

Sustainable Food: A Conversation with Jamie Harvie—Executive Director, Institute for a Sustainable Future

Brian Raymond, MPH

Introduction

Jamie Harvie, PE, is a civil engineer and presently serves as Director of Health Care Without Harm's Healthy Food in Health Care Initiative and as Executive Director for the Institute for a Sustainable Future, a not-for-profit organization based in Duluth, MN. He also serves on the steering committee for the *Green Guide for Healthcare Construction*—a best practices guide for healthy and sustainable building design, construction, and operations for the health care sector. Mr Harvie is an internationally recognized toxics expert and was instrumental in the negotiations with major pharmacy chains that successfully resulted in a national voluntary phase-out of mercury thermometer sales. In 2009, he was recognized as a “national thought leader” by the Natural Resources Defense Council for his leadership on sustainable health care food. His energy and vision are a driving force in changing the way food is produced and distributed so that it is not only nutritionally rich, but also environmentally sustainable. A Glossary of Terms used in this article may be found in the Sidebar: Glossary.

Motivated by impacts on poor nutrition, increased antibiotic-resistant bacteria, poisoned air and water, food-borne pathogens, and the potential health effects of climate change, leaders from the health sector are backing practices and policies that support sustainable agriculture and a healthier food system.

In this interview, sustainable food system advocate Jamie Harvie addresses the big stake the health sector has in the way food is produced and distributed.

Sustainable Food and Health Care

Brian Raymond (BR): What is sustainable food and how does it pertain to health care?

Jamie Harvie (JH): What is my definition of sustainable food? It is food that is health promoting in the broadest sense.

The challenge with the question is that it suggests that there is one definition for sustainable food. For an individual, sustainable food may mean that it is nutritious, contains no toxic residues, and is affordable. For farm workers who harvest the food or others in the supply chain, it would also encompass issues of justice. Are the conditions in which they work safe? Can they make enough money to support themselves or their families? From the perspective of communities, does the production of the food promote the socioeconomic health of their community or the health of the local ecosystem? Globally, does the food system promote ecological health and resilience?

BR: Can you tell me about Health Care Without Harm and how its work in food system change got started?

JH: Health Care Without Harm is an international campaign of 480 organizations in more than 50 countries, working to transform the health care sector so it is no longer a source of harm to people and the environment. Our work began about 12 years ago when the US Environmental Protection Agency released a report that showed that medical waste incinerators were one of the largest sources of persistent bioaccumulative toxics, mercury and dioxin, to the environment.¹ A variety of environmental and public health organizations recognized the inherent irony—that health care was inadvertently poisoning people and the planet—and came together to create this campaign for ecologically sustainable health care.

Much of our work involves education, which links health care practice to ecological health. Twelve years ago, hospitals had little understanding that the mercury blood pressure devices or mercury thermometers, which they used and accidentally broke could harm the short- or long-term health of their patients

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and staff and the environment. Once they saw the evidence, they began to act. Today, US health care is virtually mercury free.

Our work on health care food is only about three and a half years old and began with ongoing conversations with some of our health care partners trying to wrestle with the obesity crisis. From a strict economic perspective, this not only includes the cost of patient treatment, but the costs of lifting devices to move heavy patients, installation of new door frame sizes, as well as the occupational health costs associated with obese or overweight employees.

Industrial Food and its Costs

BR: Most of us buy our food from supermarkets, but we don't really know where our food comes from or how it's produced. What's your take on this disconnect between Americans and their food?

JH: As you suggest, most people, regardless of socio-economic background, have no idea where their food comes from. There's this belief that our farms are still bucolic places with grazing cows and the pretty red barn. Of course, nothing could be further from the truth. But, these images are marketed to consumers because

they convey a sense of warmth and community. Could you imagine a large poultry processor marketing images in supermarkets of their massive factory-farmed poultry operations, or a multinational food giant providing images of pesticide drift moving from fields into school classrooms? Of course not. But at the same time maybe we American consumers don't want to know.

Americans are proud of being a modern, industrialized, technologically advanced nation. What would it mean if we acknowledged that our industrialized model of food production was inconsistent with the health of our nation? How would we reconcile this cognitive dissonance? American society is increasingly diverse and we have no one food culture that promotes food knowledge. Moreover, American culture is fast paced and we tend to promote quantity over quality. There are a host of factors that have gotten us to where we are today. But suffice to say, for the health of our nation, we are going to have to change our current industrial model of production.

BR: Why is our highly industrialized food system a concern for health?

JH: Our current food system favors the production of animal products and highly refined, calorie-dense foods, rather than the fresh fruits and vegetables, whole grains,

Table 1. Challenges and key issues for public understanding and involvement in food policy ^a	
Challenges	Key issues for public understanding and involvement
Obesity	Our current food system favors the production of animal products and highly refined, calorie-dense foods, rather than the fresh fruits and vegetables, whole grains, and other high-fiber foods important in prevention of obesity and related diseases.
Antibiotic-resistant bacteria	There is a strong consensus among experts that antibiotic use in agriculture contributes to rising drug-resistant infections in humans. An estimated 70% of all antibiotics consumed in the US are used as feed additives for poultry, swine, and beef cattle for <i>nontherapeutic</i> purposes. That is, antibiotics are used to promote growth and to compensate for diseases caused by poor animal husbandry.
Contaminated air, water, and food	Agricultural operations that confine large numbers of livestock to a closed area—concentrated animal feeding operations (CAFOs)—pose a hazard to soil, water, and air quality. Worker and public health concerns related to CAFOs include heavy metals, antibiotic resistance, pathogen bacteria, dust, mold, and volatile gases.
Fossil fuel consumption and climate change	Industrialized agriculture methods are fossil fuel intensive; the US food system accounts for an estimated 10.5% of the nation's energy use and 19% of its fossil fuel consumption. The direct and indirect impacts of climate change on human health are substantial and include heat-wave fatalities, increased incidence of infectious diseases, and exacerbation of respiratory diseases.
Pesticide use	Reducing pesticide use is a key health priority given the many human health problems associated with pesticide exposure, as well as damage to other species.
Racial and ethnic health disparities	Low-income people and people of color face well-documented challenges to obtaining fresh fruits and vegetables and other nutritious foods: either they are not available in the neighborhood or the quality is poor and the price is high. Research shows that the scarcity of healthy foods makes it more difficult for residents of low-income neighborhoods to follow a good diet, compared with people in wealthier communities.

^a Public and political support for sustainable agriculture will not occur without greater awareness and understanding of how our industrialized food system is affecting human and ecological health.

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and other high-fiber foods important in the prevention of disease. In addition, our food system is reliant on and supported by methods of production and distribution that hurt humans and our environment. We are already experiencing significant impacts in the form of poisoned air and water, food-borne pathogens, and collapsing rural communities (see Table 1). Consider the issue of antibiotic overuse. Approximately 70% of all antibiotics produced are given to healthy animals in their feed and water to promote growth and to compensate for stressful growing practices, not for the treatment of sick animals.

Every major medical, nursing, and public health association has suggested that if we want to protect our antibiotics toolkit, we'll need to end agricultural overuse.²

BR: This sounds like a classic case of what economists call “externalized” costs.

JH: Exactly. Our industrial food system has become expert at externalizing its costs, and health care ultimately bears them. A number of years ago, Kaiser Permanente (KP) did an analysis of the cost of using a mercury blood pressure device, including the cost of clean up, patient room closure, etc. Using full-cost accounting, they found that the equally effective mercury-

free device, with a slightly higher sticker price, was far less expensive in the end. What if we did this for meat and poultry production? A recent study estimated that antibiotic-resistant infections cost the US health care system in excess of \$20 billion annually and that in addition, these avoidable infections result in more than \$35 billion in societal costs and more than eight million additional days spent in the hospital.³ Some of these costs must be related to the routine feeding of antibiotics to healthy animals. Already, many hospitals are buying meat raised without antibiotics. With full accounting, the current incremental extra cost of some sustainable meats might be recognized as a health premium. The food system is highly energy intensive, and our health and health care is going to be on the frontlines of treating climate-related health impacts. What if these costs were internalized in food production?

BR: Tell me more about the climate change connection.

JH: Depending on which analysis and on what is included, the food system is responsible for 18% to 30% of global warming emissions. This is a sizeable contribution. We also know that with more sustainable farming practices we can minimize this impact.

Glossary

Community-Supported Agriculture

According to Suzanne DeMuth in *Community Supported Agriculture (CSA): An Annotated Bibliography and Resource Guide*, “In basic terms, Community-Supported Agriculture (CSA) consists of a community of individuals who pledge support to a farm operation so that the farmland becomes, either legally or spiritually, the community's farm, with the growers and consumers providing mutual support and sharing the risks and benefits of food production. Typically, members or ‘share-holders’ of the farm or garden pledge in advance to cover the anticipated costs of the farm operation and farmer's salary. In return, they receive shares in the farm's bounty throughout the growing season, as well as [the] satisfaction gained from reconnecting to the land and participating directly in food production. Members also share in the risks of farming, including poor harvests [because of] unfavorable weather or pests. By direct sales to community members, who have provided the farmer with working capital in advance, growers receive better prices for their crops, gain some financial security, and are relieved of much of the burden of marketing.”

Source: DeMuth S. Community Supported Agriculture (CSA): An Annotated Bibliography and Resource Guide [monograph on the Internet]. Beltsville, MD: United States Department of Agriculture, National Agricultural Library: Alternative Farming Information Center; 1993 Sept [cited 2010 Jan 27]. Available from: www.nal.usda.gov/afsic/pubs/csa/csa.shtml.

Factory Farm

From the *Sustainability Dictionary*: “A large-scale industrial site where many animals (generally chickens, turkeys, cattle, or pigs) are confined and treated with hormones and antibiotics to maximize growth and prevent disease. The animals produce much more waste than the surrounding land can handle. These operations are associated with various environmental hazards as well as cruelty to animals. The government calls these facilities Concentrated (or Confined) Animal Feeding Operations (CAFOs). The Environmental Protection Agency defines a CAFO as ‘new and existing operations which stable or confine and feed or maintain for a total of 45 days or more in any 12-month period more than

the number of animals specified’ in categories that they list out. In addition, ‘there's no grass or other vegetation in the confinement area during the normal growing season.’ ”

Source: Introduction to Sustainability: Sustainability Dictionary [dictionary on the Internet]. New York: Grace: Sustainable Table; 2003-2007 [cited 2010 Jan 7]. Available from: www.sustainabletable.org/intro/dictionary.

Farm Bill

From the Congressional Research Service: “The Food, Conservation, and Energy Act of 2008 (PL 110-246, ‘2008 farm bill’) is the most recent omnibus farm bill. It was enacted into law on June 18, 2008, and succeeded the 2002 farm bill. The farm bill governs federal farm and food policy, covering a wide range of programs and provisions, and, as noted above, undergoes review and renewal roughly every five years. The 2008 farm bill contains 15 titles encompassing commodity price and income supports, farm credit, trade, agricultural conservation, research, rural development, energy, and foreign and domestic food programs such as food stamps and

So what does climate change have to do with health care? In 2003, as a result of a major heat wave, there were over 35,000 heat-stress-related deaths in Europe.⁴ Respiratory impacts such as asthma from worsened air quality, an increased range of infectious disease, death and injury from catastrophic weather events—these are just some of the many health issues that are predicted as a result of climate change. Unquestionably, health care is again going to be on the front lines dealing with the impacts of climate change. At the same time, the health sector can influence and mitigate these impacts.

In the United Kingdom (UK), the National Health Service Climate Action plan includes sustainable foods as part of the mitigation strategy. Because of the climate footprint associated with meat production they also announced a plan to eliminate meat from hospital menus.⁵ This is the UK, home of bangers and mash! The Swedish National Food Administration has created a food label system giving equal weight to climate and health.⁶ Climate change is a huge societal driver and obviously something that health care needs to be thinking about. We need to adopt food production methods that not only mitigate, but build resilience in our food system.

Health Care and the Food System

BR: We see growing interest in sustainable food, but can we really grow enough food through organic or other sustainable practices?

JH: I like to think of this issue in terms of growing food in a better way, because if we continue to strictly think quantity we tend to forget quality, such as livelihoods of farmers and communities, or soil health and so forth. We already produce more calories than is necessary to feed the global population, yet we still have food shortages. Even in this country we have inner city and, surprising to most, rural communities without access to fresh fruit or vegetables. So much of this has to do with global food politics. That said, there is this perception that sustainable practices have low productivity. But if you look at the research, this is not the case. A recent United Nations study found that of 114 projects in 24 African countries had more than doubled their yields where organic or near-organic practices had been used.⁷ As global food demand explodes, we will have to consider changing both the kinds of food we eat and how we produce them.

We already produce more calories than is necessary to feed the global population, yet still have food shortages.

other nutrition programs, among other programs.”

Source: Johnson R, *What Is the “Farm Bill”?* [monograph on the Internet]. Congressional Research Service, Library of Congress, RS22131, Updated September 18, 2008 [cited 2010 Jan 7]. Available from: <http://ncseonline.org/NLE/CRSreports/08/jun/RS22131.pdf>.

Food Miles

According to Wikipedia: “Food miles is a term which refers to the distance food is transported from the time of its production until it reaches the consumer. Food miles are a single factor used when assessing the environmental impact of food.”

Source: *Food miles* [monograph on the Internet]. San Francisco: Wikipedia; 2010 Jan 25 [cited 2010 Jan 27]. Available from: http://en.wikipedia.org/wiki/Food_miles.

Nontherapeutic Antibiotics

From the *Sustainability Dictionary*: “Antibiotics administered to animals for purposes other than the treatment of existing illness. Factory farms routinely administer nontherapeutic antibiotics to their animals in order to boost growth rates and to prevent the outbreak of diseases

which would otherwise run rampant within crowded, unsanitary factory farm facilities. The use of nontherapeutic antibiotics promotes the development of antibiotic-resistant bacteria, causing antibiotics used to treat humans to become less effective.”

Source: *Introduction to Sustainability: Sustainability Dictionary* [dictionary on the Internet]. New York: Grace: Sustainable Table; 2003-2007 [cited 2010 Jan 7]. Available from: www.sustainabletable.org/intro/dictionary.

Organically Grown/Certified Organic

According to the Center for Urban Education about Sustainable Agriculture: “All products sold as “organic” must be certified. Certification includes annual submission of an organic system plan and inspection of farm fields and processing facilities to verify that organic practices and recordkeeping are being followed. Certification is carried out by organizations accredited by the USDA. Organic farmers are not allowed to use synthetic pesticides or fertilizers, genetically modified crops, growth hormones, or antibiotics. Organic meat and

poultry can be fed only organically grown feed.

Note: Some farmers adhere to accepted organic practices but are not certified. Possible reasons for not pursuing certification include the cost, time, or paperwork involved in certification, and/or a resistance to outside intervention. Under USDA law, farmers cannot call their produce organic unless they are certified.”

Source: *Glossary of Terms* [glossary on the Internet]. San Francisco: Center for Urban Education about Sustainable Agriculture; 2009 [cited 2010 Jan 8]. Available from: www.cuesa.org/sustainable_ag/glossary.php.

Sustainable Agriculture

According to the Center for Urban Education about Sustainable Agriculture: Agriculture that is socially just, humane, economically viable, and environmentally sound.

Source: *Glossary of Terms* [glossary on the Internet]. San Francisco: Center for Urban Education about Sustainable Agriculture; 2009 [cited 2010 Jan 8]. Available from: www.cuesa.org/sustainable_ag/glossary.php.

Market Leadership

Health care organizations can make a difference by modeling good nutrition and adopting food purchasing policies and practices in their own facilities that steer the entire food system in a more positive direction.]

- **Purchasing Power**—Hospital food is big business. In 2004, alone, the top health care Group Purchasing Organizations (GPOs) purchased approximately \$2.75 billion of food.¹ The total health care market for food and beverages is about \$12 billion.² [Although] patient food receives some attention in the media, cafeteria and catered food actually make up the largest percentage of food in the hospital budget, accounting for approximately 55% – 70% of hospital volume.³ Hospitals and hospital systems are now becoming aware of their ability to use their purchasing dollar to affect change in the marketplace. Demand by health care facilities is creating momentum within the GPOs, which, until recently, were virtually unaware of food production issues. As a result of hospital-driven demand, GPOs and distributors are beginning to offer and label local products in food catalogues and are contracting for sustainable products.
- **Healthy Food in Health Care Pledge**—One action that health systems and facilities have taken is support for the Healthy Food in Health Care Pledge. Without encumbering facilities with mandates, the Pledge is a way to align hospitals with health food initiatives. As of early [2010, approximately 300] hospitals have signed the Pledge, thus sending an important signal to the marketplace and policy makers about their interest in local, nutritious, sustainable food.

Pledge signatories agree to initiate steps to:

1. **Work** with local farmers, community-based organizations, and food suppliers to increase the availability of locally sourced food
2. **Encourage** vendors and/or food management companies to supply food that is, among other attributes, produced without synthetic pesticides and hormones or nontherapeutic antibiotics
3. **Implement** a stepwise program to identify and adopt sustainable food procurement. Health care institutions are encouraged to begin where fewer barriers exist and where immediate steps can be taken, such as the adoption of rBGH-free milk, Fair Trade coffee, or introduction of organic fresh fruit in the cafeteria
4. **Communicate** to GPO interest in foods that are identified as local and certified
5. **Educate** and communicate within the system and to patients and the community about nutritious, socially just, and ecologically sustainable healthy food practices and procedures
6. **Minimize** or beneficially reuse food waste and support the use of food packaging and products that are ecologically protective
7. **Develop** a program to promote and [to] source from producers and processors that uphold the dignity of family, farmers, workers and their communities, and support sustainable and humane agriculture systems.

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3. Hospitals tighten ship: Efforts to reduce foodservice costs and boost productivity are driving operations. Food Service Director [serial on the Internet] 2005 Jun 15 [cited 2009 Oct 12]:39. Available from: www.fsdmag.com.

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BR: How are health care organizations getting involved in food system change?

JH: In the last three years we have seen this incredible uptake by health care organizations around the issue of food systems and health. We have hospitals now that have on-site gardens and Community Supported Agriculture (CSA) food box programs for the employees in their facilities. There is an incredible hospital-centered program in Connecticut that is teaching kids cooking skills. These kids have created a picture book on food and food systems, which they presented in their local schools—they have become advocates of healthy food systems and nutritious foods in their communities. One institution in Vermont has become a destination restaurant for community members. The facility serves grass-fed beef, poultry produced without antibiotics, has eliminated bottled water, has an on-site garden, purchases food from local farms, and has beehives on the hospital campus. Their Harvest Café is seeing an incredible increase in revenue.

We have other facilities hosting on-site farmers markets; KP is a leader in this regard. Many of our inner cities have no access to fresh local fruit or vegetables. Hospital markets in these communities are now providing that access, breaking historical walls between local communities and the facility and planting seeds for a new model of community-based health care. This is a radical concept, people actually wanting to go to their local hospital. And for what? Some of the best, least expensive medicine possible—fresh, healthy, sustainable food. This is exciting, but think of the influence of hospital purchasing power in changing not only health care procurement but other sectors as well.

BR: How does health care's institutional purchasing power come into play?

JH: Hospital food is big business. The total health care market for food and beverages is about \$12 billion. Although patient food receives considerable attention, the piece that people forget is that 60% to 70% of food that a hospital purchases is in a cafeteria. There is an adage that says “purchasing holds the keys to the kingdom.” What we have found is that by educating the contracting staff on sustainable food issues, they are beginning to incorporate criteria in food purchasing contracts. We are working with health systems that now require in their contracts that their suppliers meet goals consistent with the Healthy Food in Health Care Pledge. Collectively, the work of our Pledge signers, is creating ripples throughout the supply chain (See Sidebar: Market Leadership).

BR: I've heard about the Healthy Food Pledge. What exactly is it?

JH: We conceived the Healthy Food in Health Care Pledge when early on we discovered that a variety of hospitals we were working with were having difficulty getting the attention of their Group Purchasing Organization (GPO) or their distributors about changes they wanted to make in their food purchasing. Moreover, these facilities were interested in demonstrating their leadership in the marketplace. The voices of these leaders were getting lost in the din of the marketplace. A tool was needed that would help aggregate the health care voice around the issue and give it strength. Hence the Pledge, which is, as its title suggests, a formal commitment by a health care institution to initiate changes in their food service operations and a formal acknowledgement that healthy food is defined not only by nutritional criteria but by how it is produced and distributed.

From the institutional perspective it has been tremendously successful. Almost every facility that has signed the Pledge has received tremendous community support and media attention, locally and nationally. The GPOs have begun to offer new product lines and the distributors have also begun to respond. To date, we have approximately 300 hospitals that are Pledge signatories. We also created a separate Contractor Pledge for food service contractors when they each began knocking at our door trying to promote themselves as the most sustainable. The Contractor Pledge requires the contractor to support their clients' sustainability interests and to provide reporting on a variety of criteria. We now have one national contractor who has signed this pledge and several regional companies.

BR: What role can health professionals play in the public policy process?

JH: Health professionals play a vital role in the policy arena because they are patient advocates; they are respected and bring moral authority to an issue. Historically, we have seen how health professionals' engagement has changed the policy debate when they advocate a public health issue—be it removing lead from paint and gasoline or antismoking campaigns. In the last two years, both the American Nurses Association⁸ and the American Medical Association⁹ have reviewed the science and adopted policy resolutions that call on their professions to support and advocate for nutritious, sustainable food systems.

How can a health professional get involved? First, educate yourself about an issue you feel passionate

about. Food access, pesticides, genetic engineering, antibiotics overuse—there is no lack of issues or arenas for engagement. You might start by engaging your hospital administration to change hospital food purchasing policy by joining or supporting your hospital green team. You might petition your local and state professional organization to lend policy support. You might write opinion pieces in your local newspaper, or send letters to the editor. Health care professionals might lend their name and support to local, state, and federal policy initiatives by writing letters and calling legislators.

Two critical pieces of federal legislation—the US Food, Conversation, and Energy Act of 2008 (Pub L 110-234, 233 Stat 923) and the Child Nutrition and WIC Reauthorization Act (Pub L 108-235)—affect agricultural production, community food retail, school lunches, and more. The Farm Bill will be reauthorized in 2012, and includes hundreds of programs that exert tremendous influence on our food production and distribution. The Child Nutrition and WIC Reauthorization Act will be reauthorized within the next year. It includes programs such as WIC and school food programs. Ultimately, the key is to get involved.

Health professionals play a vital role in the policy arena because they are patient advocates; they are respected and bring moral authority to an issue.

Future Challenges and Opportunities

BR: What's the biggest challenge you see going forward?

JH: I think the biggest challenge is time. The United Nations' Millennium Ecosystem Assessment report says that human activity is putting such a strain on natural ecosystems that we shouldn't take for granted the ability of these systems to sustain future generations. Now that's a wake up call.

BR: What are you optimistic about and why?

JH: I'm not sure I'd say I'm optimistic, but I'm definitely hopeful. We are in an interesting time, which is both exciting and terrifying. Our economic system is in crisis; we have a crisis in health care; and our climate is in crisis. It is in this turmoil, within this commotion and tumult, that we have the opportunity to make something new, but it won't happen by watching from the sidelines. Our collective work makes sense, and I know I'm going to keep working to create models of resilience and health. My sense is that I am not alone. ❖

Disclosure Statement

The author(s) have no conflicts of interest to disclose.

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Wholesome Food

Many physicians appear to be too strict and particular in the rules of diet and regimen, which they deliver as proper to be observed by all who are solicitous either to preserve or recover their health ... The common experience of mankind will sufficiently acquaint any one with the sorts of food which are wholesome to the generality of men; and his experience will teach him which of these agrees best with his particular constitution.

— Commentaries on the History and Cure of Disease, *William Heberden, 1710-1801, English physician and author*



"Forest Innocence"
photograph

By Robert W Hogan, MD

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This photograph was taken while hiking in the Canadian Rockies.