

# Environmental Sustainability: A New Hospital Survival Strategy

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Institute for Healthcare Improvement

Michigan Green Health Care Annual Conference

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# Sustainability: More than a Blue Bin by the Copier



# How does Sustainability fit into Health Care?

## First, Do No Harm



Patient Health



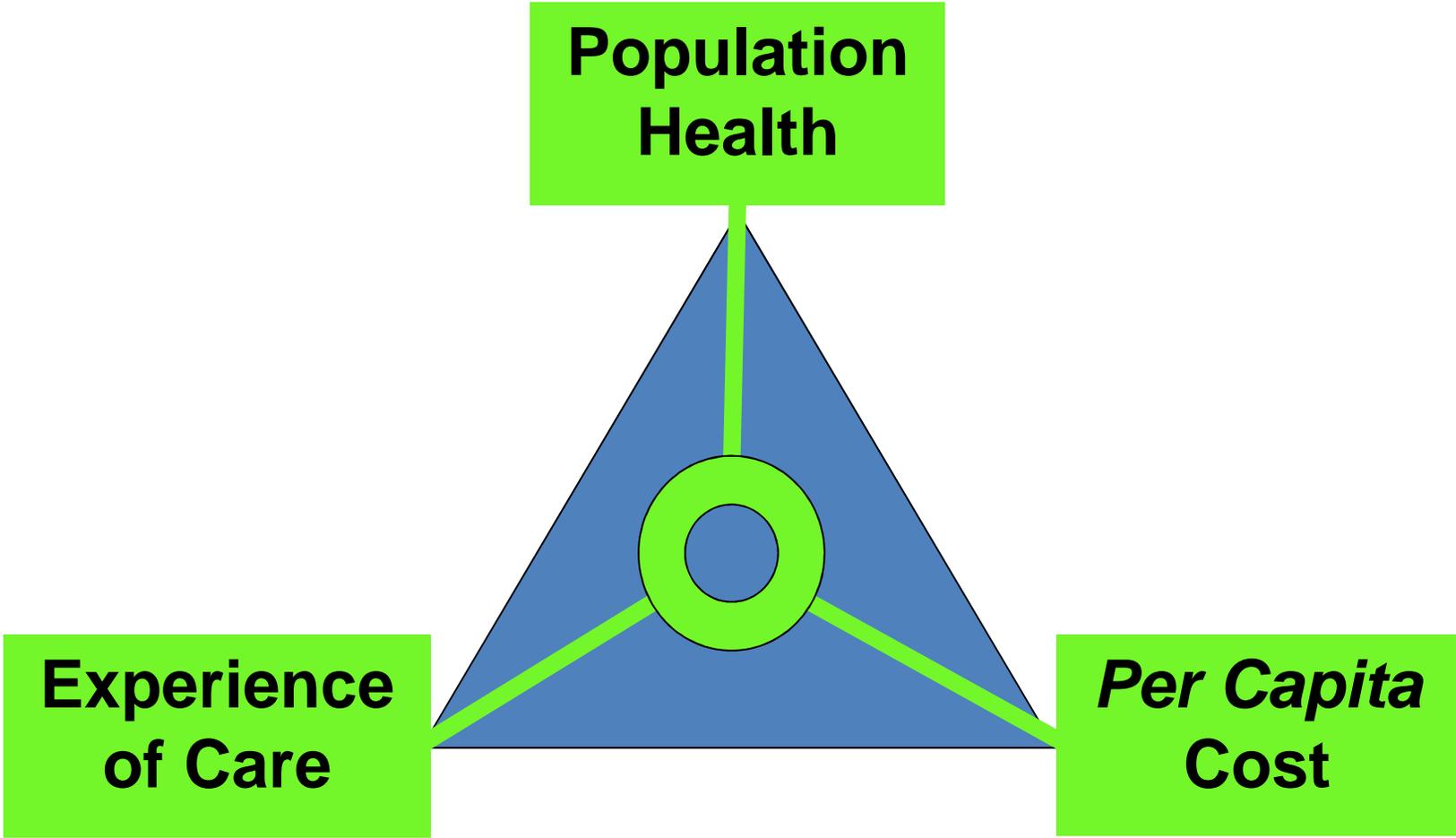
Employee Health



Community Health

- Centers for Medicare and Medicaid Services (CMS) **Triple aim** - Better Care, Better Health, and Lower Costs
- The **Joint Commission's Environment of Care (EC)**

# The Triple Aim



# The Triple Aim

**Population  
Health**

Health Care Without Harm does not  
just *relate* to the Triple Aim...  
It *redefines* the Triple Aim.

**Experience  
of Care**

***Per Capita  
Cost***



Healthier  
Hospitals  
INITIATIVE

[www.healthierhospitals.org](http://www.healthierhospitals.org)

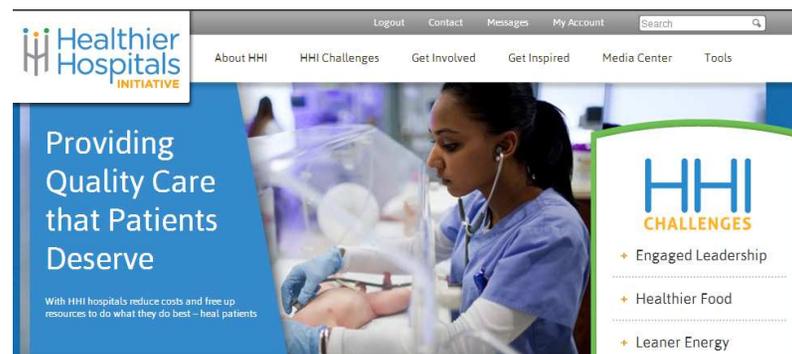


# Healthier Hospitals Initiative



Goal is to enroll **2000 hospitals**

**FREE** for all enrollees



## Modeled after IHI 100,000 Lives Campaign

- Acceleration strategy at the intersection of sustainability, patient and worker safety
- Using proven strategies to drive success

## Milestone Report

a POWERFUL evidence-based story to tell



# Cost Savings



NOVEMBER 2012

## Issue Brief

### Can Sustainable Hospitals Help Bend the Health Care Cost Curve?

SUSAN KAPLAN, BLAIR SADLER, KEVIN LITTLE, CALVIN FRANZ,  
AND PETER ORRIS

**Abstract:** As policymakers seek to rein in the nation's escalating health care costs, one area deserving attention is the health system's costly environmental footprint. This study examines data from selected hospitals that have implemented programs to reduce energy use and waste and achieve operating room supply efficiencies. After standardizing metrics across the hospitals studied and generalizing results to hospitals nationwide, the analysis finds that savings achievable through these interventions could exceed \$5.4 billion over five years and \$15 billion over 10 years. Given the return on investment, the authors recommend that all hospitals adopt such programs and, in cases where capital investments could be financially burdensome, that public funds be used to provide loans or grants, particularly to safety-net hospitals.

★ ★ ★ ★ ★

#### OVERVIEW

The health care sector has a large and costly environmental footprint. Hospitals, in particular, are among the country's most energy-intensive facilities, accounting for a significant percentage of U.S. greenhouse gas emissions and carbon dioxide emissions. They create 6,600 tons of waste per day and use large amounts of toxic chemicals. Reducing such pollution and greenhouse gas emissions would reduce the incidence of human disease, thereby saving money for the health care system and society as a whole.

As part of a preventive approach to controlling chronic disease, increasing numbers of hospitals have committed to minimizing the adverse environmental effects of their operations on patients, staff, and the community, serving as role models for the health sector and society at large. If such innovations were adopted nationwide, could they help bend the health care cost curve?

The mission of The Commonwealth Fund is to promote a high performance health care system. The Fund carries out this mandate by supporting independent research on health care issues and making grants to improve health care practice and policy. Support for this research was provided by Health Care Without Harm, through grants from The Commonwealth Fund and The Robert Wood Johnson Foundation. The views presented here are those of the authors and not necessarily those of The Commonwealth Fund or its directors, officers, or staff.

For more information about this study, please contact:  
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kaplans@uic.edu

To learn more about new publications when they become available, visit the Fund's Web site and register to receive

This report estimates that if the health care industry conserved energy at our facilities, reduced waste, and more efficiently purchased operating supplies, we could **save more than \$15 billion over a decade.**

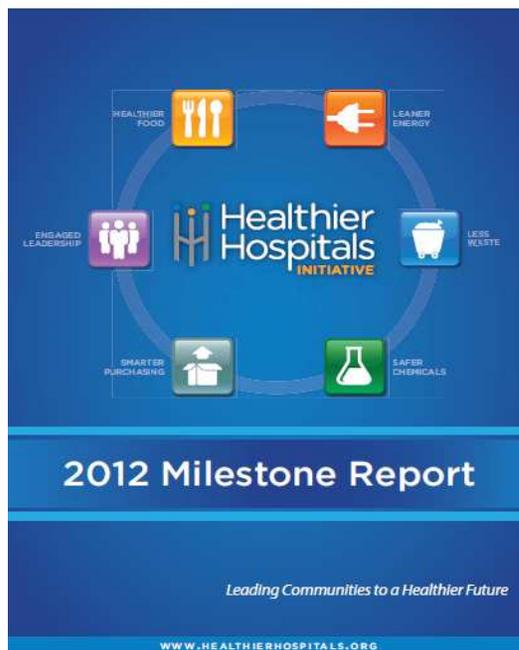
## Citation

S. Kaplan, B. Sadler, K. Little, C. Franz et al., Can Sustainable Hospitals Help Bend the Health Care Cost Curve?, The Commonwealth Fund, November 2012.

# Strength in Numbers

The 2012 HHI Milestone Report summarizes the initiative's first year of progress, with over 700 hospitals committed to HHI and more than 350 contributing to the data pool.

Here are some of the incredible accomplishments:



- **50 million** pounds of materials recycled
- **\$32,089,776** in savings resulting from single-use medical device reprocessing
- **\$9 million** spent on local/sustainable food options
- **\$19,029,640** spent on DEHP/PVC free medical products

# HHI Overview



The screenshot displays the Healthier Hospitals Initiative website. At the top right, there is a navigation bar with links for "Logout", "Contact", "Messages", "My Account", and a search box. Below this is a secondary navigation bar with links for "About HHI", "HHI Challenges", "Get Involved", "Get Inspired", "Media Center", and "Tools". The main content area features a central green banner with the "HHI CHALLENGES" logo. Below the banner, there are six white buttons with orange plus signs, each representing a challenge: "Engaged Leadership", "Healthier Food", "Leaner Energy", "Less Waste", "Safer Chemicals", and "Smarter Purchasing". The banner also includes a text description: "The HHI Challenges are a data-driven platform designed to help healthcare organizations commit to sustainability goals and track their environmental efforts." The banner is flanked by images of a woman with vegetables, a child with a recycling bin, a child eating, and wind turbines.

Healthier Hospitals INITIATIVE

Logout Contact Messages My Account Search

About HHI HHI Challenges Get Involved Get Inspired Media Center Tools

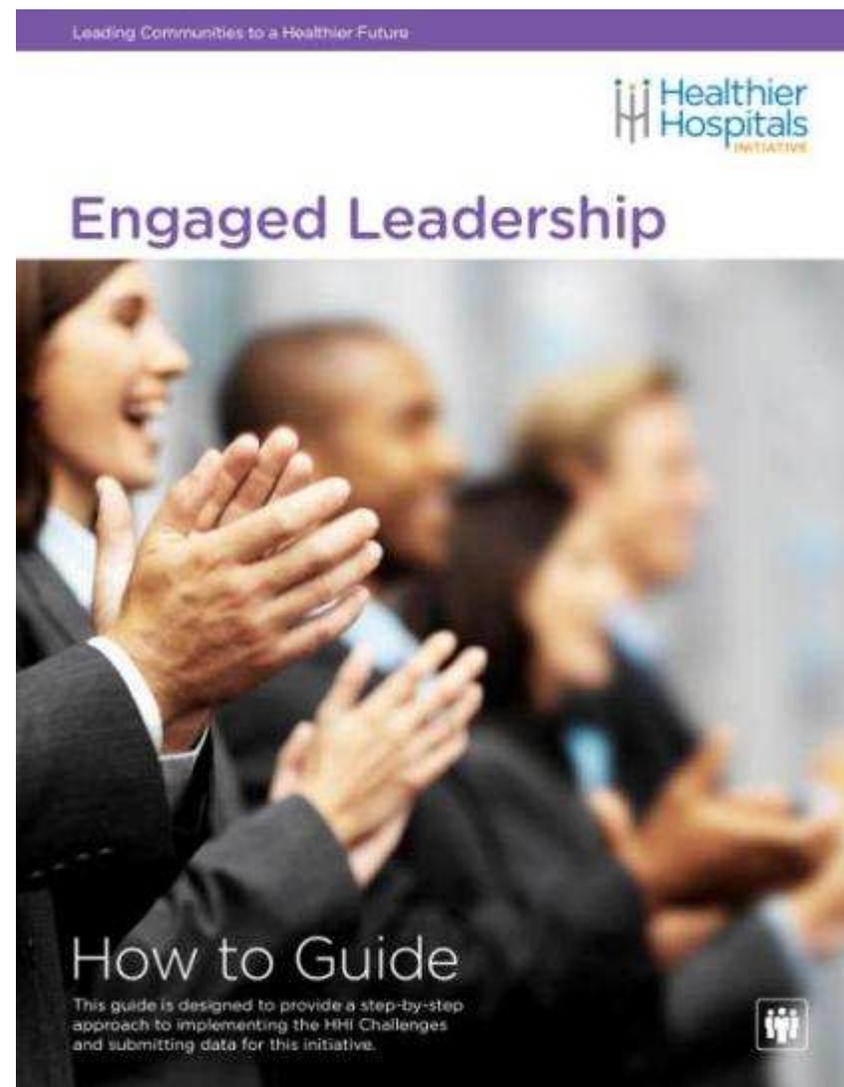
## HHI CHALLENGES

The HHI Challenges are a data-driven platform designed to help healthcare organizations commit to sustainability goals and track their environmental efforts.

- + Engaged Leadership
- + Healthier Food
- + Leaner Energy
- + Less Waste
- + Safer Chemicals
- + Smarter Purchasing

# Engaged Leadership

The furthest reaching sustainability programming has leadership support, demonstrated by environmental charters, reporting structure and goal setting that recognizes the importance of continuous environmental quality improvement for the long term.



# Engaged Leadership

## Strategic Priority:

- Create a strategic sustainability plan
- Create a Mission statement/Guiding principle/charter

## Operational Focus:

- Create sustainability responsibilities within the organization
- Create an environmental steering committee with regular meetings

## Systematic Communication:

- Communicate progress on sustainability initiatives to the board
- Report progress regularly on sustainability initiatives to leadership team

## Stakeholder Engagement:

- Participate in programs to support employee and community engagement
- Educate all employees, including entering employees, about sustainability

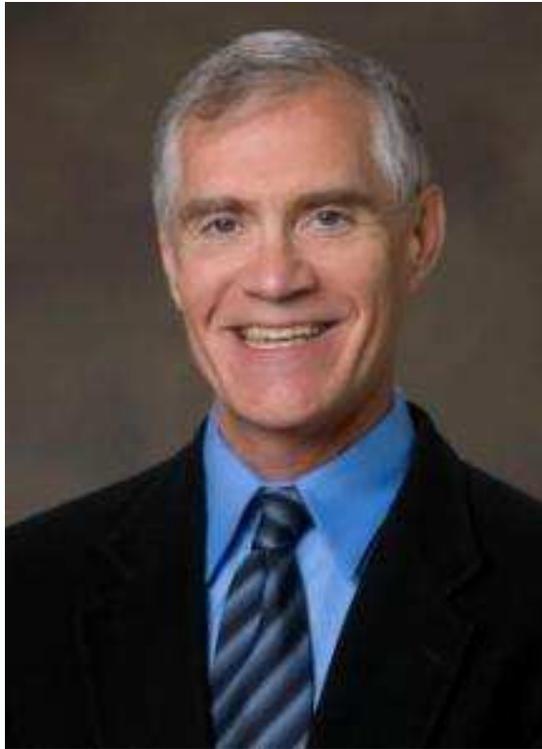
Level 1 – 3 activities

Level 2 – 6 activities

Level 3 – 10 activities



# Leadership Walks, Talks, Envisions...



Jeffrey Thompson, MD, CEO  
Gundersen Lutheran Health System  
La Crosse, Wisconsin

**“Healthcare organizations need to be honest with themselves and ‘look in the mirror’ when it comes to environmental factors that affect human disease. Our mission is to improve the health of the communities we serve, and we cannot accomplish this mission without looking at our organization’s environmental impact and how that contributes to disease.”**



# Partners HealthCare

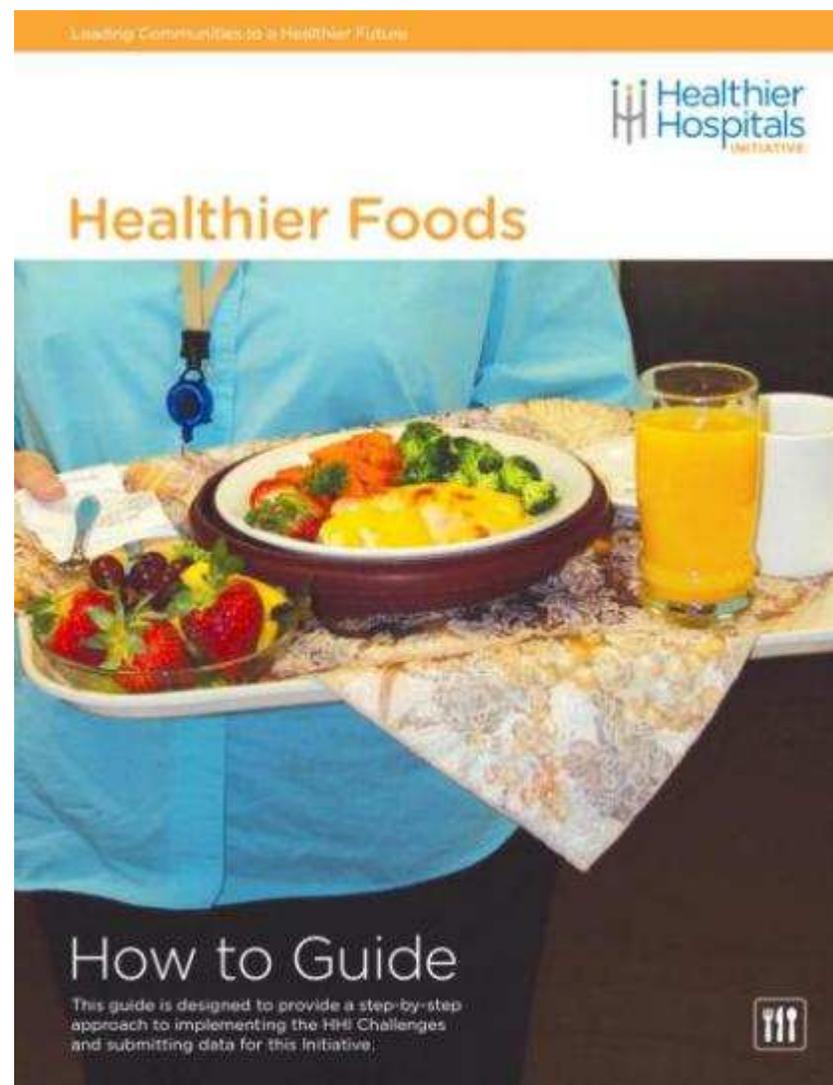
**"From the beginning, Partners HealthCare has made a commitment to improving the health of our communities, locally and globally. We accept the responsibility to take a leadership role in protecting our environment through a focus on sustainability."**



Gary Gottlieb, MD, MBA  
CEO, Partners HealthCare  
Boston, MA

# Healthier Food

Hospitals have a unique opportunity to use their purchasing power and mission of healing to model healthy food procurement and consumption by serving fresher, healthier, more nutritionally dense food to patients, staff and communities.



# Healthier Food

## Balanced Menus Challenge

Decrease amount of meat purchased by 20 percent within three years from baseline. (meat = beef, pork, poultry and lunch meat; measure = lbs.)

## Healthy Beverages

Increase the percentage of healthy beverage purchases by 20 percent of total beverage purchases annually OR achieve healthy beverage purchases of 80 percent of total beverage purchases

## Local and/or Sustainable Foods

Increase the percentage of local and/or sustainable food purchases by 20 percent annually OR achieve local and/or sustainable food purchases of 15 percent of total food dollar purchases

Baseline: Sign Health Care without Harm's Healthy food Pledge

Level 1 – Commit to one

Level 2 – Commit to two

Level 3 – Commit to all three



## Borgess Medical Center

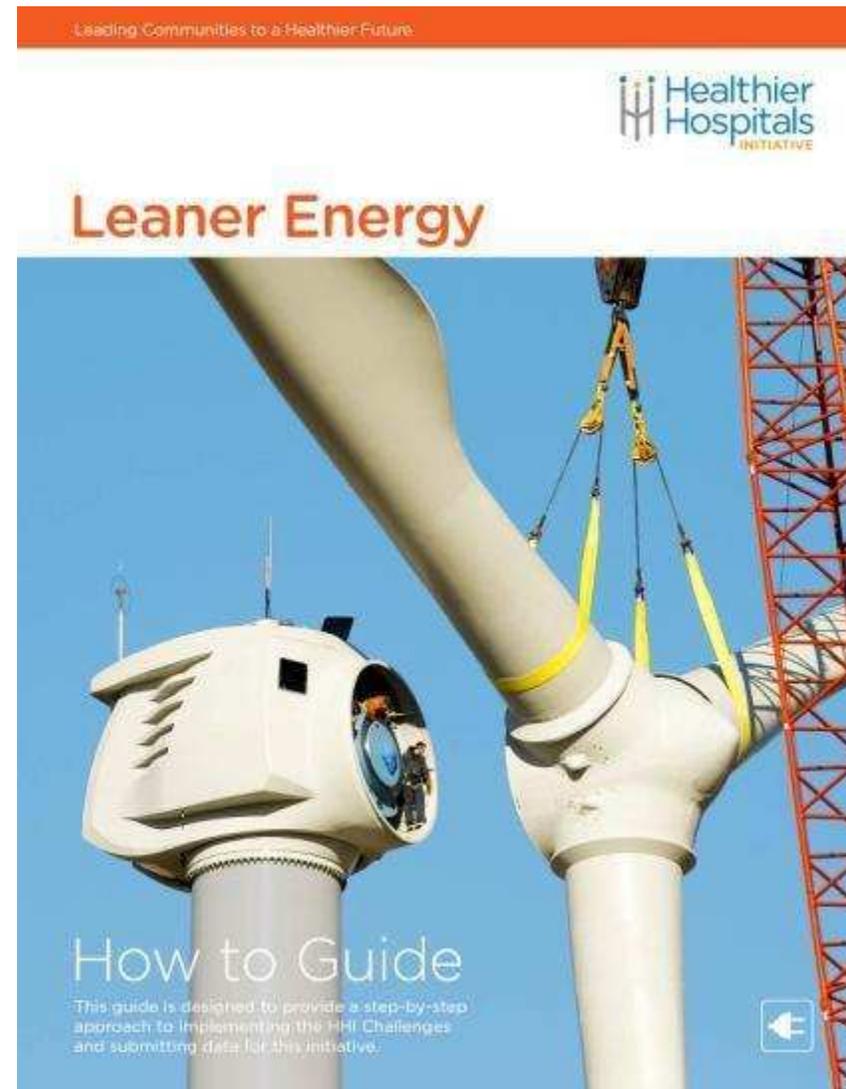
- Environmental Leadership Circle PGH Award Winner 2012
- Enrolled in four HHI Challenges
- Healthier Food- Balanced Menus:
  - **Reduced meat purchases by 20%**
  - 80% of meat is sustainably produced

**BORGESS**



# Leaner Energy

Carbon dioxide and other pollutants can contribute to chronic bronchitis, asthma attacks, respiratory symptoms and premature death. The Healthier Hospitals Initiative (HHI) is teaming with hospitals to conserve energy and reduce emissions to benefit patients, staff and local communities.



# Leaner Energy

## Level 1

Reduce greenhouse gases by decreasing weather-adjusted energy intensity from metered energy use by three percent from baseline.

## Level 2

Reduce greenhouse gases by decreasing weather-adjusted energy intensity from metered energy use by five percent from baseline.

## Level 3

Reduce greenhouse gases by decreasing weather-adjusted energy intensity from metered energy use by ten percent from baseline OR if facility is already an ENERGY STAR rated facility (> 75), maintain ES status.

Baseline: Input energy data into ENERGY STAR Portfolio Manager to track energy use and GHG emissions

Level 1 – 3% reduction

Level 2 – 5% reduction

Level 3 – 10% reduction (or >75 ES)



## HHI Accomplishments- Beaumont Royal Oak

- Partner for Change PGH Award Winner 2012
- Enrolled in all six HHI Challenges
- Leaner Energy- Annual Savings \$1.18 million
  - Hit goal to reduce energy consumption by 3%
  - LED lights
  - Computer monitors power down automatically – saves \$190,000/year corporate wide



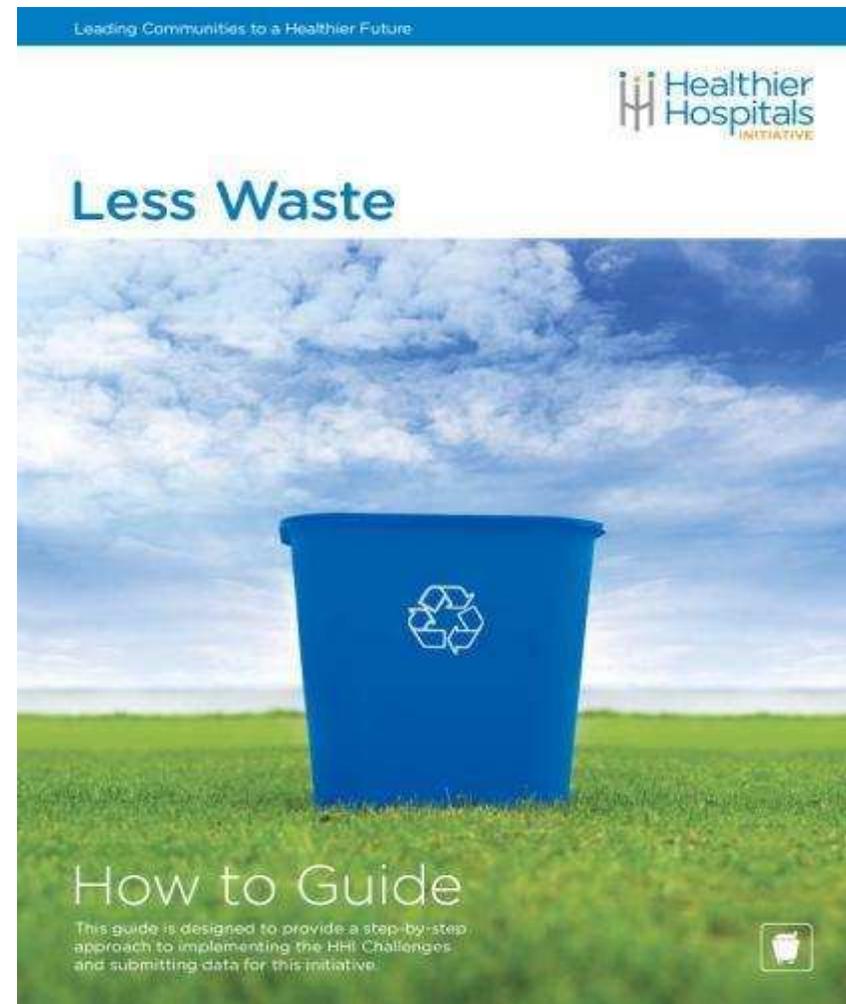
## University of Michigan Hospitals and Health Centers

- Environmental Leadership Circle PGH Award Winner 2012
- Enrolled in all 6 HHI Challenges
- Leaner Energy- Annual Savings of over \$2 Million
  - Air Handling Unit Control Optimization: \$1.6 Million/year
  - VAV Box Controls: \$300,000/year
  - Lighting Retrofits: \$300,000/year
  - Ventilation Balancing: \$80,000/year
  - Process Cooling Water Conservation: \$70,000/year



# Less Waste

While some health care environmental impacts are hard to see, understand, or quantify, waste is different. The less waste challenge offers win-win strategies that will both improve environmental performance and offer cost saving strategies.



# Less Waste

## Regulated Medical Waste Reduction

Reduce regulated medical waste to less than 10 percent of total waste or less than three pounds per adjusted patient day

## Recycling

Achieve a 15 percent recycling rate

## Construction and Demolition Diversion

Achieve an 80 percent recycle and diversion rate for major renovations and new construction

Baseline: Collect baseline data on recycling, regulated medical waste, hazardous waste and solid waste.

Level 1 – Commit to one

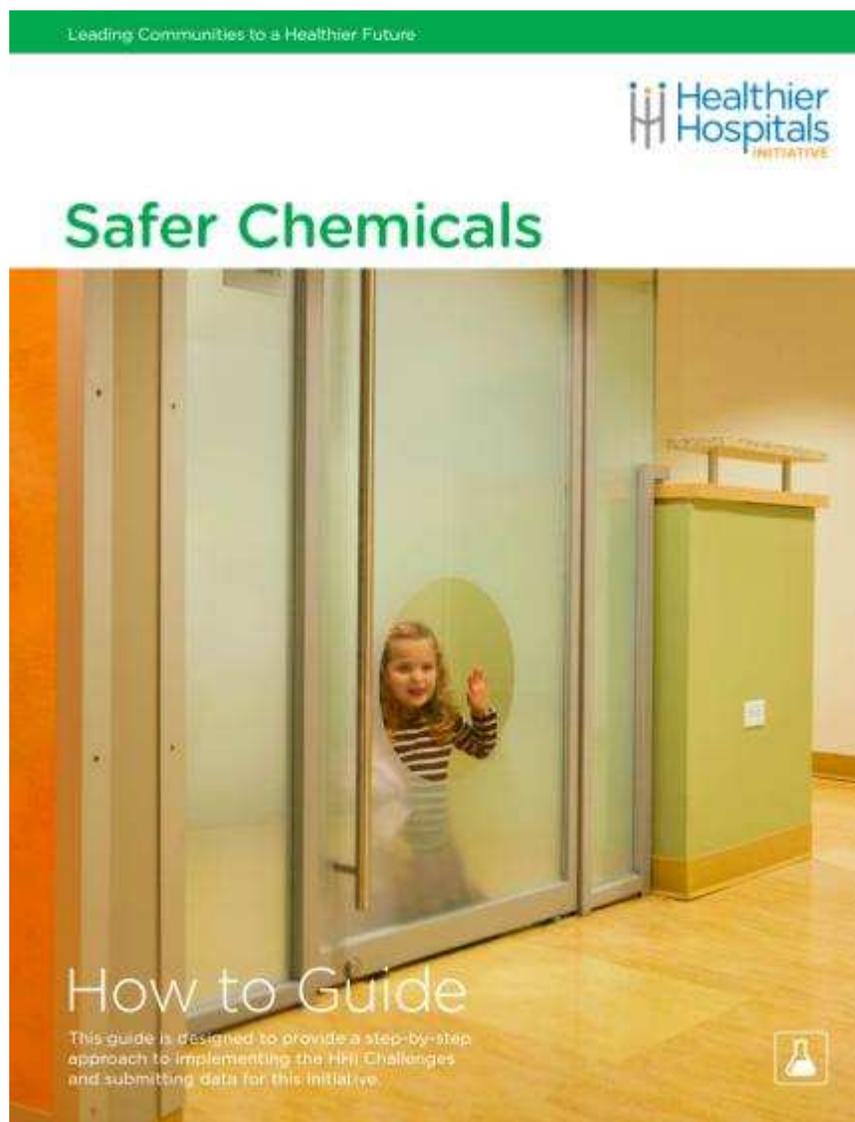
Level 2 – Commit to two

Level 3 – Commit to all three



# Safer Chemicals

Scientific research shows that exposure to hazardous chemicals found in the environment, our homes and workplaces increases the risk of various diseases in the general population.



# Safer Chemicals

## Green Cleaning

Purchase 90 percent Green Seal or EcoLogo certified cleaning products in these four categories: carpet, window, all purpose, and bathroom.

## DEHP/PVC Reduction

Eliminate DEHP/PVC from at least one product line.

## Healthy Interiors

Ensure that 25 percent of the annual volume of freestanding furniture and medical furnishings purchases based on cost eliminate the intentional use of halogenated flame retardants, formaldehyde and PVC

Baseline: Virtual elimination of mercury.

Level 1 – Commit to one

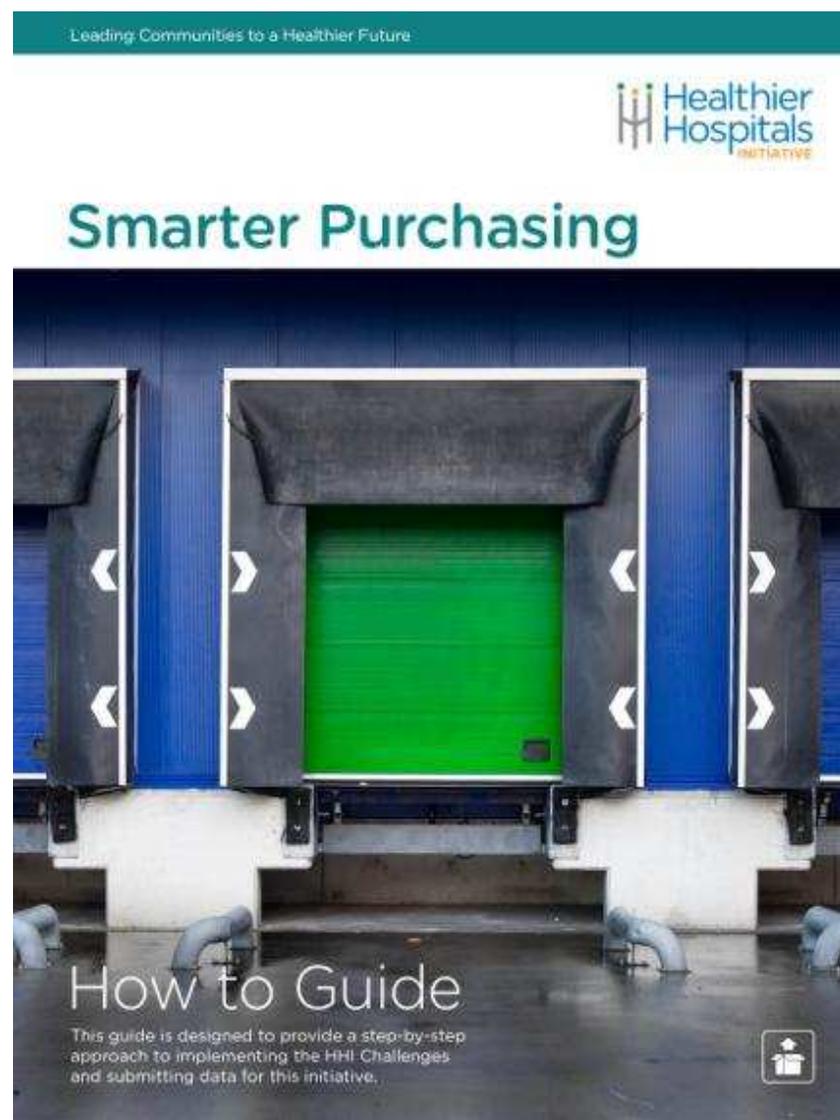
Level 2 – Commit to two

Level 3 – Commit to all three



# Smarter Purchasing

By selecting products with reduced environmental impact on human health and the environment, hospitals can have a positive effect on the community while reducing the amount they spend on waste disposal, regulatory compliance, safety issues and equipment maintenance.



# Smarter Purchasing

## Surgical Kit Review

Review at least 30 custom Surgical O.R. kits or 90% of O.R. kit types, whichever is greater in efforts to eliminate unneeded materials

## Reprocess Single-Use Medical Devices

Increase procurement of reprocessed FDA-eligible SUDs by 50% (based on dollar expenditure)

## Electronic Products Environmental Assessment Tool (EPEAT)

Specify and report expenditures on EPEAT registered devices

Baseline: Pledge to support GPOs using environmental attributes for purchasing products.

Level 1 – Commit to one

Level 2 – Commit to two

Level 3 – Commit to all three



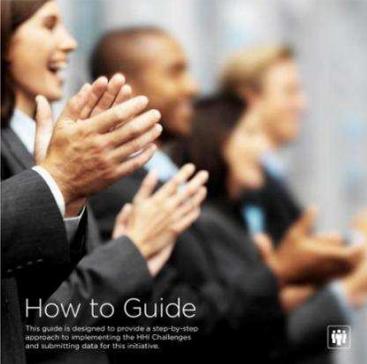
# Tools, Resources, Question Forum at [www.healthierhospitals.org](http://www.healthierhospitals.org)



Leading Communities to a Healthier Future



### Engaged Leadership



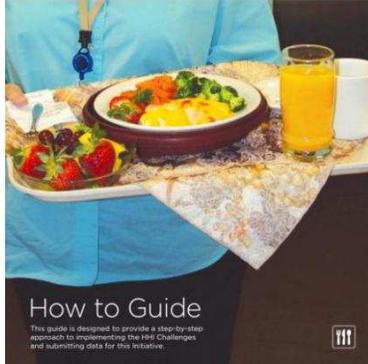
**How to Guide**  
This guide is designed to provide a step-by-step approach to implementing the HHI Challenges and submitting data for this initiative.



Leading Communities to a Healthier Future



### Healthier Foods



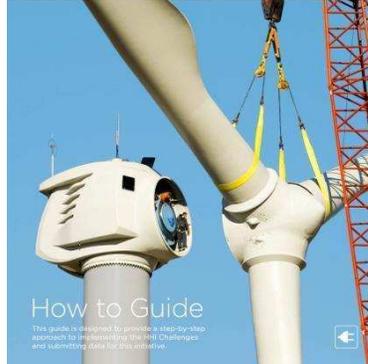
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Leading Communities to a Healthier Future



### Leaner Energy



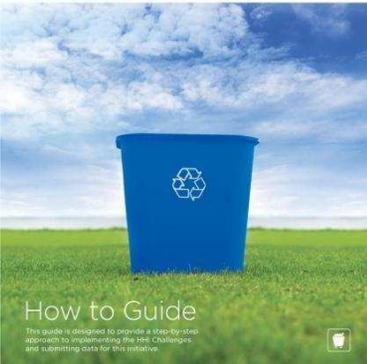
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Leading Communities to a Healthier Future



### Less Waste



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Leading Communities to a Healthier Future



### Safer Chemicals



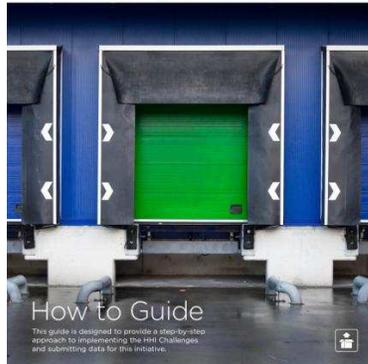
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Leading Communities to a Healthier Future



### Smarter Purchasing



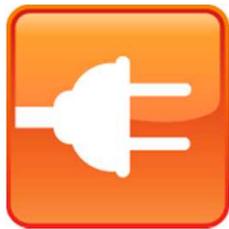
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## Educational Opportunities



Sharing Call: HHI Monthly Data Submission Call  
Thursday, September 19, 2013 - 2:00pm to 3:00pm EDT  
**Challenge Type:** All Challenges



Webinar: Targeting 101! A National Model for Achieving Deep Energy Savings in Hospitals  
Tuesday, September 24, 2013 - 2:00pm to 3:00pm EDT  
**Challenge Type:** Leaner Energy



Webinar: Engaged Leadership: What Does Environmental Sustainability Leadership Look Like? A Panel Discussion  
Wednesday, October 9, 2013 - 3:00pm to 4:00pm EDT  
**Challenge Type:** Engaged Leadership



Recorded Webinar: The Triple Aim: How HHI Improves Population Health, Employee Health and Reduces Costs  
Tuesday, September 10, 2013 - 3:00pm to 4:00pm EDT  
**Challenge Type:** All Challenges

# Learn what's **POSSIBLE**



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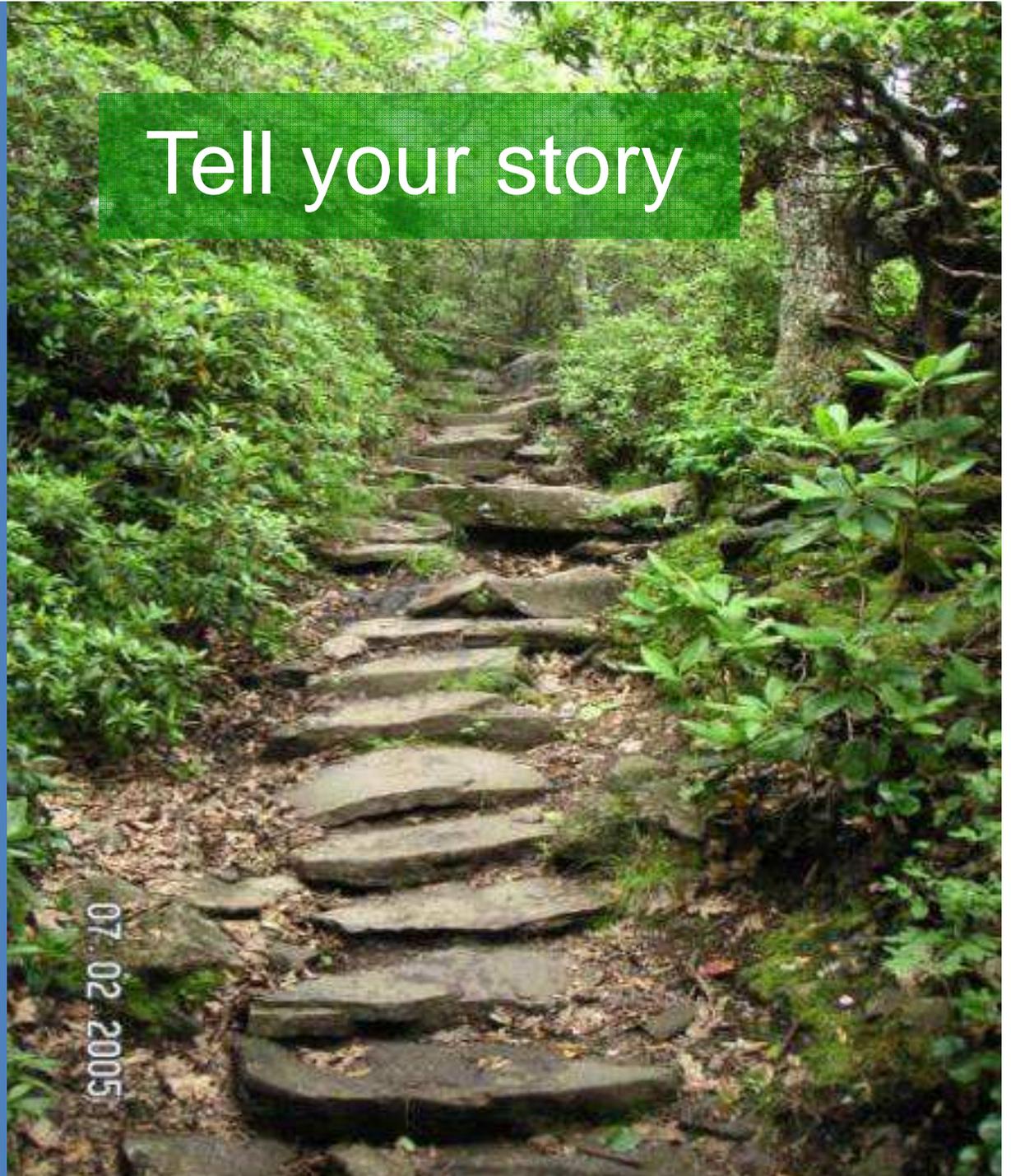
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Communication

Tell your story



# PLENARY PANEL

## Healthcare Executives Leading the Way



*Moderated by: **Blair Sadler, JD**, Senior Fellow, Institute for Healthcare Improvement*

*Panelists:*

- **Steven Johnson**, Senior Director—Operations, Michigan Health & Hospital Association
- **Rob Casalou**, President & CEO, St. Joseph Mercy Ann Arbor & Livingston Hospitals and Health Centers
- **Kimberlydawn Wisdom, MS, MD**, Senior Vice President of Community Health and Equity, Chief Wellness Officer, Henry Ford Health System.

