five local vegetable, fruit, and beef producers, and hosted our second year of a farmer's market on site. To communicate with and educate our customers, we posted the Pledge, joined the Vermont Fresh Network, an organization that promotes fresh local foods, and hosted two Farmer's Luncheons at the hospital featuring local food. In August of 2007, our CEO felt strongly enough about our initiatives to communicate our program across the state through a brochure included in the state's largest daily newspaper. Other significant achievements that year were to begin using only local ground beef, revamp the line of disposables used in the dining areas by implementing compostable plates and cups, and begin to use fresh local food that is stored for the winter.

This year's goals are more challenging. We are beginning to reach a point where purchasing decisions are more difficult to make, as the cost implications of our changes towards more sustainable foods become more expensive. This year, we are completing an assessment of fish and seafood, with the intention of implementing a program that is healthy, seasonal, and sustainable. We intend to shift the remainder of our beef products to a local supplier, so that all of the beef offered will be raised without unnecessary antibiotics or hormones. In our continual effort to reduce waste, we will be again reaching out to our suppliers to ask for their help in reducing the packaging of the products that we buy. Our farm outreach continues, as we help our farmers plan their crops and develop a customer base for a farm share drop-off program at the hospital, which will include fruits and vegetables, a variety of meats, cheese, and breads. These are ambitious goals, and it will be a very busy year, indeed.

We have learned many lessons through signing the Healthy Food in Health Care pledge and striving to become a "greener" Nutrition Services Department. The most important achievements have been twofold: first, we have been successful in educating our department's staff about the importance of good nutrition and how it relates to the health of the surrounding food system. Second, we have reached out to physicians, our customers, the local farm community, and the community in general, to involve them in helping us achieve our goal of improving the food system. Our focus on obtaining locally-produced food strengthens Vermont's farming community and the relationships we have established and nurtured along the way have become invaluable to us.

Fairview Hospital, Massachusetts

Roger Knysh, Director, Nutrition and Food Services

Fairview, a Critical Access Hospital in Western Massachusetts, interprets its mission of promoting a healthier community very broadly. Our Room Service initiative, aimed at improving patient satisfaction, naturally evolved into promoting healthier eating for patients and staff. Our rural Berkshire surroundings, with strong organic agricultural resources, facilitated our hospital's food services initiatives around food production and procurement.

After reading an article sent to us by our CEO in October of 2006, our Food Services Department began its fact-finding mission to learn more. This included a "Webinar", two conferences and site visits. What we discovered convinced us to make a formal commitment and in January 2007, Fairview became the first hospital in Massachusetts to sign the Healthy Food in Health Care pledge. Our dietitian and the Director of Nutrition and Food services developed a strategy for bringing in healthier food choices. This meant assessing our current vendors and their products, researching more appropriate vendors and altering our recipes and menus. The research led us to seek out and network with local farmers who could share in our vision of providing healthier foods, that is, foods that are not only nutritious, but also sustainable.

Internally, we filtered out trans fats from our recipes, eliminated the deep fryer completely, incorporated more whole grains and provided nutritional facts on our menu items. In addition, we began to charge more for unhealthy items, such as sodas. Other components to our strategy included the purchase of more seasonal, locally-grown produce and switching from vendors whose products contained hormones, pesticides or were produced with unnecessary antibiotics. Hospital employees have now sponsored an on-site vegetable garden.

We used a variety of strategies with our external community. For example, we networked with Berkshire Grown, a local (Farm-to-Table business program), visited local farmers to inspect their growing and sanitation conditions, and sent out letters outlining our new expectations to vendors. We developed a shared vision of building an alternative food system, deeply rooted in the concept of supporting local producers and vendors.

To cultivate these new external relationships, we have collaborated with a local high school that will grow and sell us herbs for cooking. Beginning this June, we will implement a farmer's market. The market will showcase one local farmer a week, who will sell his produce in the hospital. We have initiated a barter system with a local grower for compost, in exchange for reduced prices on fresh vegetables. Recycling and composting has significantly reduced our food service waste.

One year ago, our entire health system embarked on a "Wellness at Work" program. The healthier foods initiative became a critical part of this larger concept and we required creative thinking to integrate the two. Wellness at Work included such innovative programs as "Walk with Me," "Yoga at Work," discounts for memberships at local gyms, Weight Watcher groups, a healthy food show, and a "Purchase Ten – Get one Free" Fruit program. Our goal is to use these efforts to hardwire culture change.

Roger Knysh and Fairview Farm Stand

At the heart of our program is education, developed for staff and patients about the relationship between health and how our food is produced and distributed While we have experienced some increase in workload, our new initiative has been well accepted by the Food Services staff, with little resistance from hospital staff. We believe that we have modeled strong leadership for healthy communities and ecosystems.

New Milford Hospital, Connecticut

Marydale DeBor, VP External Affairs

In October 2006, a group of local physicians, chefs, farmers, nutritionists, public officials, and citizens concerned with the ill health and social effects of the existing food system in this country formed the Plow to Plate™ Community Coalition to promote local farms and food through a variety of activities. New Milford Hospital, which has a strong commitment to public health and the prevention of disease, agreed to provide leadership, administrative support and to obtain grant funding for the initiative. In early 2007, our new CEO and President Dr. Joseph Frolkis, brought a strong commitment to community-based programs that promote disease prevention. Plow to Plate™ became central to our mission as a community hospital.

Marydale DeBor, NMH Vice President with youth program participant on "chef jacket measuring day"

To create a robust local food system, our Coalition agreed upon a few objectives: 1) Support and advocacy for transformation of the hospital's food service to one that prepares its food for patients, visitors and employees from local, sustainable foods; 2) support of our farmer communities by increasing demand, enhancing distribution systems and public policy advocacy; 3) educating our children about local, sustainable food systems and the role they can play in their own communities.

Our ever-expanding community coalition supports and provides the person-power for our community engagement programs and events that knit farmers, chefs, community leaders and health care providers together to educate our public on the core benefits of building our local, sustainable food: improving human health and building a strong local farm economy. Working closely with the New Milford town government, the coalition is now collaborating on the re-branding and expansion of the local farmers market. Local parent-teacher organizations will also promote the "new" Plow to Plate™ Farmers Market and help by adding activities for children and music.

Hospital "Food Change"

We are currently in a transition phase and the process has been enlightening. In mid 2007, we retained a consulting firm with extensive experience in transitioning institutional food service to healthful, local sustainable menus. After challenging our existing food service contractor to meet our expectations and goals through the contract in place, we realized we must issue an RFP for contracted food service that reflected our value and expectations. An important element of the RFP was that the vendor selected would sign the "Healthy Food Pledge" just as we have. Our "RFP" contained many specific "deliverables" to ensure accountability consistent with our mission. A new contract will be awarded in late April, 2008; new menus using local foods will be served by mid- summer. We are also laying the groundwork to enter into "grow for us" agreements with local farmers in 2009. This year we also offer CSAs from a local farm to hospital employees and medical staff. New Milford Hospital is the second largest employer in the area so the impact on new demand for local foods and leadership in public health is promising. Our experience in pursuing this commitment to change may be one of the first examples of a small customer challenging the corporate food services industry. Simply put, a David and Goliath story, to be sure!

Doctors- Powerful Messengers

"FARM BUCKS™" is the brainchild of two Plow to Plate™ founders, and local pediatricians who are seeing greater than 20% obesity rates among their patients. This new "currency" can be spent at the New Milford Farmers Market and participating farm stands. Pediatricians, internists, family practice doctors will share the BUCKS with patients and their parents, together with information about the benefits of healthful eating during clinical visits. The primary focus for this effort is families with young children. The program in underwritten by a local bank and other donors.

Community-based programs: Mostly, Our Kids

In 2007, the coalition formed a partnership at local cooking school to offer a series of "local food learning experiences" led by Chef Anne Gallagher and a faculty team that included a farmer (whose products were used in the menu), chefs experienced in cooking with local and organic foods and a New Milford Hospital physician knowledgeable about the health benefits of locally grown, wholesome foods.

In March, 2008, we launched a special program with the New Milford Youth Agency, supported by local foundations and the CT Department of Agriculture. This ten month program involves middle and high school youth in hands-on learning about the harvest, preparation of local foods, and career opportunities in farming, culinary arts. Participants will provide food demonstrations at the local senior center and serve as volunteers at the farmers market, helping to carry goods to cars and home for our older adults. A real youth "locavore corps."

St. Luke's, Minnesota

Mark Branovan, Director of Hospitality

As places of healing, hospitals have a natural incentive to provide food that's healthy for people and the environment in which we live. As human and public health are intimately connected to ecological health, St. Luke's recognizes its role in minimizing its ecological impact.

Our Healthy Food in Health Care Project is the first local, sustainable healthcare food pilot in the State of Minnesota and builds on work we began in 2003 working on food waste diversion. With this program we have partnered with the America's Second Harvest, Northern Lakes food bank. Excess food from our café is packed, labeled and frozen and placed aside for the Second Harvest Food Bank for pick up. Certified Serve Safe drivers transport these leftovers via a refrigerated truck to feeding sitesthroughout the city. Over the course of an average year, St. Luke's is able to rescue (along with the help of Northern Lake's Food Bank) over 10,000 meals annually. We are also one of the pioneer facilities in our communities' composting program, Garden Green. Instead of adding solid food waste to the typical waste stream we divert solid food waste out of the waste stream. Over the course of a typical year, St. Luke's will compost close to 40,000 pounds of compostable food waste.

We also try to include education to build support for our programs. We provide a large display in our cafeteria educating patients, staff and visitors about the connection between food production, distribution and health. This display board includes photos from some of our local producers and purveyors. Some of this education is more subtle. For examples, our local, sustainable sourcing initiative began with a local, sustainable holiday dinner, where we highlight the names of the local business and producers supplying our food. An unexpected but welcome surprise was when this event received extensive local media coverage. Our program has also been helpful in building and

St. Luke's Local Sustainable Employee Holiday meal

deepening connections with our local community. As a result of our program, one of our own employees was able to recommend a neighbor as a potential source of local, healthy bison, which we now serve in our cafeteria.

When we signed the "Pledge", we wanted to become a model for others, but knew we could only do things one step at a time. We have started small and tried to build our program. Our local sourcing includes a variety of components. We serve local Lake Superior fresh water herring and whitefish. While this may seem

intuitive sitting on the edge of Lake Superior, it is not as easy to do through local distributors. Our fresh bison is brought in from a local bison farm about fifteen miles away from the hospital, helping to reduce fossil fuel emissions that might otherwise be needed to haul beef from ranches thousands of miles away. We serve local produce in our salad bar, which we purchase through a local producer who is in town weekly at a nearby farmer's market. Typically, we call once a week to see what is ripe and modify our fresh producer purchases accordingly. Last year we calculated that we actually saved money purchasing locally for the salad bar, compared to if we had purchased through our distributor 180 miles away. We have also worked with a locally owned cooperative bakery to develop a "white bean" low fat cookie. These are now ordered from the bakery four blocks away reducing transport and supporting a local enterprise. At our cafeteria check-out we offer a selection of organic fruit. While we still have traditional vending machines, we recently contracted with a vendor offering organic and more "healthy" snacks.

Finally, as a benefit to the patients and café customers, St. Luke's provides rBGH free dairy products. Working with local dairy farmers and bottlers, St Luke's has agreed to provide a product that has proven to be more beneficial to those that consume dairy products. We recently received a letter from our former milk vendor letting us know that all their milk and cream is now rBGH. Through changes in our dairy sourcing we are trying to help reduce the overall burden of antibiotics in the environment.

We have made other changes that are good for health and the environment. We have moved away from the paper tray liners that are used on patient food trays and opted for a tray that does not require a paper liner. On average approximately 450 meals are passed on patient trays daily. With the change in trays, thousands of pounds of paper waste have been taken out of the waste stream.

We are proud of these steps we are making. When we started we did not know how well received our work would be. As a result of its efforts St. Luke's Hospitality Services has been featured in Time Magazine and Minnesota Public Radio. This spring, our food pledge initiative was awarded a Minnesota Governors award for Excellence in Pollution Prevention and Waste Reduction. We hope to continue to expand our program and remain a model for preventive health.

Thomas Jefferson University Hospital, Pennsylvania

Mary A. Grant, Assistant Director Production Services and Shelley Chamberlain, RD, LDN, Assistant Director, Dining and Catering Services

It started in 2006 with a Healthy Customers, Healthy Profits seminar highlighting the hottest trends including sustainability. It opened our eyes to new possibilities and motivated us to attend subsequent conferences and roundtables to learn as much as we could.

In May 2007, we signed the Healthy Food in Health Care Pledge. In planning for this, we sat down as a team to create a comprehensive plan. We documented current accomplishments, along with our future goals related to each recommendation. We continue to utilize the Pledge recommendations as our guideline to keep us focused and organized. This 8-page working document took some time to put together, but has become a useful tool that we refer to regularly and periodically update.

In June we attended FoodMed 2007 which was another eye-opener. We were so excited to see what others were accomplishing across the country, and couldn't wait to expand our program. Having support from key individuals has enabled us to put sustainable principles into practice. Since November 2006, Lindsay Gilmour, Farm to Institution Project Manager for Fair Food, A Program of The White Dog Community Enterprises, and Dianne Moore, Manager for Healthy Food in Healthcare, Women's Health and Environmental Network have been and continue to be key resources for us. This program could not be successful without the support we have received from local vendors and our community involvement.

We are grateful for the support from Hospital Administrators and key physicians. The efforts from our management team have enabled us to enjoy healthier menus that support the incorporation of locally produced seasonally available foods.

And we have only just begun!

Framed copy of Pledge for display

Overlake Hospital Medical Center, Washington

Christopher Linaman, Executive Chef

Overlake Hospital Medical Center as a responsible provider of healthcare services, are committed to the health of our patients, our staff and the local global community. We are aware that food production and distribution methods can have adverse impacts on public environmental health. We recognize that for the consumers who eat it, the workers who produce it, healthy food must be defined not only by nutritional quality, but equally by a food system that is economically viable, environmentally sustainable, and supportive o f human dignity and justice.

Overlake Hospital signed the Healthy Food in Health Care Pledge this past winter and is launching a "go green, go healthy" campaign. We want our employees to join us in our efforts and as a result, we have adapted the pledge for our employees to sign. In our cafeteria, we have framed the Pledge and are hanging all the employee pledges alongside ours in prominent area of the cafeteria.

We understand that the pledge takes an integrated approach to providing healthy food in healthcare therefore we are taking steps to procure more sustainable foods, support local farmers, increase the nutritional value and minimize waste. In the area of sustainable foods, we use local organic greens, Starbucks fair trade coffee, rBGH-free milk, organic yogurt and serve Seafood Safe fish that is tested for mercury and PCBs supplied by EcoFish.

To provide optimal nutrition, we eliminated trans fats, exclusively source whole grain artisan breads, serve legumes, vegetables and whole grains daily in the cafeteria. The new patient menu has organic greens, whole grain bakery products, no cured meat products as well as many other sustainable foods. The patient trays have a new tray liner that explains how Overlake's food service is going green. For our employees and visitors we have Yo! Natural Vending machines for when the cafeteria and café are closed.

In the area of waste reduction we have taken great strides. All food waste is being composted and picked up 2-3 days per week. To date, 21.6 tons were diverted from the landfills and into compost. We have eliminated all foam cups, plates and clamshells and are composting with bio-based service ware. All the food trays from the cafeteria and café go on a belt and we have kitchen staff sort the trays and compost the food and plates. In addition to composting, we have an extensive recycling program for bottles, cans, newspapers, and paper cups.

Christopher Linaman Executive Chef

To support local farms and provide access to fresh fruits and vegetables to our employees and visitors, this summer we are piloting a CSA program for 30 employees to have organic produce delivered weekly to the hospital for the personal consumption. In addition, the chef plans to buy local produce from the farm once or twice a week and highlight the organic local produce on the specials.

We take education seriously, and are working with our marketing department. As a result, we have created a "go green" brochure, patient tray insert and are developing strategies to effectively launch the "go green, go healthy" campaign hospital-wide.

Conclusion

The recent United Nations Millennium Ecosystem Assessment laid bare the shared predicament of all global citizens. "Human activity is putting such strain on the natural functions of Earth that the ability of the planet's ecosystems to sustain future generations can no longer be taken for granted" (United Nations 2005). In this context, the American Public Health Association Policy Statement, *Towards a Healthy, Sustainable Food System*, highlighted the relationship between our sixty year experiment with industrialized agricultural system and global health. Though this seemingly efficient industrialized system has provided us with relatively inexpensive food, it has come at a high cost to health. We have developed synthetic inputs, decreased diversity, and contaminated the food web, thereby critically affecting cultural, social, and ecological systems.

We are at a crossroad. Fortunately, we have been given a host of clues as to how we might reconfigure agriculture, with ecological health as its foundation. Not surprisingly, they are pointing to agricultural practices and technologies which mirror and work *with* natural ecological functions instead of in conflict with them. This concept is not unique to the science of agriculture. The new field of green chemistry is growing rapidly as a new generation of scientists aims to mimic and replicate chemical processes that have been ongoing in natural environments for eons.

Roughly ten years ago, when confronted with the growing concern about mercury's impacts on human and environmental health, the health care community stepped up to the plate. Nurses and doctors began to eliminate their use of mercury blood pressure devices and mercury thermometers. Purchasing agents changed their contracts and specified mercury-free medical devices and other mercury-free alternatives throughout the hospital. Nurses, healthcare workers and hospital administrators began to support legislation to phase-out the use of mercury in commerce. Today, the availability of new mercury products within healthcare has virtually disappeared. Internationally, physicians, nurses and other healthcare workers in hospitals in Mexico, the Philippines, Argentina, South Africa, and elsewhere are building global models of mercury-free healthcare.

Mercury may be viewed as a metaphor for our failed understanding of the right relationship between human and ecological health. Although we are still reacting to mercury's legacy of negative health impacts, the positive message here is that, when faced with a significant and complicated threat to our health, the health care community can engage and change the landscape of ecological health. Today, we have major hospitals and health systems that have adopted the *Green Guide for Health Care*, the first sustainable metric for the design, construction, operations and maintenance of healthcare buildings. Through this guide, we are building hospitals that reduce waste, conserve utilities, and employ nontoxic alternatives to cleaning products and other supplies. Many of the same organizations that have taken the Healthy Food in Health Care Pledge have also stood up in support of new chemicals regulation and green chemistry.

This report demonstrates similar concern, leadership, and commitment by the healthcare community around food. Healthcare leaders throughout the nation are developing new models of supply and distribution, and are favorably changing relationships with local communities. They are promoting transparency in food production practices and advocating for public policies supportive of localized, sustainable health food systems. Although it is clear that these changes are essential, it is intuitively fitting that the field of health care is at the lead in building models for a healthier future.

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