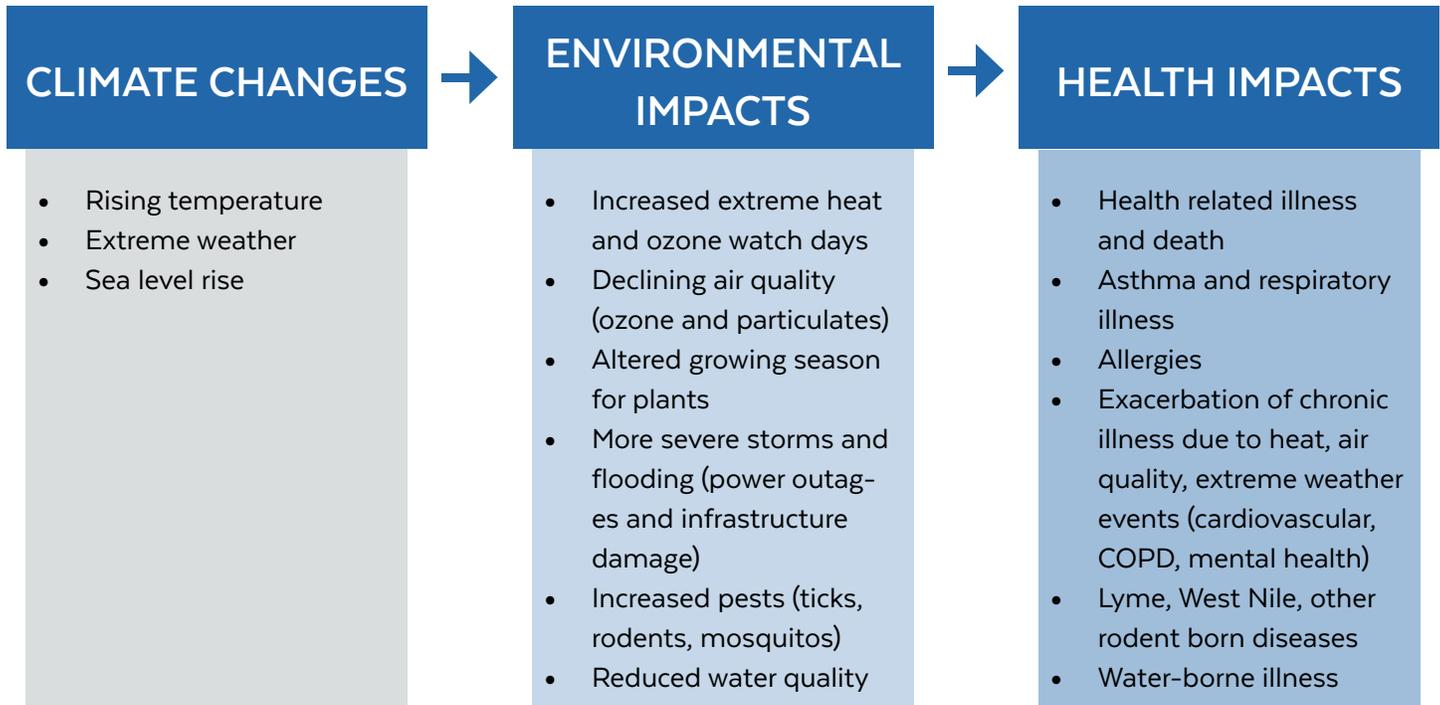# Leveraging Hospital Community Benefit Activities to Address Climate Change and Environmental Risks

March 2016

The Community Health Needs Assessment (CHNA) and community benefit implementation strategies provide a framework to support community activities that address local health priorities and climate change or other environmental risks. Many think of climate change as an energy issue because the discussion focuses on reducing fossil fuels and greenhouse gases (GHGs). **However, as greenhouse gas emissions increase we are witnessing environmental changes with far-reaching health implications, including some commonly prioritized in CHNAs (e.g., chronic diseases linked to obesity, cardiovascular risks, mental health, and asthma / respiratory risks).**

CLIMATE CHANGES	ENVIRONMENTAL IMPACTS	HEALTH IMPACTS
• Rising temperature • Extreme weather • Sea level rise	• Increased extreme heat and ozone watch days • Declining air quality (ozone and particulates) • Altered growing season for plants • More severe storms and flooding (power outages and infrastructure damage) • Increased pests (ticks, rodents, mosquitos) • Reduced water quality	• Health related illness and death • Asthma and respiratory illness • Allergies • Exacerbation of chronic illness due to heat, air quality, extreme weather events (cardiovascular, COPD, mental health) • Lyme, West Nile, other rodent born diseases • Water-borne illness

This paper identifies example community benefit activities that address common local health priorities and also mitigate climate change or generate environmental benefits. The examples are provided in four tables focusing on: 1) obesity / diabetes / cardiovascular risks (combined because community benefit activities can address multiple risks); 2) substance abuse; 3) asthma; and 4) access to health care.

Example community benefit activities were drawn from widely used national compendiums of effective, evidence based health interventions or reflect emerging practices with a strong likelihood of success.[1] In a few cases, examples from outside the health care setting are referenced as potential new strategies that could be adopted in CHNA implementation strategies.

To help community benefit staff consider pursuing similar initiatives, the tables list:
- Potential climate change or environmental benefits;
- Potential external or community partners who may conduct or help to support the work;
- Internal health care system staff who may have expertise or resources that could be leveraged to advise community projects. Internal staff may also manage relevant hospital projects that could serve as a model or be leveraged for broader community impact; and
- Links to relevant community benefit case studies, related resources, or information about initiatives that could serve as models.

---

1   The evidence for each example is drawn from these three sources: The Community Health Guide, County Health Rankings & Roadmaps, Centers for Disease Control and Prevention (CDC) Community Health Navigator

Table 1: Obesity / Diabetes / Cardiovascular Risks

OBESITY / DIABETES / CARDIOVASCULAR RELATED COMMUNITY BENEFIT ACTIVITIES		CLIMATE BENEFIT*	ENVIRONMENTAL BENEFIT	POTENTIAL EXTERNAL OR COMMUNITY PARTNERS	RELATED INTERNAL STAFF RESOURCES OR EXPERTISE	RELATED EXAMPLES OR RESOURCES
Food	Increase access to healthier sustainable foods in restaurants, schools, senior meal programs, employer-sponsored cafeterias, farmers markets	T, E, OGHG	Reduces fertilizer, pesticides, packaging, air pollution	Schools; restaurants; employers with food services; farmers; Meals on Wheels	• Food Services: can influence hospital menu planning & engage with farmer's markets; provide technical assistance for schools, senior centers, local government during program implementation • Environmental: provide resources to calculate energy & climate benefits of sustainable food adoption • Procurement and Supply: assist in the design and implementation of programs to provide local food to community organizations	Healthy Food and Beverage Choices Kaiser Permanente Farmers Market Project Kaiser Permanente Sustainable Food Project Berkeley Cool Climate Calculator
	Support locally sustainable food systems, infrastructure, and businesses (production, processing, packaging, transport)	T, E, OGHG	Reduces fertilizer, pesticides, packaging, air pollution	Farmers; farmers markets; larger food purchasers – schools, employers; Meals on Wheels; food vendors	• Food Service or Purchasing: design and/or contract to purchase from sustainable food businesses; advise other community procurement staff • Environmental: provide resources to calculate energy & climate benefits of food system changes • Finance: evaluate and recommend investments in local food businesses, where appropriate	Investment in Evergreen Cooperatives
	Discourage bottled water and soda consumption through pricing. Promote use of free tap water	T, E	Reduces waste	Schools; larger employers with food services; environmental groups; corner and grocery stores	• Food Services: promote differential pricing at health care facilities to encourage healthy beverages & ensure access to free water • Employee Wellness: implement healthy meeting menus and practices; advise community partners • Environmental: provide resources to calculate climate & waste benefits of reduced bottled water use	Healthy Beverage Choices Kaiser Permanente Healthy Menus and Meeting Planning Effective School Programs Minnesota Beverage Tax

Climate mitigation benefits through greenhouse gas reductions: T= reduced transportation emissions; E= reduced dependence on non-transit fossil fuels; OGHG= other greenhouse gas benefits (e.g., methane reductions or carbon sequestration in plants / trees).

Table 1: Obesity / Diabetes / Cardiovascular Risks (Continued)

OBESITY / DIABETES / CARDIOVASCULAR RELATED COMMUNITY BENEFIT ACTIVITIES		CLIMATE BENEFIT*	ENVIRONMENTAL BENEFIT	POTENTIAL EXTERNAL OR COMMUNITY PARTNERS	RELATED INTERNAL STAFF RESOURCES OR EXPERTISE	RELATED EXAMPLES OR RESOURCES
Transit	Engage in community outreach to encourage active transportation--Safe Routes to School; employer subsidized public transit or shuttle buses	T	Reduces air pollution	Schools; employers; City/regional transportation agencies; EPA Regional Offices	• Employee Wellness or Human Resources: implement programs to subsidize employee public transit • Environmental: create programs to subsidize public transit for patients; offer advice to community partners • Facilities: provide employee and patient shuttle buses; offer transit policy advice to local employers; encourage and build facilities near public transit	St. Louis Hospital Transit Subsidy
	Create bike or walking paths to encourage physical activity and reduce transit fossil fuel use	T	Reduces air pollution	Schools; local employers; city recreation	• Employee Wellness: encourage employee biking & walking • Facilities: install bike racks at health system campus and in the community; create walking paths; advise local employers	Seattle Children's Transit Planning
	Advocate for and/or support development of transportation or active design planning & guidelines	T	Reduces air pollution	City agencies, health and environmental organizations; large local employers	• Facilities or Planning: engage in local transportation planning • Environmental: provide resources to calculate climate & energy benefits of transit initiatives • Community Relations: promote transportation planning at local & state level	Seattle Children's Transit Planning
Physical Activity	Support reclamation of distressed/contaminated lands for park/exercise facilities	OGHG new planting carbon capture	Mitigate soil and water contamination	City economic development and recreation agencies; environmental groups; property owners	• Environmental: identify target properties; provide recommendations and advice to non-profit developers • Legal: provide pro bono legal support to non-profit developers and community groups	Seattle Gas Works Park

Climate mitigation benefits through greenhouse gas reductions: T= reduced transportation emissions; E= reduced dependence on non-transit fossil fuels; OGHG= other greenhouse gas benefits (e.g., methane reductions or carbon sequestration in plants / trees).

Table 2: Substance Abuse

SUBSTANCE ABUSE RELATED COMMUNITY BENEFIT ACTIVITIES	CLIMATE BENEFIT	ENVIRONMENTAL BENEFIT	POTENTIAL EXTERNAL OR COMMUNITY PARTNERS	RELATED INTERNAL STAFF RESOURCES OR EXPERTISE	RELATED EXAMPLES OR RESOURCES
Promote community pharmaceutical collection programs		Reduces chemicals in water and waste	Employers; public agencies; environmental groups	• Facilities or Waste Management: implement medication collection program; advise or partner with government & other health providers • Employee Wellness: promote medication collection program; advise local partners in expanded community program	Gundersen Medication Collection
Implement smoke free/tobacco free health care campus, workplaces, multi family housing, and public space policies & smoking cessation supports (Also provides asthma & respiratory benefits)		Reduces indoor and outdoor air pollution	Employers; property owners & managers	• Employee Wellness: promote smoking cessation; advise local employers HR staff • Facilities: expertise implementing health care smoke-free campus; advise local employers on smoke free policies • Community Relations: advocate for smoke-free policies in housing, restaurants, public spaces	Maine Tobacco Free Hospital Network

* Climate mitigation benefits through greenhouse gas reductions: T= reduced transportation emissions; E= reduced dependence on non-transit fossil fuels; OGHG= other greenhouse gas benefits (e.g., methane reductions or carbon sequestration in plants / trees).

Table 3: Asthma

ASTHMA RELATED COMMUNITY BENEFIT ACTIVITIES	CLIMATE BENEFIT	ENVIRONMENTAL BENEFIT	POTENTIAL EXTERNAL OR COMMUNITY PARTNERS	RELATED INTERNAL STAFF RESOURCES OR EXPERTISE	RELATED EXAMPLES OR RESOURCES
Support joint asthma and energy upgrades in low income homes with asthmatics and/or support development of healthy affordable housing (e.g., insulated and air sealed to reduce drafts; efficient heating/ cooling systems; ventilation; allergen & moisture controls; healthy building materials; asthma home visits	E	Reduces indoor air pollution and moisture/mold; can mitigate lead exposures	Public agencies; environmental & health groups; affordable housing developers/ owners; property owners; utilities; housing finance agencies	• Community Relations: assist in securing energy funding to supplement housing upgrades • Clinical Care Providers: provide referrals for high risk asthmatic patients; track improved health outcomes • Employee Wellness: engage in outreach to employees on home asthma triggers and local energy upgrade programs	Bon Secours Affordable Housing Nationwide Children's Medical Center Housing Rehab Build Health Initiative
Promote adoption of smoke free housing policies		Reduces indoor air pollution	Housing owners & managers; environmental & health community groups; health & housing agencies	• Community Relations: support policies and provide information to demonstrate health benefits	Smoke Free Coalitions Include Hospitals Smoke Free Housing Tool Kit
Support community solar projects, with multiple owners and/or buyers of the solar power	E	Reduces outdoor air pollution with reduced fossil fuel use	Public agencies; utilities; environmental groups	• Facilities: advise community solar projects; provide land • Finance: serve as anchor buyer for system solar power • Environmental: advise employees who may participate & local project proponents; related expertise with hospital or employee solar projects	Cleveland Evergreen Cooperatives Cleveland Clinic Employee Solar Benefits
Advocate for transit oriented energy efficient affordable housing (e.g., mixture of affordable housing, office, retail and/or other amenities integrated into a walkable neighborhood and located near quality public transportation	T, E	Reduces outdoor pollution	Public agencies; utilities; housing developers; non profit housing advocates; affordable housing financers	• Finance: make or provide direct investment/loans/loan guarantee to affordable housing developers • Community Relations: promote transit oriented development and related permitting; participate in local collaborations	Denver Mile High Connects

* Climate mitigation benefits through greenhouse gas reductions: T= reduced transportation emissions; E= reduced dependence on non-transit fossil fuels; OGHG= other greenhouse gas benefits (e.g., methane reductions or carbon sequestration in plants / trees).

Table 4: Access to Care

ACCESS TO CARE RELATED COMMUNITY BENEFIT ACTIVITIES	CLIMATE BENEFIT	ENVIRONMENTAL BENEFIT	POTENTIAL EXTERNAL OR COMMUNITY PARTNERS	POTENTIAL INTERNAL STAFF RESOURCES OR EXPERTISE	RELATED EXAMPLES OR RESOURCES
Create satellite community health centers	T	Reduced vehicle miles travelled reduces outdoor air pollution	Public agencies; community groups; health advocates; school nurses and school administrators	• Community Relations: assist in locating and permitting facilities; connections to affordable housing owners with potential users • Medical Providers: encourage patients to use community centers • Facilities: manage planning process and construction	Mobile Health Clinics
Promote telemedicine and online health supports	T	Reduced vehicle miles travelled reduces outdoor air pollution	Councils on Aging and senior advocates; public agencies	• Clinical Care Providers: assist with patient support for new systems • Information Technology: identify hardware & software options; provide support for partners promoting new IT services	Missouri & DC Telemedicine
Develop community & employer health screening programs	T	Reduced vehicle miles travelled reduces outdoor air pollution	Employers; local governments; school administrators	• Community Relations: help promote programs • Clinical Care Providers: fund safety-net providers to deliver community-based screening services and/or mobile clinics	Rochester Blood Pressure Screenings

* Climate mitigation benefits through greenhouse gas reductions: T= reduced transportation emissions; E= reduced dependence on non-transit fossil fuels; OGHG= other greenhouse gas benefits (e.g., methane reductions or carbon sequestration in plants / trees).

Activities Leveraging Health Care System Resources to Address Climate Change or Environmental Risks

Health care systems across the country are working to improve both patient and community health using a wide range of tools that include healthier sustainable food, active transportation, environmental risk reduction, energy efficiency and solar energy projects, housing and economic development, and access to care. Examples of such work are described below. Each of these projects addresses a health priority (as noted in the previous tables) and also helps to reduce climate or environmental risks. In some cases, the health care system is implementing the project on its campus, creating expertise or models that can be shared or leveraged with the larger community. In other instances, the health care system is directly supporting community activities to address local health priorities and the work has a climate or environmental co-benefit. In a few instances, projects from outside the health care system are described as they may offer new strategies that could be supported with community benefit resources.

Food

In addition to the below examples, more comprehensive descriptions of hospital initiatives are provided in _Creating Healthier Choices in Hospitals_, produced by Health Care Without Harm and the Center for Science in the Public Interest and Using Community Benefits to Improve Healthy Food Access produced by Health Care Without Harm.

Kaiser Permanente CA
Sustainable Healthy Food Combats Obesity and Climate Change
Kaiser Permanente's Sustainable Food project offers patients healthy locally grown food and supports over 50 farmers' markets. Partnering with local food supplies and farmers, Kaiser Permanente is working to re-envision the food supply systems using its anchor institution status to build healthy food systems that use fewer pesticides and fertilizers, reduce farm runoff that can pollute water systems and lands, employ fewer antibiotics, serve more fruits and vegetables and less meat to reduce their carbon footprint, and address the obesity crisis through healthier food choices. Using a Food Scorecard, Kaiser Permanente evaluates all potential food supplies against rigorous sustainability measures. Kaiser Permanente's food service, environmental and procurement staff and others working on the Sustainable Food Project are also offering this expertise to local community partners.

Kaiser Foundation Hospitals, South Bay and San Francisco CA
Support Locally Grown Fruits and Vegetables with Healthy Food Education
Kaiser Permanente's 2013 Community Benefit projects in South Bay and San Francisco provide resources to community organizations to increase availability and awareness of healthy foods. South Bay also will share their Farmer's Market model and resources with community partners to increase access to healthy foods. To the extent such programs promote reduced meat consumption, they help to reduce methane emissions, an important greenhouse gas. Local sustainably grown food will also help to reduce the use of energy intensive fertilizers and processing, and minimize food transportation emissions

Cleveland Clinic & University Hospital, Cleveland Ohio
Promoting Sustainable Foods, Green Energy Solutions, and Local Jobs
In 2008 five Cleveland anchor institutions, including the Cleveland Clinic and University Hospitals, created the Evergreen Cooperatives, a local wealth building and jobs initiative. The Coop supports several businesses including Green City Growers, a hydroponic greenhouse producing local food. University Hospital purchases lettuce from Green City Growers along with numerous other businesses and institutions. The longer shelf life and quality of the local lettuce is a key selling point. Additional Coop businesses include Evergreen Energy Solutions (E2S) and a LEED

certified green laundry service. E2S designs, installs, and develops solar panel arrays for institutional, governmental, and commercial markets. E2S also provides energy efficiency and home performance services to make residential and commercial buildings more energy efficient. Such home energy upgrades have been shown to reduce asthma attacks and hospitalizations in low-income families. E2S has worked with both hospitals to reduce carbon emissions and achieve climate change goals through efficiency and solar projects. Evergreen's laundry service uses less energy and water than traditional providers, producing a roughly 30% reduction in CO_2 emissions. University Hospital used Community Benefit funds to support this work.

Minnesota Sales Tax on Sugar Drinks
Discouraging High Sugar Drinks and Sodas
Minnesota has a long history of using tax policy as a tool for differentiating between foods that are deemed more or less desirable for health. Generally, food and food ingredients are exempt from the general sales tax in Minnesota. However, this exemption from the sales tax has not applied to soft drinks since at least 2000. In 2000, "soft drinks", including carbonated and noncarbonated beverages or drinks sold in liquid form, but not including beverages containing milk or more than 15 percent fruit juice, were made subject to taxation under Minnesota's general sales tax. Beverages that contain milk or milk products; soy, rice, or similar milk substitutes; or beverages with greater than 50 percent vegetable or fruit juice by volume are not included in the definition of "soft drinks" and have been exempted from the general sales tax as a food item since 2001. Hospitals could use Community Benefit resources to support advocacy efforts for similar tax or public policies.

Active Transportation

Seattle Children's Hospital Seattle WA
Transportation Projects Improve Health and Combat Climate Change
Recognizing the link between the built environment and health, Seattle Children's supported a comprehensive transportation plan to improve traffic, reduce driving, encourage physically active transportation, and improve the health of city residents and the environment. Plan goals include: fewer commute vehicle trips, reduced air pollution, and fewer greenhouse emissions. Conducted in conjunction with Seattle's Department of Transportation, the effort uses hospital funds to support the Livable Streets initiative to alleviate traffic congestion and make streets healthier. This investment is part of the community benefit plan aimed at reducing the health inequities reflected in the surrounding community. As part of their expansion of services, Seattle Children's is also devoting $4 million in transportation improvements.

Environmental Risk Reduction

Gunderson Health System La Crosse WI
Medication Collection Program
Gundersen Health System teamed up with local public health officials and the Wisconsin Department of Natural Resources to create a public medication collection program. This program collected 2500 lbs. of unwanted medication in the first six months. Gundersen provides medication drop boxes for patient, visitor and employee use across their campus, accepting prescription medications, over-the-counter medications, and pet medications. The program helps to reduce the availability of unused prescriptions, where they could be misused. Collected medications are disposed in an environmentally safe manner, minimizing potential contamination of drinking water systems.

NYC and Maine
Smoke Free Coalitions Include Hospital Partners
The NYC Smoke Free Coalition operates in several NYC boroughs. Local hospitals and community health centers are members of the coalition, which promotes smoke free housing to multi family property owners. For example, Bronx-Lebanon, Montefiore, and Lincoln Hospital participate in the coalition. The Maine Tobacco Free Hospital Network participates in the larger statewide Breathe Easy Coalition that promotes smoke free housing.

Energy Efficiency and Solar Energy

Cleveland Clinic and University Hospitals, Cleveland OH
Employee Home Solar Benefits Combats Climate Change and Improves Health
As part of a citywide Solarize Cleveland, the Cleveland Clinic and University Hospitals Health System are preparing to offer its respective 43,000 and 24,000 caregivers access to discounted purchasing prices for home solar systems to help mitigate climate change, improve air quality and health, and support local jobs. The opportunity for impact is demonstrated by the fact that the combined energy use of the Cleveland Clinic's workforce is equivalent to the energy of its facilities.

Housing and Economic Development

Bon Secours Health System, Baltimore MD
Developing Affordable Housing to Improve Health
As a mission driven Catholic hospital, Bon Secours has worked to revitalized local Baltimore neighborhoods. The hospital has helped to develop over 650 units of affordable housing and is planning to develop a total of 1200 homes. Funding for the purchase of the initial 31 vacant properties came from a $600,000 intra-company loan from the Bon Secours Health System's headquarters. To maximize its impact, Bon Secours created Unity Properties, establishing a dedicated organization to perform the initial acquisition and pre-development. Over 60 minor home improvement grants have also been provided to residents to create stable healthy housing. Community Benefit funds were also used to help support this effort.

Kaiser Permanente, Denver CO
Denver Mile High Connects – Collaboration for Transit Oriented Development and Jobs
Mile High Connects is a broad partnership of organizations from the private, public and nonprofit sectors that are committed to increasing access to housing choices, good jobs, quality schools and essential services via public transit. The mission is to ensure that the Metro Denver regional transit system fosters communities that offer all residents the opportunity for a high quality of life, including affordable and accessible public transit to health care facilities. Kaiser Permanente serves on the project Steering Committee.

Nationwide Children's Hospital, Columbus OH
Investing in Neighborhood and Housing Revitalization to Improve Health
Driven by a goal to stabilize the abutting neighborhood, improve population health, and provide workforce housing Nationwide Children's embarked on a strategy to renovate and build new affordable healthy housing. Since 2008 the effort has created over 100 affordable healthy homes and spurred creation of the Healthy Neighborhoods, Healthy Families non-profit, which will continue to build, rehabilitate and repair affordable homes. The hospital is also working with South Side Renaissance LLC to support an additional 75 home repairs. The overall effort tracks broad social outcomes that include: crime, missed school days, well checkups, asthma emergency department visits, and school readiness.

Build Health Initiative
Supports Health Care Systems and Community Groups to Address Housing Based Asthma Triggers
The Build Health Initiative awarded grant funds to several collaborations involving health care systems, public health or housing departments, and community groups to address asthma and other chronic disease risks through housing renovations. Projects are underway in Cleveland Ohio (The Metro Health System), Des Moines Iowa (Broadlawns Medical Center, Mercy Medical Center, and UnityPoint Health), and the Bronx NYC (Montefiore Medical Center).

Access to Care

Missouri and Washington DC
Promoting Telemedicine
A number of telemedicine and telehealth programs exist in the United States (HRSA-Telehealth networks). The Missouri Telehealth Network (MTN), for example, is aimed at enhancing access to care in underserved areas of Missouri. The Children's National Medical Center in Washington DC has a telemedicine program that serves community hospitals, suburban health centers, inner-city health clinics, national hospitals, and international partners (CNHS-Telemedicine).

Rochester NY
Employer Based Blood Pressure Screening
The High Blood Pressure Collaborative, a partnership between Rochester Business Alliance and the Finger Lakes Health Systems Agency, sought to improve management of this costly chronic condition. The Collaborative, which includes more than 60 community organizations, worked with businesses to encouraged employees to have their blood pressure taken and recorded through an 'easy enter' drop down menu on the Blood Pressure Challenge website. In 2013 more than 25,000 individuals from 104 organizations participated. The program significantly reduced the number of hypertensive individuals achieving blood pressure control through the use of employer

Health Care Without Harm seeks to transform the health sector worldwide, without compromising patient safety or care, so that it becomes ecologically sustainable and a leading advocate for environmental health and justice. Visit www.noharm.org for more information.

Practice Greenhealth, HCWH's membership organization, is the nation's leading health care community that empowers its members to increase their efficiencies and environmental stewardship while improving patient safety and care through tools, best practices and knowledge. Visit www.practicegreenhealth.org for more information.

Acknowledgements