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# Energy, Sustainable Medicine and 21<sup>st</sup> Century Healthcare: Opportunities for the future?

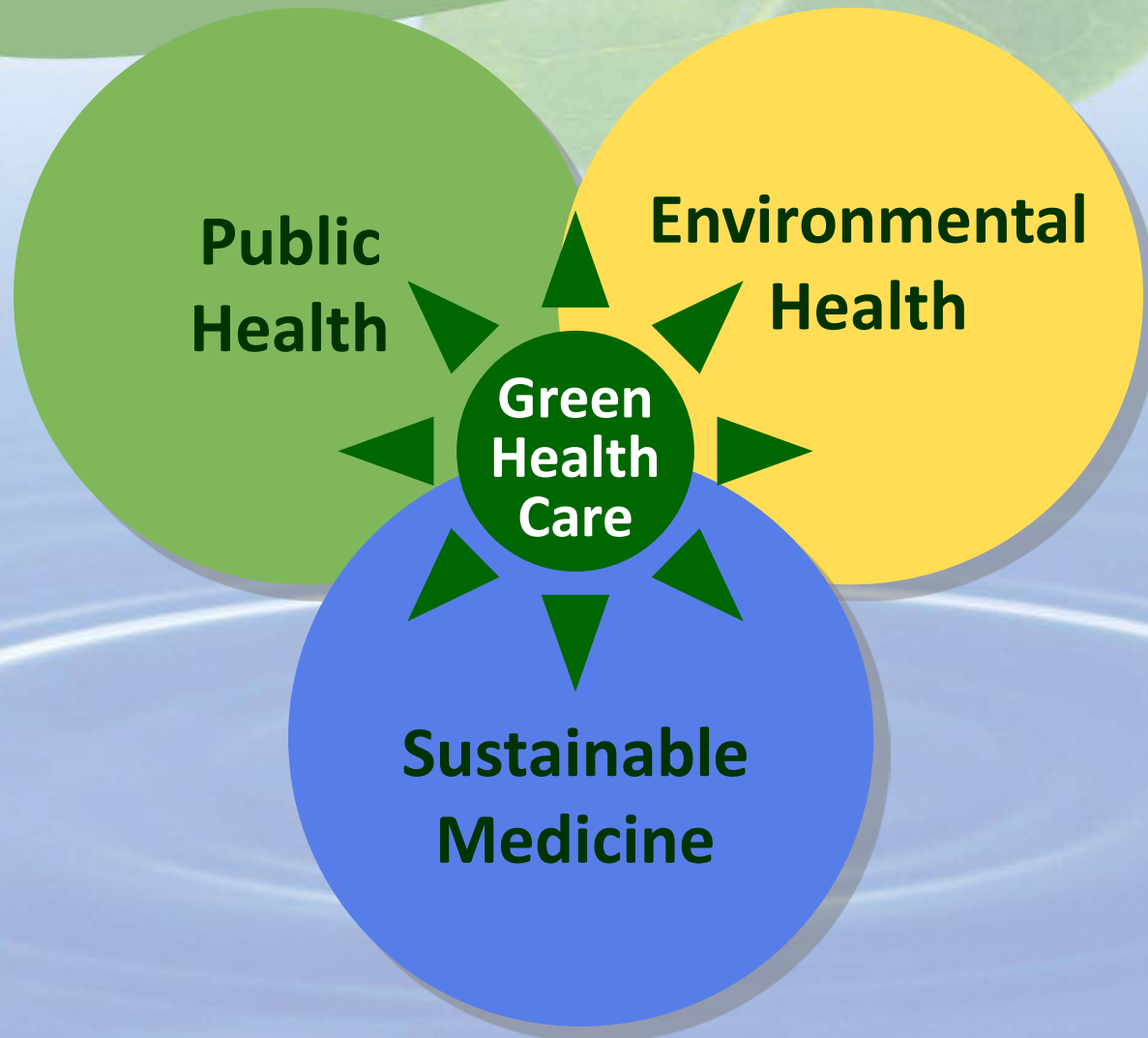
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Health Care Without Harm and Practice Greenhealth



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# What is Green Health Care?





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# Green Health Care includes





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# The Mission of Practice Greenhealth



PRACTICE  
Greenhealth™

The mission of Practice Greenhealth is to provide a *learning community* and be a clearinghouse of tools, resources and expertise for the healthcare sector as it moves toward environmentally sustainable health care.



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# A Green Medical Facility





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# Green Hospitals and Clinics

- ✓ Reduce the environmental **impact** of the facility.
  - Conserve resources
  - Minimize waste
  - Improve environmental performance





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# An Integral Approach- Four Quadrants

	SUBJECTIVE	OBJECTIVE
SINGULAR	<b>I</b> Why am I doing it? <i>Intentional</i>	<b>IT</b> What am I doing? <i>Behavioral</i>
PLURAL	<b>WE</b> Why are we doing it? <i>Cultural</i>	<b>ITS</b> What are we doing? <i>Social</i>



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# Integral Health Care

	SUBJECTIVE	OBJECTIVE
SINGULAR	<p><b>I</b></p> <p>Experience of Health Experience of Disease, Medicine, Hospitals, Environments</p> <p><i>Experience</i></p>	<p><b>It</b></p> <p>Personal Health Behaviors Behaviors of Disease Physicians Behaviors Sustainable Behaviours</p> <p><i>Behaviors</i></p>
PLURAL	<p><b>WE</b></p> <p>Belief in Science Cultures of Medicine, Cultures of Hospitals. Public Health and Prevention Programs</p> <p><i>Cultural</i></p>	<p><b>ITS</b></p> <p>Healthcare systems Hospital systems Built Environment Pharmaceutical Systems Reimbursement Systems</p> <p><i>Social</i></p>



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# Practice Greenhealth

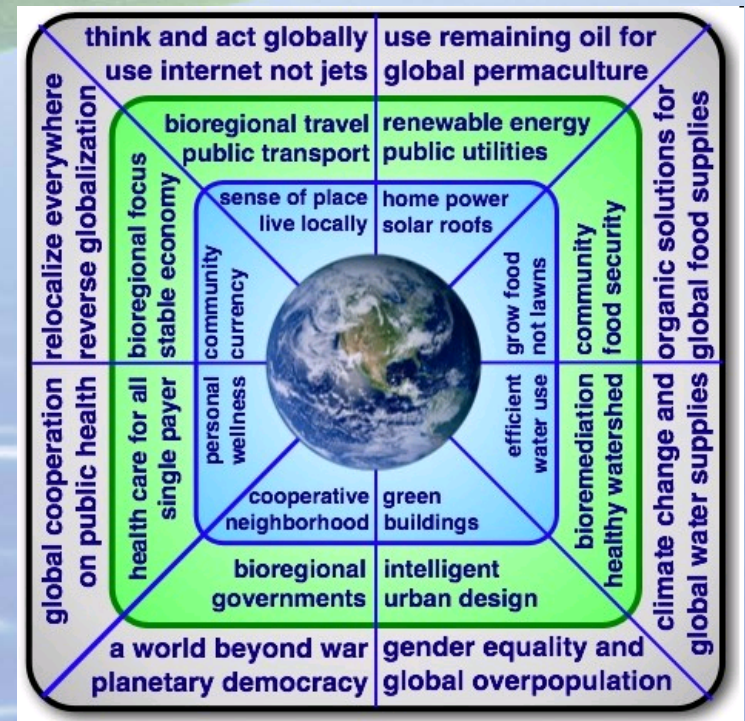
	SUBJECTIVE	OBJECTIVE
SINGULAR	I	It  <i>Behaviors</i>
PLURAL	WE	ITS  <i>Social</i>



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# Sustainability

- ✓ To be sustainable organizing structures must **encourage**:
  - Effectiveness
  - Integrity
  - Mutuality
- ✓ Be capable of continuing **transformation toward** greater social justice and greater **harmony** with the natural environment.



– Tobert, B (2004) **Action Inquiry**, Berrett-Koehler Publishers, Inc: San Francisco



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# Integrity

- ✓ How do we generate **effectiveness** and maintain integrity within ourselves?
- ✓ Personal Inquiry
  - Behaviors/ operations
  - Strategy/ goals
  - Attention/Intention





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# Mutuality

- ✓ Increasing open inquiry into the play of power between parties with **mutuality** as the goal.
- ✓ We can create more actions by:
  - Developing **shared vision** and strategies
  - Increasing collaboration
  - Learning the value of creating together





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# Sustainability in a Learning Community

	SUBJECTIVE	OBJECTIVE
SINGULAR	<p><b>I</b></p> <p><b>Integrity</b></p> <p><i>Experiences</i></p>	<p><b>It</b></p> <p><b>Sustainability</b></p> <p><i>Behaviors</i></p>
PLURAL	<p><b>WE</b></p> <p><b>Mutuality</b></p> <p><i>Cultures</i></p>	<p><b>ITS</b></p> <p><b>Sustainability</b></p> <p><i>Social</i></p>



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# Healthcare's Energy Use

- ✓ 73 billion kWh/year,  
\$4.8 billion
- ✓ All HC energy use =  
594 trillion BTU's/year
- ✓ HC & MOB's =  
4.9% of non-mall, non  
residential buildings ft<sup>2</sup>, but  
use 8.2% of that pool's kWh  
consumption





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# Ways to Reduce Energy Consumption

- ✓ Improve Energy Efficiency
  - ✓ Trim Energy Use
  - ✓ Reduce Complexity
- (Tainter J. "Complexity, Problem Solving, and Sustainable Societies," excerpt from *Getting Down to Earth: Practical Applications of Ecological Economics*, 1996, Island Press, <http://dieoff.org/page134.htm>).





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# Oregon Health Plan

- ✓ A prioritized list of diagnosis-treatment pairs in order to ensure that benefit reductions eliminate only the least effective and valuable treatments

(The Oregon Health Plan,  
[http://www.cwru.edu/med/epidbio/mph/439/Oregon\\_Health\\_Plan.pdf](http://www.cwru.edu/med/epidbio/mph/439/Oregon_Health_Plan.pdf)).





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# Jameton's Plan

- ✓ Rank-order various healthcare services according to their **value**, as rated by public meetings, and according to their energy costs.
- ✓ Cut out the services that offer the least value for the highest energy cost.
  - (Jameton A. Is a Modest Health Care System Possible? *Synthesis/Regeneration*. Fall 2007; 44, <http://www.greens.org/s-r/44/44-08.html>).





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# Learning Community

## ✓ Integrity

- As an **individual**, am I using my energy effectively?
- Am I in integrity with energy consumption in my personal and professional lives?

## ✓ Mutuality

- Are we living healthy?
- Are we using energy in healthcare **wisely**?
- Can we reduce our use?
- Can we generate **positive** health outcomes using less energy?





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# Sustainability and Energy

✓ Are we **organized** in a way that encourages effectiveness, integrity and mutuality?

✓ Are we **transforming healthcare** towards greater social justice and greater harmony with the natural environment?





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# Primary Health Care (Alma Ata)

## ✓ Participation

- Participation of the population in health **decision-making**: moving towards and interaction between people and professionals.

## ✓ Equity

- People have the **right** to health care and inequalities in health and health status are unacceptable.

## ✓ Intersectorial collaboration

- Adopting an **understanding** of health as being something created in the social domain.

MacDonald, J (2005) Environments for Health





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# Sustainable Healthcare and Energy!

	SUBJECTIVE	OBJECTIVE
SINGULAR	<p>I</p> <p><b>Integrity</b></p> <p><i>Experiences</i></p>	<p>It</p> <p><b>Sustainability</b></p> <p><i>Behaviors</i></p>
PLURAL	<p>WE</p> <p><b>Mutuality</b></p> <p><i>Cultures</i></p>	<p>ITS</p> <p><b>Sustainability</b></p> <p><i>Social</i></p>