Impact of Health Care on the Environment and Health

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Topics

• Health care’s impact on the environment and human health

• Priority areas for focus by hospitals and health care professionals (applicable to other institutions)

• Examples of how Kaiser Permanente and other health care systems are creating healthier environments
About Kaiser Permanente

Recognized as one of the U.S.’s leading health care providers and not-for-profit health plans

Kaiser Foundation
Health Plan

Permanente
Medical Groups

Kaiser
Foundation
Hospitals

10 million members
$54 billion annual operating revenue
18,000 physicians; 175,000 employees
8 states, Wash DC
38 hospitals; 700 medical offices; 75 M sq ft
Many Factors Drive and Shape Health

- **Personal Behaviors**: 40%
- **Family History and Genetics**: 30%
- **Environmental and Social Factors**: 20%
- **Medical Care**: 10%

Source: McGinnis et al, Health Affairs, 2002
Total Health

A state of complete physical, mental and social well-being for all people.

We are committed to helping our members, our workforce, their families, and our communities achieve Total Health through the services we provide and by promoting clinical, educational, environmental, and social actions that improve the health of all people.
“We aspire to provide health care services in a manner that protects and enhances the environment and the health of communities now and for future generations.”
Health Care’s Big Environmental Footprint

- 8% of greenhouse gas emissions in U.S.
- 2 million tons of waste every year
- Top 10 water users in their communities
- Chemicals of concern are contained in food, building materials and products we purchase
That Footprint Contributes to Disease

It’s about health:

• Climate change: extreme weather events, spread of infections, respiratory illness and more.

• Toxic chemicals in products and food: cancer, reproductive disorders, neurological problems and more.

• Pollution of air, water, soil reduces Earth’s resiliency, and compromises ecosystems.

• Waste that is poorly managed contaminates soil and water, and can create respiratory and other illnesses.
Sustainable Health Care

- Climate & Energy
- Safer Chemicals
- Water Conservation
- Sustainable Food
- Waste Reduction
Climate change will cause health effects that will directly impact KP’s ability to fulfill our promise of quality affordable care …
“Climate change is undermining 50 years of progress in global health.”

“Climate change is the greatest health opportunity of this century.”

“The health community has a vital part to play in accelerating progress to tackle climate change.”
“Humans are contributing to climate change.

“The poor are impacted the most.”

“We have a moral obligation to address it.”
Public Health and Climate Change Summit
Dr. Ted Eytan from KP joined public health, medical and other health professionals to discuss impacts of climate change on health, and identify opportunities to minimize these impacts on Americans.
Sustainable Development Goals

Ray Baxter from KP joined UN Secretary-General Ban Ki-moon and selected business leaders to discuss global health and development, including a roundtable on climate change.
KP’s Actions: New Energy Agreements

• 30% GHG emission reduction three years early
• Half of our electricity in California will be from new solar and wind installations
• Two components: offsite and onsite =
  • 223 megawatts
  • Generate 590 million kilowatt-hours annually
  • Equivalent to 82,000 American homes
Offsite

Power Purchase Agreements

• 20-year contract with NextEra Energy Resources
• 110 megawatts of solar, Riverside County, CA
• 43 megawatts of wind, Altamont Pass, CA
Onsite

- NRG Energy
- 70 megawatts of solar
- 100+ hospitals and California campuses by the end of 2016
Three More Great Things

• Cost neutral or cost savings; no down payment
• Employee discount on residential solar from NRG
• Tremendous water savings – more on that later…
Climate Action Beyond Renewable Energy

- Sustainable Energy Policy
- Sustainable Resources Council
- LEED Gold on $10M+ projects
- Care delivery innovations provide more options to our members AND reduce resource use
- Supplier selection includes climate action
Our aim is to advance an economy where the production and use of chemicals are not harmful for humans or the environment.
Birth of Sustainability in Health Care
KP’s Actions: A case study
KP’s Actions: A case study

Kaiser Permanente Pledges To Stop Buying Flame-Retardant Furniture

More hospitals shunning furniture with flame retardants

By Jaimy Lee

A few months ago, Kaiser Permanente said it would stop buying furniture with flame retardants because the chemicals are believed to be toxic. Now several other large hospital systems are following suit.

A group of hospital systems—Advocate Health Care, an 11-hospital based in Downers Grove, Ill.; Beaumont Health System, a three-hospital system based in Royal Oak, Mich.; New Jersey's 685-bed Hackensack University Medical Center—are considering adding this week that will buy a list of 200 products such as beds, chairs, and room decor. Some hospitals are already implementing policies or using products that are free of flame retardants.
RESULTS:

• Increased public awareness of health effects of flame retardants

• Furniture manufacturers requesting input and guidance

• Other health systems adopting similar prohibitions

• Enhanced positioning of non-governmental organization (NGO) partners

• Largest firefighter union commended Kaiser Permanente to its members

• Reduced exposures to flame retardants

Southern California's updated Fontana Medical Center, opened in 2013, features furniture and fixtures that use fewer toxic chemicals.
• Sierra snowpack hit 0% of normal on May 28, 2015
• Conserving water also conserves energy. In California, 20% of energy use is related to water use.
• Jan-July 2015, there have been 3,380 wildfires, 1,000 more than the average over the previous five years.
Health Effects of Drought

- Compromised quantity and quality of drinking water
- Effects on air quality (pollen, smoke, and fluorocarbons)
- Diminished living conditions related to energy, air quality, and sanitation and hygiene
- Increased recreational risks (e.g., waterborne diseases)
- Compromised food and nutrition (insect and disease infestation can lower crop yields resulting in higher food prices and shortages)
- Increased incidence of illness and disease (viruses, protozoa, and bacteria can pollute both groundwater and surface water when rainfall decreases)
Water Risk Screening

Takeaway: many areas are using water unsustainably which overlaps Kaiser Permanente operating regions.

Legend

Baseline Water Stress

- Low (<10%)
- Low to medium (10–20%)
- Medium to high (20–40%)
- High (40–80%)
- Extremely high (>80%)
- Arid & low water use
- No data

Measures the total annual freshwater withdrawals (municipal, industrial, and agricultural use) expressed as a percentage of total annual freshwater renewable supply. A higher ratio means more water withdrawn as compared to renewable supply.
Drought Response in California by KP

- Monitoring and complying with all Water Agency restrictions (local variations depending on reduction goal set by the State)
- Coordinating with California Hospital Association regarding the proposed State Water Board Work Group on Health and Safety
- Implementing capital improvements, such as low flow fixtures, water efficient sterilizers and smart irrigation systems
- Educated and engaged with those who most impact our consumption. Distributed an informational brochure to facility managers early last year.
- Regularly look for and report leaks and constantly running water sources
- Examining opportunities to convert existing site landscape to drought-tolerant and low-maintenance plants (xeriscape); and
- Review all repair and maintenance projects for water (and energy)-savings opportunities
Renewable Energy Initiatives

• By 2017, KP will be purchasing over 600,000 MWH/year of renewable energy generated by wind and solar
• This will reduce the “water profile” of our energy consumption by over 100 million gallons per year.
Sustainable Food

We support food systems which are ecologically sound, economically viable, and socially responsible.
Food and Chemicals

- 85% of the lettuce in the U.S. comes from Salinas
- 500,000 pounds of organophosphate pesticides are used annually in Salinas
- California is the #1 pesticide depository
- Most high poverty communities are in agricultural counties
- Farm workers suffer from exposure-related diseases and conditions
- We need FRESH and SUSTAINABLE food
Food and Chemicals

• Corn & soybean mono-crops
  • Extensive use of fertilizers and pesticides
  • The Gulf Dead Zone
  • Soil erosion

• Concentrated Animal Feeding Operations (CAFO)
  • Groundwater contamination
  • Air quality
  • Antibiotics for livestock
Food and Climate Change

Production, packaging, and transportation of industrial food accounts for 10% of U.S. greenhouse gas emissions
Sustainable Food at Kaiser Permanente

- Sustainable food scorecard
- We host 50 farmers markets
- We buy 590 tons of local and/or sustainable produce per year
- 19% of our food spend is on sustainable food
- By year end, we will be spending $1M on antibiotic free beef and poultry. More than 50% of our meat and poultry in California is antibiotic free.
- NCAL and SCAL are sourcing non-GMO juices
Waste Minimization

Promote individual and community health, environmental stewardship, cost savings and legal compliance by reducing the total amount of waste that is generated in all buildings owned or leased by Kaiser Permanente.
Waste Minimization

Greening the Operating Room: $55 million savings over 10 years from reprocessing products labeled single use.

- Cost savings from buying reprocessed devices
- Cost avoidance from reduced waste volumes (220 tons/year)

Total solid waste reused, recycled, composted = 40%
How We Achieve Success – Internal Organization

Environmental Stewardship Council

Community Benefit
Green Teams

Regional Leadership
National Facilities Services

Government Relations
Pharmacy

Environmental Health & Safety
KPIT

Procurement & Supply
Medical Groups
Collaborations

• Health Care Without Harm
• Practice Greenhealth
• Center for Environmental Health
• Alliance for Climate Education
• Public Health Institute
• …and many others

Partnerships

• Suppliers
• Certifiers (e.g., EPEAT, USGBC)
• Advisors (e.g., Business Renewable Center)

Grantmaking
Our next steps:

- Set new long term goals reflective of our impacts and opportunities

- Focus on those actions that serve our local communities while making global impacts (e.g., community health needs assessment action plans)

www.kp.org/green