



SUSTAINABLE PITTSBURGH



CHAMPIONS FOR SUSTAINABILITY

*Champions for Sustainability
Member Workshop Summary Series*

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**Sustainability and Healthcare:
Making the Business Case**
Part 1 of 5-Part 2011 Healthcare and Sustainability Series

**Workshop Date:
June 2, 2011**

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Steering Committee

Phyllis Barber (Steering Committee Co-Chair) Sustainability Coordinator Environmental Management Highmark	Mike Kane Executive Director Community Foundation for the Alleghenies
Dr. Eric Beckman Co-Director Science & Technology Mascaro Sustainability Initiative	Deborah Lange, Ph.D. Executive Director Steinbrenner Institute for Environmental Education and Research Carnegie Mellon
Beth Edwards General Manager The Mall at Robinson The Mall at Robinson Management Office	Dr. Irene E. McGee Vice President Health, Safety, Environment and Quality Bayer Material Science LLC
Bill Flanagan Executive Vice President, Corporate Relations Allegheny Conference on Community Development	Allison Robinson, Ph.D. Director, Environmental Initiatives UPMC
Benson Gabler Manager of Corporate Sustainability PNC Financial Services Group	Jerry Swart (Steering Committee Co-Chair) Managing Director Environmental Services Department FedEx Ground
Scott Golla Principal Corporate Environmental Engineer Westinghouse Electric Company LLC	
Lee Hipps Director of Nonprofit Technology Practice Ceeva, Inc.	
Drew Johnston Global Facilities Director Medrad, Inc	
David Kahley President & CEO Progress Fund	

Executive Summary

Champions for Sustainability (C4S) has launched a series of 5 workshops that advance the mutually reinforcing agendas of sustainability and healthcare for 2011. The emphasis for each event involves articulating the health outcomes, healthcare benefits, and business case, as well as best practices, resources, examples, and how to get started. Designed for executive leadership in mind, this event showcased how healthcare organizations can tap into opportunities for producing better health outcomes, reducing costs and finding new sources of revenue by pursuing a sustainable approach to healthcare operations. Participants interacted with a range of internationally-recognized practitioners who have implemented sustainable solutions in the healthcare industry to a variety of challenges.

C4S Workshop Series

Champions for Sustainability engages its members by convening a series of events and workshops for its membership approximately six times per year. Each workshop event explores a strategic topic of interest for the membership. Events make accessible current trends and challenges, provide access to tools, knowledge, and examples, and engage the membership in assessments and reflections to help craft the regional practice of sustainability. This publication series summarizes and makes accessible the most important outcomes from these workshop events.

About C4S

Champions for Sustainability brings together companies large and small, from many different industries, entrepreneurs, community leaders, university researchers, educators, and other social ventures to put sustainability into practice. C4S aspires to be the most effective region-based collaboration of leaders accelerating the practice and policy of sustainability in business and civic circles. Champions for Sustainability provides value to firms and organizations that seek sustainable solutions to operational practices through convening, networking, and direct consulting.

Memberships and Information:

- Champions for Sustainability www.C4SPgh.org
- Sustainable Pittsburgh www.sustainablepittsburgh.org

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1. About the Sustainable Healthcare Series

Leading healthcare organizations are increasingly recognizing the business case benefits and improved individual health outcomes of choosing sustainability as a strategy for operations and management. Benefits include healthier patients because of better environmental conditions and an emphasis on wellness, and bottom line wins associated with more efficiently operated facilities and institutions.

Sustainable Pittsburgh's sustainable business network, Champions for Sustainability (C4S) has launched a series of workshops that advance the mutually reinforcing agendas of sustainability and healthcare. The emphasis for each event involves articulating the health outcomes, healthcare benefits, and business case, as well as best practices, resources, examples, and how to get started.

According to the US Environmental Protection Agency, "Hospitals make significant contributions to their communities by providing a wide variety of services. They are also major employers, with healthcare comprising approximately 16% of the national and regional economy. Hospitals operate all day everyday, making their environmental footprint large in many communities. Hospitals generate approximately 7,000 tons per day of waste, including infectious waste, hazardous waste, and solid waste."

The emphasis for each event involves articulating the health outcomes, healthcare benefits, and the business case for sustainability in the healthcare field. The programs will also focus on sharing best practices, resources, examples, and how to get started.

Future programs in the series will focus on such topics as: Strategic Operational Environmental Solutions (Energy, Waste, Procurement, Buildings) on July 21, 2011; Sustainability Standards and Regulations for Healthcare on October 6, 2011; Sustainable Product and Service Procurement on November 3, 2011; and Information Management for Sustainability and Healthcare on December 1, 2011.

2. Sustainable Healthcare Series Planning Committee

Phyllis Barber
Sustainability Coordinator
Environmental Management
Highmark

Holly Cairns
PA Department of Environmental
Protection

Rachel Filippini
Executive Director
Group Against Smog and Pollution
(GASP)

Angela Garcia
Deputy Director
Global Links

Artis Hall
PA Department of Health

Erin Hart
Health Benefit Services Manager
American Healthcare

Michelle Naccarati-Chapkis
Executive Director
Women for a Healthy Environment

Valerie Patrick
Sustainability Coordinator
Bayer Materials Science

Brian Pinter
Kane Regional Centers

Allison Robinson
Director, Environmental Initiatives
UPMC

Virginia Thompson
EPA Region 3

Blythe Toma
Quality Assurance Manager
Allegheny County Medical
Examiners Office

Karen Wolk Feinstein
Director
Jewish Healthcare Foundation

Jeaneen Zappa
Sustainability Coordinator
Allegheny County

3. Event Summary

Title: Sustainability and Healthcare: Making the Business Case

Date: Thursday, June 2, 2011

Time: 7:30 am – 11:30 am

Location: Phipps Conservatory and Botanical Gardens

Cost: \$45 for C4S/Sustainable Pittsburgh Members, \$65 Nonmembers, Students: Special Rate

3.1 Agenda

7:30 AM Registration and refreshments

8:00 AM Welcome by Matt Mehalik, Champions for Sustainability, Sustainable Pittsburgh

8:10 - 8:30 Opening Address--Secretary Avila, Pennsylvania Department of Health

8:30 - 9:00 David Hearn, Kaiser Permanente

9:00 - 9:15 Audience Questions

9:15 -10:15 Panel discussion

10:15 - 11:15 Break out discussion with panelists

11:15 - 11:30 Wrap Up

3.2 Event Speakers

Kickoff Speaker:

Dr. Eli Avila, Secretary, Pennsylvania Department of Health (Confirmed)

Keynote:

David Hearn, VP IT and NFS Procurement, Procurement & Supply, Kaiser Permanente (Confirmed)

Panelists:

Anna Gilmore Hall, RN, MS, CAE, Executive Director, Practice Greenhealth (Confirmed)

Marc Mondor, AIA, LEED Faculty, Principal, evolveEA (Confirmed)

Seema Wadhwa, Director of Sustainability, Inova Health System (Confirmed)

Christina Vernon, AIA, LEED AP, Sr. Director of Sustainability and Environmental Strategy, Cleveland Clinic (Confirmed)

Moderator:

David Dausey, Ph.D., Senior Director, Health Programs and Distinguished Service Professor, Carnegie Mellon (Confirmed)

3.3 Speaker Biographies

Dr. Eli N. Avila, MD, JD, MPH, FCLM

Secretary Of Health

Commonwealth Of Pennsylvania

In early January 2011, Governor Tom Corbett announced Eli N. Avila, MD, JD, MPH, FCLM as his nominee to head the Pennsylvania Department of Health. Beginning his post on Jan. 18, 2011 as Pennsylvania's top health regulator, Dr. Avila is responsible for carrying out the Health Department's mission to promote healthy lifestyles, prevent injury and disease and to assure the safe delivery of quality health care for all Pennsylvania citizens.

Dr. Avila is a practicing physician, attorney and public health executive. Before joining the commonwealth, he worked as Chief Deputy Commissioner of Health Services for Suffolk County, NY – the seventh largest county in the United States, managing an annual budget of more than \$400 million and overseeing a staff of nearly 1,500 employees. Dr. Avila recently practiced law in New York City for an environmental biotechnology company and practiced administrative/clinical medicine as the Senior Examining Occupational Medicine Physician for the Department of Health and Human Services' Federal Occupational Health Service in the Capital Region of New York.

Dr. Avila has trained in internal medicine, ophthalmology, and occupational and environmental medicine. For 12 years, he was a member of the academic/clinical faculty at Columbia's College of Physicians and Surgeons in the Department of Ophthalmology. He also co-chaired the New York State Bar Association's Medical Research and Biotechnology subcommittee and was a member of the Executive Committee of the Health Law Section.

His volunteer and community service credits include participation in several county medical reserve units, the role of medical director for the Suffolk County Urban Search and Rescue Team, and consultation as a police surgeon for several law enforcement agencies. He has also been included in the "Who's Who" of Hispanic Americans since 1994.

Dr. Avila received his bachelor's degree in biology from Brown University, M.D. from Brown University School of Medicine, along with a J.D. (cum laude) from the St. John's University School of Law and a Master of Public Health (honors) from the Mount Sinai School of Medicine's Program in Public Health – New York University.

David Dausey, Ph.D.

Senior Director, Health Programs and Distinguished Service Professor, Carnegie Mellon

David J. Dausey, Ph.D., is a tenured Professor of Public Health and director of the Mercyhurst Institute for Public Health at Mercyhurst College in Erie, Pennsylvania. He also holds an honorary faculty position at Carnegie Mellon University where he is a Distinguished Service Professor of Health Policy and Management. An internationally respected public health and health care expert, Dr. Dausey has worked closely with senior health officials in more than twenty countries and experts at international organizations and foundations such as the World Health Organization, the United Nations, the Global Health and Security Initiative and the Rockefeller Foundation. Dr. Dausey serves as a consultant for the RAND Corporation's Global Health Division and the US Centers for Disease Control and Prevention. Over the last decade, Dr. Dausey has led and directed externally funded research projects totaling nearly ten million dollars. He is the author of more than 70 scholarly publications including articles in top-tier journals such as the American Journal of Public Health, Health Affairs, and the American Journal of Psychiatry. His work has been featured by domestic and international media outlets such as the domestic and international edition of USA Today (front page), the Atlantic Journal-Constitution, the

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San Francisco Chronicle, the San Diego Union-Tribune, the Washington Post, U.S. News and World Report, CNN, MSNBC and Westwood One. Dr. Dausey currently serves as a trustee or elected member of the board of directors for several organizations including the Jewish Health Care Foundation, Health and Hospitals Inc, the Hospital Council of Western Pennsylvania and the American College of Health Care Executives.

Anna Gilmore Hall, RN, MS, CAE

Executive Director, Practice Greenhealth

Ms. Gilmore Hall is a graduate from Eastern Maine Medical Center, School of Nursing (diploma in Nursing), University of Maine (BUS) and Capella University (MS). Anna received her CAE certification from the American Society of Association Executives. She is currently the Executive Director of Practice Greenhealth, the nation's leading membership organization for institutions in the healthcare community that have made a commitment to sustainable, eco-friendly practices.

Previously for twenty years, Ms. Gilmore Hall has held various staff positions including the position of Co-Executive Director of Health Care Without Harm, the international campaign for environmentally responsible health care, the Director of the Center for Occupational and Environmental Health at the American Nurses Association where she was responsible for developing and implementing environment policy issues for the largest nursing organization in the United States. She was the ANA's Director of Labor Relations and Workplace Advocacy for many years. Before joining the ANA, she worked with the Maine State Nurses Association as both their director of Labor Relations and later their Executive Director. She is a nursing luminary. She is the editor of Greenhealth Magazine and recently the guest editor of the 2010 fall issue of Nursing Administration Quarterly on environmental health.

Marc Mondor, AIA, LEED Faculty

Principal, evolveEA

Marc Mondor takes pride in seeing potential for design innovation where others do not. He has over ten years of architectural experience and has been an integral part of Pittsburgh's sustainable design movement since the mid 1990's. Marc's consulting work has led to many innovative firsts, including the nation's first LEED certified supermarket (for Giant Eagle), the first LEED Gold certified place of worship (for the Unitarian Universalist Community), the first LEED Commercial Interiors Gold office space (for the Coro Foundation) and is currently working on what is to be the first LEED certified project in Africa (with HSBC Bank Egypt). Current clients include Giant Eagle, Carnegie Mellon University, Dick's Sporting Goods, HSBC, IBM, Phipps Conservatory, the Pittsburgh Opera, Point Park University, Supervalu, Wegmans, WPXI, UPMC and several school districts. Marc has lectured nationally and is one of 60 national professionals to be named to be USGBC's LEED Faculty.

Marc has brought change to the region by serving on the boards of the Food Marketing Institute, Friendship Development Associates, the East End Growth Fund and Three Rivers Association for Sustainable Energy (TRASE). Marc received his Bachelor of Architecture degree from California Polytechnic State University at San Luis Obispo and studied sustainable design in Scandinavia. Marc is a Registered Architect and a LEED Accredited Professional.

Christina Vernon, AIA, LEED AP

Sr. Director of Sustainability and Environmental Strategy, Cleveland Clinic

Christina Vernon is the inaugural Director of Cleveland Clinic's Office for a Healthy Environment, established in 2007. She is a registered architect and LEED accredited professional with more than 10 years experience, most of which focused exclusively in healthcare planning and construction. She oversees the sustainability program across the Cleveland Clinic Health System which has more than 37,000 employees and over 22 million SF in its portfolio. In support of healthy environments for healthy communities, her efforts target healthy buildings,

healthy operations and better buying while finding champions and innovators within Cleveland Clinic Health System and its communities. The Office for a Healthy Environment oversees a network of green teams and advises green building projects throughout the \$4.6 billion dollar enterprise. Under her leadership, the Cleveland Clinic Health System became the first healthcare provider in the United States to sign on to the United Nations Global Compact, and received 13 national green healthcare awards from Practice Greenhealth in 2008.

3.4 Panel Discussion Synopsis

Anna Gilmore Hall

Practice Green Health

- Sustainability in healthcare, more than a trend,
- Good for patients, staff, communities and business
- 75% of HC spending on chronic and preventable diseases: obesity, diabetes, cancer.
- HC spending is 17% of US GDP, will be upwards of 20% by 2015.
- HC workforce is 4.6 million people.
- HC spends 8.3 Billion dollars on energy every year.
- HC produces 6 million tons of waste per year.
- HC is a huge user of water.

Sustainability Oversight:

- Healthier hospital initiative – move market to environmentally preferable practices.
- Greening the O.R., Greening the supply chain.

Christina Vernon *Cleveland Clinic*

- Create safe and healthy places to work and heal.
- Foci: waste, energy, food, climate change
- Solutions: solar panels, recycling initiatives, farmer's markets for community.
- Change decision making by caregivers.

Seema Wadhwa *Innova*

- Innova, 5 hospitals, 1,700 doctors.
- Key Areas of Sustainability: energy, water, purchasing, info-tech, foods, construction, transport, waste.
- Culture Change:
 - the business case: looking at lifecycle costs to the overall system, not just first costs.
 - Culture change creates cost savings: benchmarking, auditing, education, monitoring, and process improvement.
 - Answering the question “Why should I care?”
- **Green is Green:** recycling savings, water savings, energy savings.

Marc Mondor *evoleEA*

- Sustainability/ built environment

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- Buildings account for 72% of electricity usage, 39% of energy usage.
- Every building has a leed score. Criteria: site, water, energy, materials, indoor environment.
- Leed healthcare, separate rating system.
- **Best Practices:** evidence based design, daylighting, energy modeling, conditioning (HVAC optimized in design), measurement and verification (to manage energy), senior level commitment.
- **ROI's:** (Not necessarily economic)
- Energy, faster discharges, increased employee productivity, risk mitigation, recruiting advantage, public perception.
- **Barriers:** increased first costs, lack of awareness, experience curve, lack of training.

6 C's: Competition, Collaboration, Culture, Commitment, Cost. Construction, Can-do spirit, Certification

- Competition for awards yields positive outcomes for all hospitals. Greenhouse awards, Leadership Awards etc.
- Ethical moral propensity to sustainability, best stewards of the community
- Competition and Collaboration: open-source programs, most dynamic aspect of construction, opportunities for leverage. The triple bottom line.

Challenges:

- Communicating with employees. Explaining how sustainability accomplishes untied goals. Fun activities for employee engagement. Incentives.

Work with broader culture.

- Addressing the issue of "Food Deserts" in cities. Farmer's Markets on Hospital grounds that take WIC and food stamps.
- Create positive environment around hospitals.
- Employees as ambassadors to the community.
- Community Partnerships: farmer's markets, enrolling employees in farmer's coops.
- **Greening Smaller Offices:** Physician engagement, What does Green mean?, how to be ecologically beneficial?

"Random Acts of Greenness v. Certification"

- Accumulated strategy for sustainability is a system of continuous improvement, as opposed to individual actions.
- **Lifetime costs + hidden costs:** e.g. flooring (some cheaper to install flooring has higher lifetime costs, in waxing and cleaning than do more sustainable flooring materials.)
- Water-based floor stripping, more expensive, but less disruptive and toxic, meaning less costs overall.

- Finding processes and products that are “Aces in the deck” sustainable and cost savings.

4.0 Workshop Report Results—Participant Information

4.1 Event Attendees:

The following organizations had representatives attend this workshop:

Allegheny County
American Healthcare Group
Bayer Corporation
Carnegie Mellon University (x6)
ClearChoice Energy
Cleveland Clinic, Office for a Healthy Environment
Duquesne University (x2)
evolveEA
Global Links
Group Against Smog and Pollution
Healthy Start, Inc.
Heritage Valley Health System (x2)
Highmark Inc. (x4)
Inova Health System
Kaiser Permanente
Kane Regional Centers
Lytle EAP Partners
Massaro Corporation
MEDRAD, Inc.
Monongahela Valley Hospital, Inc.
Pennsylvania Department of Environmental Protection
Pennsylvania Department of Health (x4)
Practice Greenhealth
SCA Green Cities
Sizewise
St. Clair Hospital
Sustainable Pittsburgh (x7)
The Salvation Army Dental Center
TRANE (x2)
University of Pittsburgh (x2)
UPMC (x8)
Women for a Healthy Environment

A total of 64 people attended the event, involving 35 separate organizations, of which 24 organizations (44 people) were directly involved in healthcare services, products, or systems.

4.2 Workshop Discussion Worksheet Results

Q1A: What sustainability initiatives have been put into practice at your organization?
What were key factors making them possible?

Programs:	* * * * * (8)
Education/Consulting	* * * * * (6)
Transportation	* * * * (4)
Green Purchasing/Infrastructure	* * * * (4)
Certification	* * * (3)
Energy management	* * (2)

Responses:

- Health info exchange network
- Sustainable food service
- Higher level champions
- Cross functional teams
- Green commute week
- Increase recycling
- Going paperless
- Green Team
- Transitioning from random acts of sustainability, to strategic approach to sustainability.
- Expectation of regulation/response to competition
- Research, communication, education
- Sustainable education events
- Sustainable consulting
- Focus on metrics
- Alternative transportation
- Green commute week
- Trucks use Biodiesel
- Hybrid vehicles
- List of items with PVC-DEHP Free tubing
- Electronic medical records
- Green chemical
- Green roofs
- Energy star benchmarking
- LEED certification
- Portfolio manager
- Research, communication, education
- Outside funding grants

Q1B: What new sustainability initiatives would you like to see put into practice in your organization? What are some key features of these opportunities that will make the new initiatives possible?

Operational Programs	* * * * * (7)
Training/Awareness	* * * * (4)
Monitor/Measure	* * (2)
Collaboration	* * (2)

Responses:

- Work hours to be mindful of rush hour demands on the environment
- Energy goal/target for sustainable sources
- Composting/ food waste management
- Green transportation fleet
- Sustainability coordinator
- Engage middle man
- Better organization
- Awareness of sustainability, products, compostable products
- Cultural change initiative
- Leadership training
- Renewable energy
- Monitoring/measuring of LCA&GHG
- Measurement and Verification
- Community collaboration
- Donating used supplies

Q2A: What are barriers that limit the ability for you and your organization to implement sustainability initiatives? What are the sources of those barriers?

Communication/Coordination Problems	* * * * * (8)
Cost Effectiveness	* * * * (5)
Attitudes-Resistant To Change	* * * * (4)
Strategy Lacking	* * * (3)
Expertise Lacking	* * (2)
Information Lacking	* * (2)
Time	* * (2)

Responses:

- Large organization w/ constant change makes it difficult to get the workplace in the forefront
- Logistics of a large institution
- Executives that “don’t get it”
- Perception of green energy
- Integration-No SILOS
- Not certain of needs
- Partners
- Age
- Perception of cost effectiveness of mitigation measures
- Justification of cost over lifetime
- Time and focus
- Finances
- Cost
- Topic of climate change is highly politicized
- Resistant’s to using technology
- Competing Agendas
- Priorities
- Large organization w/ constant change makes it difficult to get the workplace in the forefront
- Implementation of sustainability in strategic plan
- Coordination
- Information gathering from key people
- Availability of expertise
- Data availability
- Education

Q2B: Are these barriers unique to your organization or shared throughout the industry?
What might be done to break through those barriers?

Collaboration * * * * * (7)
Goal Setting * * * * (4)
Reward Getting Started * * (2)

Responses:

- Education of staff and public
- Starting projects in advance
- Hiring additional personnel
- Collaborative effort
- C-level support
- Persistence
- Delegating
- Realizing rewards and recognition
- Starting projects in advance
- Set ambitious goals
- Persistence
- Realizing rewards and recognition
- Starting projects in advance

Q3A: Which types of expertise, skills, access, or capacities should the organizing committee provide to help your organization implement sustainability programs?

Provide Opportunities For * * * * * (15)
Provide Inspirational & Informative Programming * * * * * (13)
Demonstrate Practical Benefits * * * * * (6)

Responses:

- More “what can be done?” inspiration, bringing successful innovators from outside regions today
- Persuasion of value and business case for greening
- Someone that is interested and enthusiastic
- Reporting results of assessment tools
- Personnel from many backgrounds
- Business sense & sustainability
- Providing examples of results
- Communication & education
- Training and access to data
- Information/Idea sharing
- Best practice sharing
- Embody the value
- Sample checklist
- Best practices
- Facilitation
- Reach CEO’s, COO’s, Director of environmental services
- Credibility, matching message of organization
- Real world tools for analysis projects
- Personnel from many backgrounds
- Facilitation
- Mandates

Q3B: What types of events and subject matter would give your organization access to more opportunities regarding sustainability issues?

Education * * * * * (5)
Strategies * * * * * (5)
Sharing/Discussion * * (2)

Responses:

- Raising awareness and training workshops that deflected informed decisions
- Sensors to measure sustainability
- Leadership education

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- Mandatory sessions
- Technical folks
- Implementation of offensive strategies and attitudes rather than defense attitudes from scientists,
- Alternatives methods to educate older mentalities
- More local focus of opportunities
- Product lists, company lists
- Competitions
- Roundtable discussion of success stories
- Sharing models of strategic approaches