Engaging Health Professionals to Support Environmental Stewardship and Sustainability

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Our Mission

Guided by the values and expertise of medicine and public health, Physicians for Social Responsibility works to protect human life from the gravest threats to health and survival.
“Climate change is the biggest global health threat of the 21st century... The impacts will be felt all around the world – and not just in some distant future but in our lifetimes and those of our children.”

The Lancet
Alexander Leaf Dies at 92; Linked Diet and Health

By PAUL VITELLO
Published: January 6, 2013

Alexander Leaf, a versatile physician and research scientist who was an early advocate of diet and exercise to prevent heart disease, and who traveled the world to make important discoveries about increasing human longevity and to help scientifically establish the dangers global warming poses to the human species, died on Dec. 24 in Boston. He was 92.

The cause was complications of Parkinson’s disease, said his wife, Barbara Leaf.

Dr. Leaf’s career toggled between pure scientific research and medical practice; unusually for the medical world, he sustained achievement in both realms. He was at different times chairman of medicine and chief of medical services at Massachusetts General Hospital in Boston, one of the nation’s premier hospitals, and led the department of preventive medicine at Harvard Medical School. He was one of the first practicing physicians ever elected to the National Academy of Sciences, in 1972.

He was probably best known for his work on heart disease, advocating prevention through exercise and diet, particularly foods low in animal fat and sodium.

Dr. Leaf’s research into the cellular biology of heart disease led him to undertake a series of expeditions in the early 1970s to study longevity in parts of the world where heart disease was rare and some people were said to live 140 years or more.

The expeditions, sponsored by the National Geographic Society, were criticized when some of the very old people in the study turned out to have lied or been misinformed about their ages. Dr. Leaf openly disavowed the project. But he never doubted the basic insights he had gleaned from the scores of interviews he conducted with people in the Caucasus Mountains, the Hunza Valley of Pakistan and the foothills of the Andes.
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Public Health Effects of Climate Change Remain Largely Unaddressed

- Climate change is happening now
- Costs of inaction are high
- Prevention approach is key
  - Public health and safety
  - Preparedness and response
  - Community resiliency and recovery
“The health sector must add its voice – loud and clear...we must fight to place health issues at the center of the climate agenda. We have compelling reasons for doing so. Climate change will affect, in profoundly adverse ways, some of the most fundamental determinants of health: food, air, water.”

- Dr. Margaret Chan, Director General of the World Health Organization, December 2007
PUBLIC HEALTH

Rebranding Climate Change as a Public Health Issue
Why medical professionals may be the best messengers for global warming right now

By Courtney Subramanian @csub | Aug. 06, 2013 | 0

To most people, climate change means melting snowcaps and helpless polar bears sweltering under escalating temperatures. But most of the world’s populations aren’t likely to see an iceberg in their lifetimes, much less a stranded polar bear in the wild. Which explains why the dangers of these environmental changes haven’t exactly earned high priority on most people’s list of attention-worthy crises. (Does anyone remember Al Gore’s $300 million We Campaign?) The politicization of climate change — the never-ending debate over whether it exists, for example, and the ensuing back-and-forth over its causes, its implications and potential solutions — further discourages the public from action.

But what if climate change were instead about an increase in childhood asthma, or a surge in infectious diseases, or even an influx of heat-induced heart attacks? Would that hold more resonance for the average citizen of the world? That’s what some climate change experts are hoping, as they steer the conversation about global warming toward the public health issues it raises. Last week, the journal Science featured a special issue on climate change and included a study on the complex yet growing connection between global warming and infectious diseases.

MORE: Infectious Disease Could Become More Common In a Warmer World—Especially for Plants and Animals

According to a recent study, framing global warming as a public health issue rather than as an environmental or national security one produces the most emotionally compelling response among people, since it focuses on the immediate implications a warmer climate could have on people’s lives. This strategy also has the benefit of providing a sense of hope that the problems can be addressed and avoided, if people take action early enough. Matthew Nisbet, co-author of the study and an associate professor at American University, says such positive actions are critical for communicating the importance of climate change to a broader and more diverse proportion of Americans who may not care about environmental issues. “It’s easy to become fatalistic about the problem,” he says. “You have to give them a sense of hope that they can become part of something that addresses the problem.”

Source: Time Magazine August 8, 2013
Health Care Needs To Lead The Fight Against Climate Change

Editor’s Note: Gary Cohen (left) is Co-Founder and President of Health Care Without Harm and Practice Greenhealth. Jeffrey E. Thompson (right), MD, is chief executive officer and chairman of the boards of Gundersen Health System, and a practicing pediatric intensivist and neonatologist.

As we continue to learn more about climate change, we are realizing it is fundamentally a health issue that will affect everyone in the world. How it is damaging to our health depends on where we live. If we live in Beijing or Baton Rouge, climate change looks like air that’s so thick and poisoned we can’t go outside of our homes. If we live in the Midwest of the United States, climate change looks like extreme weather that rages through our communities and heat waves that destroy our crops and cause heat exhaustion. If we live in New York City, climate change looks like a massive hurricane, which flooded our streets, trapped us in homes with no power and shut down our hospitals. For many communities living downwind from coal power plants, processes that affect climate change are more local and look like increased asthma in our children and respiratory disease in our most vulnerable citizens. We are learning that climate change is already leading to the spread of mosquito- and other vector-borne infectious diseases like Dengue fever and malaria to places that have never seen these diseases before. We are learning it’s not possible to support people on a sick planet.

In this unfolding crisis, the healthcare sector occupies a unique position in our society to admit its contribution to the problem and to lead the fight against climate change.

First, healthcare is just as addicted to fossil fuels as the rest of us, if not more so. Hospitals use twice as much energy per square foot as our schools and offices, partly because of the intensity of their business, partly because of lack
Health Care & Climate Change

An Opportunity For Transformative Leadership
Press Release

Kaiser Permanente Environmental Leader Makes the Case for Hospitals to Help Heal the Planet

New book offers timely insight into the movement to ‘green’ the health care system

August 13, 2014

TOPICS: ENVIRONMENTAL STEWARDSHIP | REGIONS: NATIONAL | KEYWORDS: BOOKS, KATHY GERWIG, LEADERSHIP, THOUGHT LEADER, WOMEN

OAKLAND, Calif. – In a newly released book, Greening Health Care: How Hospitals Can Heal the Planet, Kaiser Permanente’s environmental stewardship officer, Kathy Gerwig, explores a universal paradox of health care: As hospitals deliver life-saving care to individuals, their substantial environmental footprint can often be detrimental to environmental and community health.

Kathy Gerwig, vice president of Employee Safety, Health and Wellness, and Environmental Stewardship Officer

Greening Health Care examines the intersection of health care and environmental health, analyzing failures and describing the revolution that is currently underway to fix them. From the health implications of climate change to creating a healthier food system and minimizing hospital waste, Gerwig provides a clear picture of what is happening now in the movement to green health care and what we can expect in the future.

Health care activities as a whole contribute 8 percent of the total greenhouse gas emissions produced in the United States. Gerwig
Reducing The Health Care Sector’s Green House Gas Emissions Is a Task of National Importance

* The health care industry ranks second only to the food service industry in intensity of energy use
* Medical facilities are high GHG emitters and spend $5.3 billion/year on energy
* The health care sector has a large national impact
  * Health care comprises 1/7th of the US economy
  * 100 million sq. ft. of medical building space is constructed annually
The Health Care Sector Can Play a Key Role Combating Climate Change

- Encourage green practices and energy efficiency in your medical facility
- Provide brochures, relevant literature and informational posters in waiting areas and lobbies to educate patients and their families about how they can reduce their emissions
- Make recommendations to hospital staff and community members that improve health and wellbeing and reduce greenhouse gas emissions (such as eat less meat, walk and bike more, use public transit)
Sponsoring Health Systems

Advocate Health Care

Bon Secours Health System

Catholic Health Initiatives

A spirit of innovation, a legacy of care.

Partners Healthcare

MedStar Health

Dignity Health

Kaiser Permanente

Hospital Corporation of America

Envision

Gundersen Health System

Tenet

Vanguard Health Systems
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
Participating Hospitals Map

About HHI
- What We Do
- Who We Are
- Participating Hospitals
  - Participating Hospitals Map
- Supporting Businesses
- Supporting Organizations
- Frequently Asked Questions
- Contact Us

Enroll Now with HHI
Three organizations and thirteen Sponsoring Health Systems invite you to join them in leading communities to a healthier future. Enroll in healthier hospitals initiative. Learn More
HHI Overview

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
The Climate and Health Literacy Consortium

Our goals are to educate healthcare professionals about the science and health effects of climate change, and to help build a stronger, more unified effort within the health care sector to reduce the environmental and public health impacts of climate change in our global community.
Many thanks to the following organizations that have participated in the Climate and Health Literacy Consortium:

- American Medical Association
- American Nurses Association
- Center for Disease Control and Prevention
- Evidence Based Media
- Health Care Without Harm
- Health Sciences Online
- Program on Global Sustainability and Health, Johns Hopkins Bloomberg School of Public Health
- Natural Resources Defense Council
- Physicians for Social Responsibility
- Practice Greenhealth
A Climate Change for the Better

Federal Initiatives on Climate Change and Health

Linda Birnbaum, PhD, and John Balbus, MD, MPH

With Washington, D.C., buried under more than two feet of snow and Congress seemingly paralyzed by the discussion of health care and economic reforms this winter, one might have been tempted to believe that the human health impacts of climate change have been lost in the blizzard of other federal public health concerns. But instead we can write today about the new and renewed federal efforts to address these broad impacts—efforts taking the form of research and interagency initiatives, which are emerging like the crocuses under the leafless trees. As spring arrives and these initiatives begin to bloom, physicians should be among those taking notice.

The public health community is beginning to fully realize that climate change presents many long-term challenges to human health. The American Medical Association's 2008 resolution on global climate change and human health recognized that immediate effects may include those related to heat, extreme weather events such as flooding or drought, increased air pollution, and infectious and vector-borne diseases. It also noted longer-term impacts on food and water supplies that could result in malnutrition and dehydration. The resolution also included a number of recommendations aimed at encouraging the medical community to become educated about the impacts and threats from climate change, particularly on vulnerable populations such as the elderly, children, and the poor; to help such patients and communities respond; and to become involved in policy efforts to mitigate climate effects.

Exciting new research is revealing that the news on climate change is not necessarily all bad, and that reducing greenhouse gases has the potential to provide significant benefits to human health, saving both lives and dollars in the process. Last November, scientists and government officials from the United States and Great Britain came together in an "across the pond" teleconference event to mark the release of a special issue of The Lancet that contained a series of studies conducted in London and Delhi demonstrating that significant health benefits could result if measures were taken to reduce greenhouse gases from household energy use, electrical generation, urban land transport, and agriculture. The key message from the series, which was cosponsored by the National Institute of Environmental Health Sciences, the Wellcome Trust, and the London School of Hygiene and Tropical Health Medicine, was that "If properly chosen, action to combat climate change can, of itself, lead to improvements in health." For example, interactions between human health, climate change, and short-lived greenhouse pollutants (those that last only a few weeks at most in the environment) were the topic of one of the papers in The Lancet series, which illustrated both the opportunities and the complexities of this science. Black carbon aerosols that result from incomplete fossil fuel combustion in household cooking and diesel engines have been shown in numerous studies to contribute to cardiovascular mortality, asthma, COPD, and pneumonia. Other studies have suggested that black carbon aerosols may contribute as much as 60 percent of the total climate forcing as the most prominent greenhouse gas, carbon dioxide. Reducing black carbon emissions by providing the developing world with cleaner cookstoves or installing diesel particulate filters would provide the double benefit of improving health while immediately reducing the warming potential of the atmosphere. One caveat, however, is that where there is black carbon, there is often sulfur. Because sulfite aerosols have a cooling effect on the atmosphere, diesel particulate filters that require low-sulfur diesel fuel may provide mixed benefits for climate, since they would reduce both warming and cooling air pollutants. Because of the high stakes for both public health and as the complex considerations of public policy in the climate arena. The Lancet authors recommend that policy makers consider all of the health implications in short-lived greenhouse pollutant reduction measures.

Because physicians are at the forefront of treating diseases and reducing mortality that may be associated with a changing climate, it is vital that you contribute your perspectives to these considerations. In addition to revealing new bricks in the path toward understanding climate change impacts on health, this research offers a road map to move not just health but also energy, transportation, and agricultural policy forward on this issue. The Lancet authors noted, however, that awareness of the potential for health benefits to offset at least some of the costs of reducing greenhouse gases was generally low. Physicians clearly have a role to play in increasing such awareness.

Other federal commitments to research on health impacts of climate change...
Global warming is an occurrence that is well documented, with average global surface temperatures now 1.5°F (0.83°C) higher than at the start of the industrial revolution. Since the 1970s, each decade has been warmer than the previous, and the 2000 through 2009 decade was the warmest on record. Changes in temperature alter wind, precipitation, and ocean current patterns across the world. Because climate is temperature-driven, scientists prefer the term “climate change” to “global warming.” The Intergovernmental Panel on Climate Change, comprising more than 2,000 of the world’s leading climate-change scientists, concluded in its 2007 consensus report that most of the increase in global average temperatures since the mid-20th century has resulted from an increase in human-generated greenhouse gas emissions, with a probability of greater than 90 percent. A review of the extensive scientific evidence for climate change is beyond the scope of this article, but, in addition to the consensus report, a 2009 report from The Lancet offers a comprehensive review of the science. Because humans are largely responsible for these climate changes, it is reasonable to suggest that persons could take actions necessary to stabilize the climate. Although that responsibility falls on everyone, physicians can make an important contribution by keeping informed about the impending adverse health effects of climate change; making specific health recommendations to their patients; reducing the environmental impact of their office and hospital practices; and serving as community spokespersons. Family physicians should join the growing global movement of scientists—as evidenced by the InterAcademy...
Global Warming and Your Health

**What is global warming?**

Global warming is when the Earth’s average surface temperature goes up over time. Because of this, the Earth is getting warmer with each decade. Scientists have found that this is mostly caused by human activities that affect air pollution.

When people burn fossil fuels for energy (example: driving vehicles that use gasoline), it puts gases into the air. Sometimes these gases are called greenhouse gases because having too much of them in the air causes what is called the greenhouse effect.

A greenhouse is a building where plants are grown. It usually has a glass ceiling and walls for the sun to shine through. The sun’s heat goes in through the glass more easily than it can get back out of it. This causes the temperature inside the greenhouse to get warmer than it is outside. Greenhouse gases cause global warming by acting like the glass of a greenhouse around the Earth’s atmosphere. Adding to the problem, people also have removed a lot of the Earth’s plants that would help absorb the greenhouse gas carbon dioxide.

**How will it affect my health?**

Warmer average temperatures can increase the risk of health problems. Global warming will cause direct and indirect effects on health. The direct effects would be easier to see and may show up first (Table 1), but the indirect effects would be the most serious (Table 2).

**What can I do to help?**

About one-fifth of all greenhouse gases come from the production of food animals. Raising cows generates the most greenhouse gases. Your doctor may have talked about the health benefits of a low cholesterol diet, but reducing

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<th>Change caused by global warming</th>
<th>How this change affects health</th>
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<td>Heat waves come more often, are more severe, and last longer</td>
<td>Heat stress makes people sick</td>
<td>Everyone, but especially older people and children</td>
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<tr>
<td>Average temperatures are warmer, summers last longer</td>
<td>Heat stroke can be deadly</td>
<td>Everyone, but especially older people and children</td>
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<td>Air pollution gets worse</td>
<td>Increase in infectious diseases, especially those carried by insects</td>
<td>Everyone, but especially people who live in countries that don’t have good public health care systems</td>
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<td>More severe storms cause flooding and damage from wind, snow, and hail</td>
<td>More risk of heart and lung diseases, such as asthma and heart attacks</td>
<td>Everyone, but especially people who already have heart or lung disease</td>
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<td></td>
<td>More accidents and injuries</td>
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*continual*
The Physician’s Role in Efforts to Slow Global Warming

ROBERT M. GOULD, MD, Physicians for Social Responsibility, San Francisco, California

►See related article on page 271.

Dr. Parker’s article in this issue of American Family Physician offers a concise presentation of the science of climate change.1 Global warming will directly affect the health of our patients, communities, and planet; therefore, physicians and other health care professionals have a critical role in addressing the issue.

In 2007, greenhouse gas emissions attributable to the production of health care goods and services accounted for 8 percent of total emissions in the United States.2 Hospitals are the largest contributors to health care’s carbon footprint, responsible for an estimated 39 percent of the sector’s greenhouse gas emissions.2 Many major health systems and organizations committed to improving sustainability and safety across the health care sector have been participating in the Healthier Hospitals Initiative (HHI). The HHI is a coordinated sector-wide approach to the design, construction, and operation of hospitals.3

The HHI partner organizations have developed a number of innovative programs to foster climate-friendly health care institutions. One such valuable resource, Addressing Climate Change in the Health Care Setting, focuses on addressing seven major contributors to climate change in hospitals: energy conservation and efficiency, alternative energy generation, green building design, waste disposal and management (including recycling anesthetic gases), water conservation, transportation, and food service.2 Myriad strategies for reducing the impact of each of these areas have been developed and successfully implemented at hospitals across the United States, with potential benefits to the general public health from reduced hospital-generated pollution.4,5

Other efforts to reduce the carbon footprint of hospitals include the Health Care Without Harm initiatives, Healthy Food in Health Care campaign and Balanced Menus Challenge.6 These initiatives complement efforts to educate patients about reducing meat consumption outlined in Dr. Parker’s article by changing hospital food procurement patterns to help prevent and mitigate climate change and related adverse health impacts.7

The links between our industrialized food system and climate change include: (1) fossil fuels that are consumed to run farm machinery and transport food over long distances; (2) fossil fuels related to heavy reliance on pesticides and chemical fertilizers; and (3) industrialized livestock production (e.g., fossil fuel-intensive grain to feed livestock, deforestation for feed production and pasture).7

Steps that health care facilities can take include procuring food produced in systems that eliminate the use of toxic pesticides and chemical fertilizers using ecologically protective and restorative agriculture (e.g., local, organic). Data from four institutions demonstrate that implementation of the Balanced Menus Challenge can yield substantial reductions in greenhouse gas emissions, as well as save hospitals money in food purchases.8 Because the health care sector spends $12 billion annually on food,9 this balanced menu approach can serve as a model for healthy food purchases in other sectors and encourage the more widespread availability of healthy foods. Thus, realignment of the hospital’s food system can have positive health impacts well beyond our cafeterias.

Recognizing that education is key to the success of climate-friendly hospital programs, the American Medical Association (AMA), in concert with the American Nurses Association and the American Public Health Association, has strongly supported educating health professionals about the impacts of climate change. The AMA is a major participant in the Climate and Health Literacy Consortium, which has developed free standard PowerPoint presentations for hospital administrators and clinical staff.10

Finally, Dr. Parker points to physician involvement in policy change. Historically, the clinical voice in policy arenas has been central to addressing environmental threats to patient health.11,12 The potential of physician involvement in addressing climate change cannot be overestimated. For example, the California Medical Association has adopted numerous policies to prevent and mitigate climate change, including encouraging hospitals to implement better food-purchasing strategies.13 The AMA has also adopted far-reaching policies that comprehensively address healthy food issues10 and call for active engagement of physicians in other efforts to prevent and mitigate climate change.14 This was underscored by a November 19, 2009, letter from the AMA to President Obama citing the “significant public
California Medical Association

Climate Change and Energy Policies

HYDRAULIC FRACTURING MONITORING, REGULATION AND DISCLOSURE (2013)
Endorse efforts to remove trade secret exemptions and other restrictions that do not allow full disclosure of chemicals used in hydraulic fracturing to physicians, appropriate government agencies and the public; encourage government agencies to perform health assessments prior to new hydraulic fracturing development projects; endorse efforts to implement hydraulic fracturing regulations, monitoring, funding and enforcement efforts in order to protect public health, the environment and vital water resources.

• AIR POLLUTION, ENERGY AND HEALTH (2002)
Encourage hospitals to use cleanest power generating units, including emergency generators; retire old power plants and replace with renewable energy sources; ease the introduction of clean, alternative vehicles, explore petroleum demand reduction strategies, clean up and mitigate transportation and petroleum-related air and water pollution; support new, clean transportation technologies and infrastructure.

• CLIMATE CHANGE AND HUMAN HEALTH (2002)
Urge the President of the United States to take proactive steps to reduce green house emissions and work with other nations to address the increasing dangers of climate change by committing to binding reduction targets for emissions.

Complete text of California Medical Association resolutions at: http://www.sfbaypsr.org/work_cma.html
Global Climate Change and Human Health Resolutions

• **American Medical Association, 2008**
  
  “1) endorse the findings of the 4th Intergovernmental Panel on Climate Change; 2) support research to explore the human health effects of climate change; 3) support state, federal and international policy coordination to develop adaptive strategies to respond to the predicted human health effects of climate change; and 4) encourage Congress and the President to adopt national and international policies to reduce the emissions of greenhouse gases.”

• **American Nurses Association, 2008**
  
  “American Nurses Association recognizes and publicly acknowledges that the challenges we face as a result of global climate change are unprecedented in human history and it is critical that nurses speak out in a united voice and advocate for change on both individual and policy levels.”

• **American Public Health Association, 2007**
  
  “The public health community should advocate for mitigation and avoidance of climate change, track the impacts of climate change on human health, and assist with adaptation, to the degree possible, to those health effects caused by changes in climate that can not be prevented.”
RESOLUTION 506 - REDUCTION OF CARBON DIOXIDE POLLUTION FROM ENERGY PRODUCTION

RECOMMENDATION A:
Mr. Speaker, your Reference Committee recommends that Policy H-135.949 be amended by addition and deletion to read as follows:

H-135.949 Support of Clean Air and Reduction in Power Plant Emissions Act

Our AMA supports (1) federal legislation and regulations that meaningfully reduces the following four major power plant emissions: mercury, carbon dioxide, sulfur dioxide and nitrogen oxide; and (2) efforts to limit carbon dioxide emissions through the reduction of the burning of coal in the nation's power generating plants, efforts to improve the efficiency of power plants, substitution of natural gas in lieu of other carbon-based fossil fuels, and continued development of alternative renewable energy sources.

RECOMMENDATION B:
Mr. Speaker, your Reference Committee recommends that Policy D-135.972 be amended by addition and deletion to read as follows:

D-135.972 Support EPA Regulation Reduction of Carbon Dioxide Emissions Pollution

Our AMA will submit comments to (1) inform the President of the United States, the US Administrator of the Environmental Protection Agency (EPA), and Congress during public comment period on the new proposed rule regarding existing that our American Medical Association supports the Administration's efforts to limit carbon dioxide pollution emissions from power plants emissions to underscore the need to keep the standards strong and protective of public health; and (2) working with state medical societies, encourage state governors to support and comply with EPA regulations designed to limit carbon dioxide emissions from coal fired power plants.
Global Climate Change and Children’s Health

COUNCIL ON ENVIRONMENTAL HEALTH

Rising global temperatures are causing major physical, chemical, and ecological changes in the planet. There is wide consensus among scientific organizations and climatologists that these broad effects, known as “climate change,” are the result of contemporary human activity. Climate change poses threats to human health, safety, and security, and children are uniquely vulnerable to these threats. The effects of climate change on child health include: physical and psychological sequelae of weather disasters; increased heat stress; decreased air quality; altered disease patterns of some climate-sensitive infections; and food, water, and nutrient insecurity in vulnerable regions. The social foundations of children’s mental and physical health are threatened by the specter of far-reaching effects of unchecked climate change, including community and global instability, mass migrations, and increased conflict. Given this knowledge, failure to take prompt, substantive action would be an act of injustice to all children. A paradigm shift in production and consumption of energy is both a necessity and an opportunity for major innovation, job creation, and significant, immediate associated health benefits. Pediatricians have a uniquely valuable role to play in the societal response to this global challenge.

INTRODUCTION

It is clear from observations across a range of indicators that many fundamental measures of climate are changing. These broad changes, known as “climate change,” threaten the biological systems on which the life, health, and prosperity of all children depend. On the basis of well-established evidence from the past 20 years, there is now wide consensus among scientific organizations and approximately 97% of climatologists that human-generated greenhouse gas emissions are the cause of climate change. Although the effects of climate change are already being felt across the world, the magnitude of the effects of future changes depends on our ability to substantially reduce greenhouse gas emissions and implement adaptation strategies within the ensuing decades. Thus, it remains possible to protect children, families, and communities from the worst potential effects of climate change.
Climate change could pose a “catastrophic risk” to human health and undermine the global health gains achieved during the past half century (1, 2). The reality of climate change and our warming planet is unequivocal, and although there continues to be debate and dissenting views on whether climate change is largely the result of human activity, the American College of Physicians (ACP), on the basis of its review of the evidence as described in this paper, strongly concurs with the finding of the Intergovernmental Panel on Climate Change (IPCC), which has stated that “human influence on the climate system is clear” (2). The burning of fossil fuels, deforestation, other land-use changes, agriculture and food production, and power plant emissions all release carbon dioxide and other greenhouse gases into the atmosphere, trapping heat which then elevates global temperatures and causes other changes to the climate system (3). Possible direct and indirect health effects include higher rates of respiratory and heat-related illnesses, elevated prevalence of vector-borne diseases, increased food insecurity and malnutrition, and behavioral health problems. Although all nations will face the negative health effects of climate change, developing countries as well as vulnerable populations throughout the world—such as elderly persons, children, and persons with chronic illnesses—will be disproportionately affected.

Climate change is happening now, and its effects are expected to worsen over the next century. Anthropogenic (human-caused) greenhouse gas emissions must be substantially curbed to hold the global average temperature increase to “well below” 2 °C (3.6 °F) (and the more ambitious target of 1.5 °C [2.7 °F]) above preindustrial levels, as established in the Paris Agreement under the United Nations Framework Convention on Climate Change, which was adopted by the representatives of 195 nations in December 2015 (4). Efforts to adapt to a changing planet and mitigate future harmful emissions could bring about major health and environmental co-benefits.

A sense of urgency is warranted. Under one scenario, cumulative carbon dioxide emissions could cause the global average temperature to reach the threshold of 2 °C (3.6 °F) above preindustrial levels by 2043 (5). Although cautiously optimistic, the Lancet Commission on Health and Climate Change warns that “the effects of climate change are being felt today, and future projections represent an unacceptable high and potentially catastrophic risk to human health” (6).

The ACP is concerned about the effect that climate change could have on individual persons and populations in the United States and throughout the world.

Although climate change poses a potentially major threat to human and environmental health, taking action to reduce greenhouse gas emissions could have major benefits to human health. For example, reducing motor vehicle use in favor of walking or cycling could yield carbon emission reductions and health improvements (6-8), and carbon pollution standards for power plants could have a positive effect on cardiovascular and respiratory health (9).

* This position paper, written by Ryan A. Crowley, BSJ, was developed for the Health and Public Policy Committee of the American College of Physicians. Individuals who served on the Health and Public Policy Committee from initiation of the project until its approval and authored this position paper are Darlyn V. Meyer, MD (Chair), Douglas M. Delano, MD (Vice-Chair), Tom S. Biermann, MD, James P. Beals, MD, Gregory A. Hood, MD, Carole A. Howel, MS, Gregory C. Kane, MD, Robert M. Lohr, MD, Kenneth E. Olive, MD, Oskooi U. Rahman, MD, Mitch Bechty, DO, Mitch Biermann, BS, and Fatima Syed, MD. Approved by the ACP Board of Regents on 16 February 2016.
PREVENTING HUMAN MERCURY EXPOSURE (2000)
Encourage the reduced use of mercury-containing products by urging medical product suppliers to continue to develop, produce, and bring to market appropriate, cost-competitive, environmentally protective, and effective mercury-free replacements; calls upon health care professionals to encourage the institutions with which they are associated to adopt policies that will lead toward the eventual elimination of mercury containing products where feasible, effective alternatives are available, and to promptly eliminate mercury from the waste-stream fed into incinerators.

PVC PLASTIC USE IN HEALTHCARE FACILITIES (1998)
Encourage the study and evaluation of alternative products and practices that will lead to the reduction and elimination of dioxin release into the environment from medical products composed of chlorinated hydrocarbons

DEHP USE IN NEONATAL INTENSIVE CARE UNITS (2003)
Urges all hospitals to phase out their use of PVC products containing DEHP in Neonatal Intensive Care Units and encourages the use of commercially available alternatives; calls upon health professionals, especially those involved in the care of critically ill infants, to encourage the institutions with which they are associated to adopt purchasing policies that will lead to the increasing use of non-DEHP medical devices in Neonatal Intensive Care Units; encourages medical device manufacturers to continue developing PVC-free and DEHP-free medical devices while phasing out production of those that contain PVC and/or DEHP due to problems of disposal.

Encourages its members and California health institutions to adopt purchasing or leasing contracts only with electronics manufacturers who are committed to safely handling the products at the end of life, who reuse and recycle to the greatest extent possible, do not export hazardous electronic waste to developing countries, and safely dispose of the waste that can not be reused or recycled; to provide purchasing/leasing preferences to electronics manufacturers that minimize the use of toxic and hazardous constituents, use recycled content, and design products that can be easily recycled; support policies that hold electronics manufacturers responsible for taking back their products at the end of life, with the objective of re-designing their products for longevity and reduction of harmful materials.
PSR Pediatric Environmental Health Toolkit: Tools for Use in the Clinical Practice Setting

What is the Toolkit?

The Physicians for Social Responsibility Pediatric Environmental Health Toolkit is a clinical tool endorsed by the American Academy of Pediatrics (AAP) and based on the AAP Pediatric Environmental Health desk reference also known as the “Green Book.”

The Toolkit includes reference and anticipatory guidance materials for both providers and patients including desk and pocket references for providers, and “Rx for Prevention” slips, magnets, and posters for patients. The Toolkit makes it easy for providers to give information to patients on preventing exposures to toxic chemicals and other substances that may affect child health.

Toolkit Credentials

The Toolkit was developed by a team of pediatrics and peer reviewed by experts in the field of environmental health. The materials were pilot tested, with positive reviews, at 17 practices by 34 pediatric and family practice providers in Massachusetts and California. A secondary test coupled with CME training programs in 5 states - CA, MN, MA, OR and WA – was conducted during 2006 and 2007. Results were very positive. Respondents were asked to rate the Toolkit across several domains. About half gave an “excellent” rating for 3 of the 4 domains: for overall content, 55%; for design, 54%; and for ease of use with patients, 43%. Less gave an “excellent” rating for patient receptiveness (21%).

Provider Materials:

- Laminated reference card with brief summaries of major toxicants – their potential health effects, routes of exposure, and prevention strategies;
- “Anticipatory guidance” card keyed to developmental stages for use during well-child visits;
- Key Concepts brief on children’s environmental health.

The Reference Card was adapted from the Green Book. It allows providers to quickly reference environmental toxicants, health effects, routes of exposure, and exposure prevention strategies.

The Anticipatory Guidance Pocket Card fits in a large pocket for handy use during a well visit. The topics on the pocket card are both developmentally appropriate and take advantage of “teachable moments.”

For example, at a newborn visit, the provider will naturally discuss infant feeding. Breastfeeding has been found to mitigate negative effects of prenatal toxic exposure, suggesting that breastfeeding is the best choice for mother and baby. Exchanging mercury thermometers for safer digital ones is another easy step that a provider can mention at an early visit. These flexible guidance points provide clinicians with an age appropriate menu of choices to discuss during routine visits.

Key Concepts in Pediatric Environmental Health provides additional background on a number of topics including the unique vulnerabilities of children, higher risk communities, “Built Environment” and “Food Environment,” Right-to-Know issues and much more.

Patient Materials:

Note: Rx slips and posters are English on one side and Spanish on the other. Magnets are available in English and Spanish.

Rx for Prevention “prescription” slips are key to developmental stages: Birth-1 year, 1-4 years, school age, and teens. Each “Rx” (there are multiple slips for each age group) contain two to four high priority tips on prevention for parents, such as how to avoid mercury in fish, protection from solvents, reducing use of pesticides, eliminating toxic cleaners, etc. The provider hands the slip to a family as if prescribing a medication.

Magnets with “Tips for Prevention” – include six different magnets with brief prevention tips. Patients can use the magnets to post the “Prescriptions” on the refrigerator.

Posters - Two colorful posters, Have a Healthy Home, and Play Safe, with prevention tips from the Toolkit, are available to display in office and patient waiting rooms.

Ordering the Toolkit

Complete Toolkits and Patient Materials can be ordered through our website at www.psrg.org click on Tools for Clinicians and use our online order form.

A Toolkit Training Program complete with case studies is also available to download.

For questions please contact Lucia Syrke at luciasyrke@psrglobal.org or 510 559 8777.
Mission: To create a healthier environment for human reproduction and development by advancing scientific inquiry, clinical care, and health policies that prevent exposures to harmful chemicals in our environment.
All That Matters

Work Matters

When you work with or around what you know really matters

Food Matters

Your health depends on it

Cuestiones de

Cómo proteger a nuestro hijos de las sustancias tóxicas

Toxic Matters

Protecting Our Families from Toxic Substances

Program on Reproductive Health and the Environment
The evidence that links exposure to toxic environmental agents and adverse reproductive and developmental health outcomes is sufficiently robust, and the American College of Obstetricians and Gynecologists and the American Society for Reproductive Medicine join leading scientists and other clinical practitioners in calling for timely action to identify and reduce exposure to toxic environmental agents while addressing the consequences of such exposure.

Available at: http://www.acog.org/Resources_And_Publications/Committee_Opinions/Committee_on_Health_Care_for_Underserved_Women/Exposure_to_Toxic_Environmental_Agents
“... we must shift the burden of proof from the individual health care provider and the consumer to the manufacturers before any chemicals are even released into the environment.”

Dr. Jeanne Conry, President ACOG
February 12, 2014

Dear Chairman Shimkus and Ranking Member Tonko,

The American Congress of Obstetricians and Gynecologists (ACOG), the American Society for Reproductive Medicine (ASRM), the American Academy of Pediatrics (AAP), and the Society for Maternal-Fetal Medicine (SMFM) thank you for your leadership in elevating the issue of toxic chemical reform. Together our organizations represent nearly 120,000 physicians and partners dedicated to the health of vulnerable populations such as pregnant women, infants, and children. We appreciate your commitment to enacting meaningful chemical safety legislation.

We are taking this opportunity to provide you with our comments on reforms of the Toxic Substances Control Act (TSCA).

As practitioners of women’s and children’s health, we are consistently seeking ways to advance the health of our patients and improve outcomes. We know that an important outcome of pregnancy is no longer just a healthy newborn, but a human being optimally programmed for health from infancy through old age. Pregnant women’s exposure to harmful chemicals can cross the placenta, and in some cases can accumulate in the fetus, resulting in higher fetal than maternal exposure. Robust scientific evidence has emerged over the past several years demonstrating that preconception and prenatal environmental exposures can have a profound and lasting impact on reproductive health across the life course. In addition, as infants and children grow and mature, their unique physiologic, developmental, and behavioral differences make them especially vulnerable to chemical exposures during critical windows of development. It is with these concerns in mind that we share our recommendations to reform TSCA.

Any reform proposal should include:

- An adequate definition of “vulnerable populations,” as is found in the definition of “vulnerable human population” in the Safe Chemicals Act (S 396) including, at minimum, pregnant women, infants, and children;
- A requirement that subpopulations, once defined, are protected from aggregate exposure to high priority chemicals;
- A health-based standard of “a reasonable certainty of no harm to vulnerable populations;”

Congress has an opportunity to enact truly meaningful preventative and protective chemical safety legislation. We hope that careful consideration will be given to our recommendations, and that the health of vulnerable populations will be a main focus of reform. We look forward to working with you to bring the best TSCA-reform proposal forward and hope that you will see us as a resource moving forward.

Sincerely,

[Signatures]

[Address]

Cc: The Honorable John Barrow
The Honorable Joe Barton
The Honorable Gus Bilirakis
The Honorable Lois Capps
The Honorable Bill Cassidy
The Honorable Diana DeGette
The Honorable John Dingell
The Honorable Phil Gingrey
The Honorable Gene Green
The Honorable Ralph Hall
The Honorable Gregg Harper
Honorables John Boozman
Honorables Bob Inglis
Honorables Doris O. Matsui
Honorables David McKinley
Honorables Jerry McNerney
Honorables Tim Murphy
Honorables Frank Pallone, Jr
Honorables Joe Pitts
Honorables Jan Schakowsky
Honorables Ed Whitfield
February 2016 Recommendations to US Congress on Reforming the Toxic Substances Control Act by 14 Health Professional Societies

February 12, 2016

The Honorable James M. Inhofe
Chairman
Committee on Environment and Public Works
U.S. Senate
410 Dirksen Senate Office Building
Washington, DC 20510

The Honorable Barbara Boxer
Ranking Member
Committee on Environment and Public Works
U.S. Senate
456 Dirksen Senate Office Building
Washington, DC 20510

The Honorable Frederick S. Upton
Chairman
Committee on Energy and Commerce
U.S. House of Representatives
2183 Rayburn House Office Building
Washington, DC 20515

The Honorable Frank Pallone, Jr.
Ranking Member
Committee on Energy and Commerce
U.S. House of Representatives
237 Cannon House Office Building
Washington, DC 20515

As organizations dedicated to ensuring the health and safety of the public, we write to urge Congress to continue to prioritize public health during its consideration of legislation to update the 1976 Toxic Substances Control Act (TSCA).

The bipartisan bills in the House and the Senate represent the most significant progress on reform in recent years. The TSCA Modernization Act of 2015 (H.R. 2576) and the Frank R. Launtenberg Chemical Safety for the 21st Century Act (S. 697) both passed with overwhelming bipartisan support. We remain encouraged that a final compromise bill will soon become law. As you move forward in the reconciliation process, we offer the following recommendations to ensure the public health.

Our recommendations focus on the following priorities:
- A safety standard that protects public health
- Preemption provisions that ensure protections from unsafe chemicals
- Protections for vulnerable populations against harmful exposures
- Access to confidential business information by public health and other professionals

Safety Standard
In the four decades since TSCA, EPA has reviewed fewer than 200 chemicals. The agency has restricted fewer than a dozen dangerous chemical families from the market. A major reason for this is the current safety standard, which requires a balancing of health and economic factors before the agency can act. The sponsors and committees of jurisdiction have taken a significant step in both bills to remove the consideration of costs from chemical safety assessments. We support a health-based standard and urge Congress to preserve or build upon efforts to adopt a strong, workable standard during the reconciliation of these bills.

Preemption
While both bills grandfather state rules adopted before August 2015, we recommend avoiding preemption language that has the potential to create a lengthy regulatory pause or institute a procedurally difficult waiver process. States and the federal government have worked collaboratively in protecting citizens from toxic substances for many years. Moving away from this historical understanding of preemption would create uncertainty and hinder ongoing state efforts to protect their citizens from hazardous chemicals. Preemption provisions must:

- Maintain the ability of states to protect their citizens in the absence of a federal rule directly addressing the scope of a state regulation; and
- Preserve states’ ability to request chemical reporting information while federal rules are being finalized; and
- During federal review and once a federal rule is promulgated, provide states with a timely waiver process that is clear, not unduly burdensome, and avoids creating any gaps in chemical oversight that would prolong exposures to dangerous substances.

Protect Vulnerable Populations
Outcomes of toxic chemical exposures can be more severe, occur at much lower doses, and even impact different tissues in developing embryos and young children than in adults. The bills increase protections for children and pregnant women, about whom the current law is silent. However, neither bill sufficiently addresses the type of testing necessary to ascertain risks to these vulnerable populations before potentially harmful products become pervasive in the consumer market. The final bill should:
- Address the use of currently available science to ensure adequate protections for vulnerable populations. EPA often relies upon predictive modeling when conducting new chemical reviews. Since there are no validated predictive models for the developmental impacts of chemicals, the final bill should address the use of currently available methods, such as reproductive and developmental assays; and
- Address other harms for which vulnerable subpopulations may be at a greater risk, including endocrine disruption, immune damage, cancer, and genotoxity.

Confidential Business Information
We support increasing the availability of confidential chemical information to public health professionals, health care providers, tribes, and state and local governments. Both bills would allow this for the first time. The Senate bill is more comprehensive in its approach to expressing claims, requiring manufacturers to re-substantiate the basis for confidentiality. Its language also explicitly includes first responders and poison control centers. First responders, public health officials, and health care professionals are often on the front lines of disasters, industrial accidents, and hazardous spills. These professionals need access to appropriate data such as incidents to be effective during emergencies and to protect the long-term health of their communities. As such, the relevant provisions must be drafted with sufficient breadth and clarity to ensure:
- Necessary parties have adequate and timely access to information; and
- Increased transparency around the chemical composition of products, including the results of toxicity studies for individual chemicals, chemical mixtures and additives.

As the committee processes revealed, the nation’s major chemical safety law is badly in need of an update. We commend the commitment of both chambers in passing reform and thank you for your consideration of our recommendations during the process of negotiating a final bill.

Sincerely,
American Academy of Family Physicians
American Academy of Pediatrics
American Congress of Obstetricians and Gynecologists
American Public Health Association
Americas Society of Tropical Medicine and Hygiene
American Society for Microbiology
American Society for Nutrition
Association of Military Surgeons of the United States
Association of Schools and Programs of Public Health
California’s Prevention-Medical-Health Nurses
Centers for Disease Control and Prevention
Centers for Medicare and Medicaid Services
Council of State and Territorial Epidemiologists
Environmental Law Institute
Food and Drug Administration
Institute of Medicine
National Institutes of Health
National Institute of Occupational Safety and Health
National Organization of Public Health Laboratory Directors
Robert Wood Johnson University Hospital
World Health Organization

Database of health professional statements on toxic chemicals at:
http://prhe.ucsf.edu/prhe/professionalstatements.html
International Federation of Gynecology and Obstetrics opinion on reproductive health impacts of exposure to toxic environmental chemicals

Gian Carlo Di Renzo, Jeanne A. Conry, Jennifer Blake, Mark S. DeFrancesco, Nathaniel DeNicola, James N. Martin Jr., Kelly A. McCue, David Richmond, Abid Shah, Patrice Sutton, Tracey J. Woodruff, Sheryl Ziemin van der Poel, Linda C. Giudice

*International Federation of Gynecology and Obstetrics, London, UK
†American College of Obstetricians and Gynecologists, Washington, DC, USA
‡Society of Obstetricians and Gynecologists of Canada, Ottawa, ON, Canada
§Royal College of Obstetricians and Gynecologists, London, UK
¶Program on Reproductive Health and the Environment, University of California, San Francisco, San Francisco, CA, USA
‖World Health Organization, Geneva, Switzerland
%%American Society for Reproductive Medicine, Birmingham, AL, USA

Article Info
Keywords:
Developmental health
Environmental chemicals
Reproductive environmental health
Toxic chemicals
Women's health

Abstract
Exposure to toxic environmental chemicals during pregnancy and breastfeeding is ubiquitous and is a threat to healthy human reproduction. There are tens of thousands of chemicals in global commerce, and even small exposures to toxic chemicals during pregnancy can trigger adverse health consequences. Exposure to toxic environmental chemicals and related health outcomes are inequitably distributed within and between countries; universally, the consequences of exposure are disproportionately borne by people with low incomes. Discrimination, other social factors, economic factors, and occupation impact risk of exposure and harm. Documented links between prenatal exposure to environmental chemicals and adverse health outcomes span the life course and include impacts on fertility and pregnancy, neurodevelopment, and cancer. The global health and economic burden related to toxic environmental chemicals is in excess of millions of deaths and billions of dollars every year. On the basis of accumulating robust evidence of exposure and adverse health impacts related to toxic environmental chemicals, the International Federation of Gynecology and Obstetrics (FIGO) joins other leading reproductive health professional societies in calling for timely action to prevent harm. FIGO recommends that reproductive and other health professionals advocate for policies to prevent exposure to toxic environmental chemicals, work to ensure a healthy food system for all, make environmental health part of health care, and champion environmental justice.

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Contaminating Our Bodies With Everyday Products

Nicholas Kristof | Nov. 28, 2015

In recent weeks, two major medical organizations have issued independent warnings about toxic chemicals in products all around us. Unregulated substances, they say, are sometimes linked to breast and prostate cancer, genital deformities, obesity, diabetes and infertility.

“Widespread exposure to toxic environmental chemicals threatens healthy human reproduction,” the International Federation of Gynecology and Obstetrics warned in a landmark statement last month.

The warnings are a reminder that the chemical industry has inherited the mantle of Big Tobacco, minimizing science and resisting regulation in ways that cause devastating harm to unsuspecting citizens.

In the 1950s, researchers were finding that cigarettes caused cancer, but the political system lagged in responding. Now the same thing is happening with toxic chemicals.

The gynecology federation’s focus is on endocrine disruptors, chemicals that imitate sex hormones and often confuse the body. Endocrine disrupters are found in pesticides, plastics, shampoos and cosmetics, cash register receipts, food can linings, flame retardants and countless other products.

Lead in old, peeling paint is just one substance that permanently harms children’s development.
Credit Spencer Platt/Getty Images

Are You a Toxic Waste Disposal Site?
Nicholas Kristof
FEB. 13, 2016

EVEN if you’re not in Flint, Mich., there are toxic chemicals in your home. For that matter, in you.

Scientists have identified more than 200 industrial chemicals — from pesticides, flame retardants, jet fuel — as well as neurotoxins like lead in the blood or breast milk of Americans, indeed, in people all over our planet.

These have been linked to cancer, genital deformities, lower sperm count, obesity and diminished I.Q. Medical organizations from the President’s Cancer Panel to the International Federation of Gynecology and Obstetrics have demanded tougher regulations or warned people to avoid them, and the cancer panel has warned that “to a disturbing extent, babies are born ‘pre-polluted.’”

They have all been drowned out by chemical industry lobbyists.

So we have a remarkable state of affairs:

Politicians are (belatedly!) condemning the catastrophe of lead poisoning in Flint. But few acknowledge that lead poisoning in many places in America is even worse than in Flint. Kids are more likely to suffer lead poisoning in Pennsylvania or Illinois or even most of New York State than in Flint. More on that later.

Americans are panicking about the mosquito-borne Zika virus and the
“What FIGO is saying is that physicians ...need to advocate policies that will protect our patients and communities from the dangers of involuntary exposure to toxic chemicals.”

Jeanne A. Conry, MD, PhD
past president
American College of Obstetricians and Gynecologists
Recommendation 1: Advocate for policies to prevent exposure to toxic environmental chemicals

Recommendation 2: Work to ensure a healthy food system for all

Recommendation 3: Make environmental health part of health care

Recommendation 4: Champion environmental justice
CLIMATE CHANGE AND WOMEN’S HEALTH

Position Statement
The American College of Obstetricians and Gynecologists and
The American Congress of Obstetricians and Gynecologists

Conclusive evidence has demonstrated that climate change is having a dramatic impact on the lives of people around the world. Representing physicians dedicated to the whole well-being of women – including their safety, security, and access to quality care – the American College of Obstetricians and Gynecologists recognizes that climate change is an urgent women’s health concern as well as a major public health challenge. We call on our national and international leaders to act to curb greenhouse gas emissions and limit further climate stabilization.

Without question, climate change has a disproportionate effect on global women’s health, as it broadens existing gender-based health disparities. The effects of climate change – such as food and water insecurity, civil conflicts, extreme weather events, spread of disease, and more – put women in affected regions at
“Advancing policies and practices in support of a healthy food system should be pursued as a primary prevention strategy to ensure healthy pregnancies, children and future generations.”

ACOG/ASRM Committee Opinion

Linda C. Giudice, MD, PhD, President American Society for Reproductive Medicine and Jeanne C. Conry, MD, PhD, President, American Congress of Obstetricians and Gynecologists – October 2013, Washington, DC
Food: Too Much, Too Little, Too Bad

*Nutrition Policy, Progress, and Pitfalls*

Antibiotics in Agriculture
*We’ve Reached a Crisis State*

Genetically-Modified Food: Hazardous or Healthy?

*Obesity, Soda Tax, and Energy Drinks*
IMPROVING HEALTH THROUGH SUSTAINABLE FOOD PURCHASING (2007)
Encourage hospitals to adopt policies and implement practices that increase the purchasing and serving of food ... grown according to organic or other methods that emphasize renewable resources, ecological diversity, and fair labor practices.

PESTICIDES AND SCHOOLS (2004)
Strengthen health protection of students, teachers, and other school employees ... through adequately funded and implemented least-toxic school pest management programs, that strictly prohibit the school use of highly toxic pesticides.

AGRICULTURAL PESTICIDE DRIFT (2000)
Strengthen efforts to protect schools and residential areas from pesticide drift and off-site pesticide movement.

FARMWORKER PROTECTION FROM PESTICIDES (2000)
Support efforts to reduce farmworker exposure to pesticides; strengthen enforcement of existing laws by increasing fine levels; encourage physician awareness of pesticide illness and reporting.

HEALTHY SCHOOLS (1999)
Protect indoor air at California schools; recommend statewide implementation of least-toxic school pest management programs; include parents in pest management decision making.

Complete text of California Medical Association resolutions at: http://www.sfbaypsr.org/work_cma.html
American Medical Association

REPORT 8 OF THE COUNCIL ON SCIENCE AND PUBLIC HEALTH (A-09)
Sustainable Food
(Resolution 405, A-08)
(Reference Committee D)

EXECUTIVE SUMMARY

Objective: To address how medical schools, hospitals, and other health care facilities can model and encourage healthy eating in a manner that supports environmentally sustainable agricultural and food system practices. This report defines sustainability within the context of the overall food system and outlines areas requiring further attention.

Methods: Literature searches for articles published through February 2008 were conducted in the PubMed database using the search terms “sustainable food,” “sustainable agriculture,” and “organic food.” Articles were selected that focused on human health and on the role health professionals and health care institutions could play in regard to these issues. Web sites managed by federal agencies and applicable professional and grassroots organizations were also reviewed for relevant information. Additional articles were identified by reviewing the reference lists of pertinent publications.
Healthy Food in Health Care

Leveraging the purchasing power and expertise of the health care sector to build a healthier food system: procurement, practitioners, and policy

Over 1,000 hospitals, 4,000 health professionals

About 1/3 of all California hospitals
HEALTH CARE FOOD PURCHASING POWER

Hospitals and health care systems can use their substantial buying power to help build a healthier food system.

MAKING THE HEALTHY CHOICE THE EASY CHOICE

Purchasing fresh food from local producers

Farm Fresh Healthcare Project: ten family farmers have sold nearly 84,000 pounds of local and organic produce to six San Francisco Bay Area hospitals.

Health Impacts

- Environmental quality
- Local/rural economy
- Social & economic health outcomes

Purchasing sustainably-grown produce

Kaiser Permanente: 590 tons of the fruits and vegetables served on patient menus are sustainably produced and/or locally grown — that's nearly 50% of fresh produce purchased annually.

Health Impacts

- Farm workers' exposure to harmful pesticides
- Water pollution & soil contamination

Purchasing meat and poultry raised without antibiotics

Overlake Hospital, WA & Fletcher Allen Health Care, VT: over 65% of the beef, poultry and pork products served are produced without the routine use of antibiotics.

Health Impacts

- Efficacy of antibiotics in human medicine
- Healthier, more sustainable meat production practices

Purchasing hormone-free dairy

Emory Healthcare, GA: all milk and yogurt sold in cafeterias is free of recombinant Bovine Growth Hormone.

Health Impacts

- Udder infections & other health issues in cows
- Antibiotics use in dairy cows to combat health problems

https://noharm-uscanada.org/kp.org/green
@HCWithoutHarm
@KPShare

Kaiser Permanente
MAKING THE HEALTHY CHOICE THE EASY CHOICE

Serving healthy inpatient meals that meet nutritional standards

Health Care Without Harm: over 1,000 hospitals are committed to purchasing and serving more fresh, healthy food.

Implementing Balanced Menus

Less Meat, Better Meat: hundreds of hospitals are reducing the amount of meat they purchase and serve and buying more sustainably produced meat.

Offering vending machine healthy picks

Kaiser Permanente: more than 1,000 vending machines restocked so 75% of food and beverages meet Healthy Pick’s criteria for being lower in fat, calories, sodium, and sugar.

Serving healthier cafeteria and cafe options

Partnership for a Healthier America’s Hospital Healthier Food Initiative: more than 700 hospitals committed to healthy food practices that improve the nutrition of patient meals and cafeteria options.

Reducing or eliminating sugar-sweetened beverages

Vanguard Health’s four, Chicago-area hospitals phased out all sugar-sweetened beverages from their facilities, in the implementation of Cook County’s “Rethink Your Drink” program.
Hospitals as Anchor Institutions: Improving Community Food Environments

- by modeling good nutrition and improving environmental health inside and outside their facilities
- by collaborating with community-based programs to support a healthy, regional food system and increased access to healthy food

Making the Healthy Choice the Easy Choice

Hosting hospital-based farmers markets
- **Kaiser Permanente**: founded one of the first hospital-based farmers market in 2003 and now hosts more than 50 farmers markets.

Reducing waste & donating unused food to the hungry
- **University of Iowa Hospitals and Clinics**: reduced food waste by 40% in 2013 by eliminating less-popular menu items and cutting surplus servings. The hospital donated more food to organizations that feed the hungry and composted 77 tons of food.

Educating patients about healthy grocery shopping and meal preparation
- **Children’s Hospital of Philadelphia**: teamed up with the foodservices company Aramark to launch Home Plate, an innovative research study designed to combat childhood obesity, which teaches low-income parents the skills to cook healthy meals at home.

Supporting health professionals to be effective public policy advocates
- **Health Care Without Harm’s Food Matters program**: engages over 4,000 doctors, nurses, and dietitians across the country to become leaders and advocates for a more sustainable food system.

Writing healthy food “prescriptions”
- **Fresh Prescription, City of Detroit & the Ecology Center**: An expanding network of health care sites across the city are connecting chronic disease patients, at risk pediatric patients and food insecure families with local healthy food resources by writing prescriptions for fresh, local fruits and vegetables.

https://noharm-uscanada.org/kp.org/green
@HCWithoutHarm
@KPSHare

Kaiser Permanente
A Program of Health Care Without Harm’s Healthy Food in Health Care Initiative, in collaboration with the University of California, San Francisco’s Program on Reproductive Health and the Environment.

For more information on UCSF’s Program on Reproductive Health and the Environment go to: www.prhe.ucsf.edu

For more information on the San Francisco Bay Area Physicians for Social Responsibility go to: http://www.psr.org/

For more information on Health Care Without Harm’s Healthy Food Systems go to: http://www.noharm.org/us_canada/issues/food/

Published: December 2011

Food Matters: What to Eat?

Your health depends on the food you eat.

The health of communities and the environment we depend on for life are also impacted by how food is grown and how it gets to your dinner plate.

This brochure provides tips for making food choices to protect your health and the health of your family and community.

The brochure also provides many more resources to learn more about how the food we eat impacts our health. For more information, visit: http://www.prhe.ucsf.edu/prhe/foodmatters.html

There are many ways to make a difference. Here are some suggestions to get started.

http://coe.ucsf.edu/prhe/pdfs/whattoeat.pdf
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<th>Fruits, vegetables, beans, legumes and whole grains</th>
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<tr>
<td>Good</td>
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<tr>
<td>Eat fruits and vegetables every day</td>
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<tr>
<td>Wash fruits and vegetables before eating or cooking them</td>
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<tr>
<td>Better</td>
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<tr>
<td>Eat the least pesticide-contaminated fruits and vegetables and avoid the most contaminated</td>
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<tr>
<td>Eat beans and legumes instead of meat every day</td>
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<td>Best</td>
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<td>Eat locally grown, organic food</td>
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<th>Seafood</th>
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<tr>
<td>Good</td>
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<tr>
<td>Do not eat King Mackerel, Tuna (Bigeye, Ahi), Swordfish, Tilefish or Shark. These fish have high levels of mercury</td>
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<tr>
<td>Check local advisories about the safety of fish caught by family and friends in your local lakes, rivers, and coastal areas</td>
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<tr>
<td>Better</td>
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<tr>
<td>Eat chunk light tuna instead of white albacore tuna. Do not eat more than two cans of chunk light tuna a week</td>
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<tr>
<td>Five of the most commonly eaten fish that are low in mercury are: Shrimp, Canned light tuna, Salmon, Pollock, and Catfish</td>
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<td>Eat seafood that has healthy fat, fewer chemicals and is sustainably caught</td>
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<td>Some good choices are wild salmon, sardines, anchovies and herring</td>
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<th>Dairy and animal fat</th>
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<td>Good</td>
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<tr>
<td>Eat low-fat or non-fat dairy products</td>
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<td>Limit foods high in animal fat</td>
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<td>Better</td>
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<td>Eat non-fat, non-rBGH, free-range, antibiotic free dairy products</td>
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<td>Eat non-fat organic dairy products</td>
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<th>Meat</th>
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<td>Good</td>
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<td>Eat meat sparingly - get protein from plant sources instead</td>
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<td>Better</td>
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<tr>
<td>Eat hormone and antibiotic free meat sparingly</td>
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<td>Eat organic or grass fed meat sparingly</td>
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<th>Eat at home</th>
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<tr>
<td>Good</td>
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<tr>
<td>Avoid fast food and other processed foods whenever possible</td>
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<td>Better</td>
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<td>Increase the number of meals you make at home</td>
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<td>Best</td>
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<tr>
<td>Make most of your meals at home with organic, fresh, local, seasonal foods</td>
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Pesticides Matter

Reduce your exposure to toxic pesticides and protect your health and the health of your family

http://prhe.ucsf.edu/prhe/pdfs/pmbrochure.pdf
http://prhe.ucsf.edu/prhe/pdfs/pesticidesmatter_whitepaper.pdf
“Here is my strong view: climate change, and all of its dire consequences for health, should be at centre-stage, right now, whenever talk turns to the future of human civilizations. After all, that's what's at stake.”

Dr. Margaret Chan, Director General of WHO
“How Climate Change Can Rattle the Foundations of Public Health” September 15, 2014
ENCYCLICAL LETTER
LAUDATO SI'
OF THE HOLY FATHER
FRANCIS
ON CARE FOR OUR COMMON HOME

1. "LAUDATO SI', mi' Signore" – "Praise be to you, my Lord". In the words of this beautiful canticle, Saint Francis of Assisi reminds us that our common home is like a sister with whom we share our life and a beautiful mother who opens her arms to embrace us. "Praise be to you, my Lord, through our Sister, Mother Earth, who sustains and governs us, and who produces various fruit with coloured flowers and herbs".[1]

2. This sister now cries out to us because of the harm we have inflicted on her by our irresponsible use and abuse of the goods with which God has endowed her. We have come to see ourselves as her lords and masters, entitled to plunder her at will. The violence present in our hearts, wounded by sin, is also reflected in the symptoms of sickness evident in the soil, in the water, in the air and in all forms of life. This is why the earth herself, burdened and laid waste, is among the most abandoned and maltreated of our poor: she "groans in travail" (Rom 8:22). We have forgotten that we ourselves are dust of the earth (cf. Gen 2:7); our very bodies are made up of her elements, we breathe her air and we receive life and refreshment from her waters.

   Nothing in this world is indifferent to us

3. More than fifty years ago, with the world teetering on the brink of nuclear crisis, Pope Saint John XXIII wrote an Encyclical which not only rejected war but offered a proposal for peace. He addressed his message Pacem in Terris to the entire "Catholic world" and indeed "to all men and women of good will". Now, faced as we are with global environmental deterioration, I wish to
THE VOICE OF CLIMATE HEALTH
Physicians for Social Responsibility
www.psr.org
Leaders Roll Up Sleeves on Climate, but Experts Say Plans Don’t Pack a Wallop

By JUSTIN GILLIS and CORAL DAVENPORT  APRIL 21, 2016

An airport hangar outside Paris shook with cheers, toasts and foot-stomping in December as diplomats ushered a landmark climate agreement into existence. On Friday morning, world leaders will gather again at the United Nations for a grand ceremony to sign the document.

But can they deliver on their promises to fight global warming?

After a quarter-century of failed diplomatic efforts, signs are growing that nations have turned a corner in their political willingness to tackle climate change. Many leaders are pushing to make the Paris agreement legally binding years earlier than originally expected. The falling cost of clean energy is providing a powerful tailwind for their efforts.

For all the signs of progress and political will, however, new challenges to implementing the accord have arisen just since December. Outside experts also say the countries’ bare-bones plans are still far from enough to keep global warming to tolerable levels. No country has shared a detailed, credible strategy to achieve what scientists think is necessary: ending the era of fossil-fuel emissions and converting entirely to clean energy no later than the middle of this century.

Unless countries develop more ambitious plans, the experts say, the world could ultimately suffer profound consequences, including debilitating heat waves,
Annual Report

MILITARY vs CLIMATE SECURITY

The 2011 Budgets Compared

By MIRIAM PEMBERTON
with JONATHAN GLYN

Foreign Policy In Focus
of the Institute for Policy Studies

NOVEMBER 2010
Cost of Nuclear Weapons

In 2008, US spent $52.4 billion on nuclear weapons-related programs.

(14X the amount spent on developing new sources of energy)

Source: Carnegie Endowment for International Peace
TRILLION DOLLAR TRAINWRECK

Out-of-control U.S. nuclear weapons programs accelerate spending, proliferation, health and safety risks

A REPORT FROM THE WEAPONS COMMUNITIES of the ALLIANCE FOR NUCLEAR ACCOUNTABILITY

APRIL 2016
$1 TRILLION TRAINWRECK

THE US PLANS TO SPEND A TOTAL OF $723 BILLION TO SUSTAIN TRILLION MAINTAINING THE CURRENT ARSENAL, BUYING REPLACEMENT SYSTEMS, AND UPGRADING EXISTING NUCLEAR BOMBS AND WARHEADS.

HOW DO WE STACK UP?

UNITED STATES
$14 Billion

RUSSIA
$9.8 Billion

CHINA
$6.4 Billion

FRANCE
$4.7 Billion

$350 Billion

$240 Billion

$10 Billion

$77 Billion

$55 Billion

$10 Billion

$35 Billion

$20 Billion

$10 Billion

$7 Billion

$5 Billion

$1 Billion

$100 Billion

$150 Billion

$200 Billion

$240 Billion

$350 Billion

$1 TRILLION SPENT OVER 30 YEARS
$4 MILLION PER HOUR

ANALYSTS AT THE MONTEREY INSTITUTE OF INTERNATIONAL STUDIES HAVE PROJECTED LIKELY EXPENDITURES ON THE PROGRAM, BASED UPON SECTION 151 OF THE NATIONAL DEFENSE AUTHORIZATION ACT FOR FISCAL YEAR 2010 AND OTHER OFFICIAL BRIEFINGS. THEIR SUMMARY BREAKS DOWN THE 30 YEAR BUDGET IN BILLIONS OF DOLLARS AS FOLLOWS:

$350 Billion for the Nuclear Security Administration which runs the facilities which research, develop and produce nuclear weapons

$150 Billion for a successor to the Minuteman missile

$100 Billion for command and communications

$100 Billion for a strategic bomber to succeed the B-2

$77 Billion for Ohio class submarines to carry missiles

$250 Billion to $270 Billion for maintenance of the existing triad of bombers, land-based missiles and submarine-launched missiles

$5 Billion for a new strategic bomber to succeed the B-2

$10 to $20 Billion for a long range standoff missile

*Core costs refer to researching, developing, procuring, testing, operating, maintaining, and upgrading the nuclear arsenal (weapons and their delivery vehicles) and the infrastructure for command, communications and early warning infrastructure

Race for Latest Class of Nuclear Arms Threatens to Revive Cold War

By WILLIAM J. BROAD and DAVID E. SANGER  APRIL 16, 2016

The United States, Russia and China are now aggressively pursuing a new generation of smaller, less destructive nuclear weapons. The buildups threaten to revive a Cold War-era arms race and unsettle the balance of destructive force among nations that has kept the nuclear peace for more than a half-century.

It is, in large measure, an old dynamic playing out in new form as an economically declining Russia, a rising China and an uncertain United States resume their one-upmanship.

American officials largely blame the Russian president, Vladimir V. Putin, saying his intransigence has stymied efforts to build on a 2010 arms control treaty and further shrink the arsenals of the two largest nuclear powers. Some blame the Chinese, who are looking for a technological edge to keep the United States at bay. And some blame the United States itself for speeding ahead with a nuclear "modernization" that, in the name of improving safety and reliability, risks throwing fuel on the fire.

President Obama acknowledged that danger at the end of the Nuclear Security Summit meeting in Washington early this month. He warned of the potential for "ramping up new and more deadly and more effective systems that end up leading to a whole new escalation of the arms race."
Worry has focused on the U.S. versus Russia, but a regional nuclear war between India and Pakistan could blot out the sun, starving much of the human race

BY ALAN ROBOCK AND OWEN BRIAN TOON

Twenty-five years ago international teams of scientists showed that a nuclear war between the U.S. and the Soviet Union could produce a "nuclear winter." The smoke from vast fires started by bombs dropped on cities and industrial areas would envelop the planet and absorb so much sunlight that the earth's surface would get cold, dark and dry, killing plants worldwide and eliminating our food supply. Surface temperatures would reach winter values in the summer. International discussion about this prediction, fueled largely by astronomer Carl Sagan, forced the leaders of the two superpowers to confront the possibility that their arms race endangered not just themselves but the entire human race. Countries large and small demanded disarmament.

Nuclear winter become an important factor in ending the nuclear arms race. Looking back later, in 2000, former Soviet Union leader Mikhail Gorbachev observed, "Models made by Russian and American scientists showed that a nuclear war would result in a nuclear winter that would be extremely destructive to all life on earth; the knowledge of that was a great stimulus to us, to people of honor and morality, to act."

Why discuss this topic now that the cold war has ended? Because as other nations continue to acquire nuclear weapons, smaller, regional nuclear wars could create a similar global catastrophe. New analyses reveal that a conflict between India and Pakistan, for example, in which

KEY CONCEPTS
- Nuclear bombs dropped on cities and industrial areas in a fight between India and Pakistan would start a firestorm that would put massive amounts of smoke into the upper atmosphere.
- The particles would remain there for years, blocking the sun, making the earth's surface cold, dark and dry. Agricultural collapse and mass starvation could follow. Hence, global cooling could result from a regional war, not just a conflict between the U.S. and Russia.
- Cooling scenarios are based on computer models. But observations of volcanic eruptions, forest fires and other phenomena provide confidence that the models are correct.

—The Editors
NUCLEAR FAMINE: TWO BILLION PEOPLE AT RISK?

Global Impacts of Limited Nuclear War on Agriculture, Food Supplies, and Human Nutrition

SECOND EDITION

Ira Helfand, MD
International Physicians for the Prevention of Nuclear War
Physicians for Social Responsibility
Preventing Nuclear War: A Professional Responsibility for Physicians

Ira Helfand, MD, Antti Junkkari, BM, and Ogebe Onazi, MD

Since the destruction of Hiroshima in August 1945, the medical community has understood that it cannot respond in a meaningful way to the terrible devastation caused by nuclear weapons. Dr. Marcel Junod of the International Committee of the Red Cross (ICRC) arrived in Hiroshima just one month after the attack and chronicled the enormity of the destruction, the decimation of the city’s medical resources, and the inability of the relatively few surviving health professionals to care for the enormous number of severely injured patients [1]. In a 2012 statement at the United Nations, the ICRC reaffirmed its belief that the world lacks any “adequate international response capacity to assist the victims if a nuclear weapon were to be detonated” [2]. Based on this understanding the medical community must prevent what we cannot cure.

Today, it is not the detonation of a single nuclear weapon that we must fear. Despite the end of the Cold War, there are still more than 17,000 nuclear weapons in the world today, most of them many times more destructive than the bombs that destroyed Hiroshima and Nagasaki [3, 4]. It is more important than ever for the medical community to educate the world about the danger posed by these weapons and our inability to respond to the humanitarian disaster that will result from their use.

The Current Danger

Recent studies have shown that the use of only a small fraction of the world’s nuclear arsenal, in a war confined to one region of the globe, would cause a worldwide disaster. A 2006 paper by Alan Robock and his colleagues modeled the consequences of a limited nuclear war between India and Pakistan in which each side used fifty Hiroshima-sized bombs, less than half of their actual nuclear arsenals and less than 0.03 percent of the world’s nuclear arsenal [5]. The direct effects in South Asia would be catastrophic: more than 20 million people dead in less than a week from the explosions, fires, and immediate radiation effects.

The global impact would be even worse. The fires caused by these hundred nuclear explosions would inject five million tons of soot high into the atmosphere, blocking out sunlight. Across the planet, temperatures would drop an average of 1.3 degrees Celsius, the growing season would be shortened, precipitation would decline, and food production plummet. In the US, corn production would decline 12 percent for a full decade [6]. In China, rice production would decline 17 percent, corn production 16 percent, and winter wheat 31 percent, all for a full decade (unpublished data).

The world is not able to absorb a decline in food production of this magnitude. At this time, world grain...
AMA votes to support banning and eliminating nuclear weapons

Posted by Martin Fleck on June 10, 2015
Labels: Nuclear Weapons

On June 7, PSR member Peter Orris, MD testified in support of the PSR resolution at the American Medical Association Reference Committee in Chicago. On June 9, at the full annual meeting, the AMA adopted the resolution urging "the U.S. and all national governments to continue to work to ban and eliminate nuclear weapons."

This effort began when PSR members introduced and advocated for state-level resolutions in Massachusetts, Maine and Maryland. The Maryland and Massachusetts resolutions were adopted and sent up through the system to the AMA annual meeting. PSR members in additional states contacted AMA national delegates and urged them to support the resolution at the Chicago annual meeting. Thanks to all PSR members and AMA delegates who have worked to focus attention on this critical public health issue.

This AMA resolution will help support proposed improvements -- currently under consideration -- to the World Medical Association statement on nuclear weapons.

PSR looks forward to working with both the American Medical Association and World Medical Association to increase public awareness and education on the consequences of nuclear war, and to urge national governments to ban and eliminate nuclear weapons once and for all.

Here is the text of the AMA resolution, which amends existing AMA policy:

AMA Resolution adopted, June 9, 2015 at Chicago Annual Meeting

Medical Consequences of Nuclear War

Resolved, that our American Medical Association urge the U.S. and all national governments to continue to work to ban and eliminate nuclear weapons (Directive to Take Action); and be it further

Resolved, that our AMA collaborate with relevant stakeholders to increase public awareness and education on the topic of the medical and environmental consequences of nuclear war (Directive to Take Action); and be it further

Resolved, that policies H-520.988, H-520.994, H-520.995, H-520.996, H-520.999 be reaffirmed. (Reaffirm HOD Policy)
TRENDS IN WORLD MILITARY EXPENDITURE, 2015

SAM PELO-FREEMAN, AUDE FLEURANT, PIETER WEZEMAN AND SIEMON WEZIEMAN

Global military expenditure in 2015 was an estimated $1676 billion, representing an increase of about 1.0 per cent in real terms from 2014. Total expenditure was equivalent to 2.3 per cent of global gross domestic product (GDP). This is the first increase in world military spending since 2011. The total rose continuously for 13 years from 1998 to 2011, before decreasing slightly between 2011 and 2014 (see figure 1).

The SIPRI Military Expenditure Database, available at <http://www.sipri.org/databases/milex/>, was updated on 5 April 2016 to include new data on military expenditure in 2015. This Fact Sheet highlights regional and national trends in 2015 and between 2006 and 2015, as revealed by the new data.

Military expenditure in North America and Western Europe fell again in 2015, but at a slower pace than in previous years. Military expenditure

5 All totals exclude figures for certain countries for which it is judged that reasonable estimates cannot be made due to long-term lack of data. These countries are Cuba, Eritrea, North Korea, Somalia, Sudan, Syria, Turkmenistan and Uzbekistan. Unless otherwise stated, dollar figures for national, regional or global military spending in 2015 refer to spending at current prices and exchange rates—i.e., converted from national currency to US dollars at the average market or official exchange rate for 2015. Figures for percentage changes between 2 years, unless otherwise stated, are given in ‘real terms’—i.e., adjusted for inflation. The SIPRI Military Expenditure Database includes figures for each country and region in constant (2014) US dollars, which is the basis for the real-terms calculations. This means that local currency figures are first adjusted for inflation in each country to express them in 2014 prices and then they are converted into US dollars at the average market or official exchange rate for 2014.

Figure 1. World military expenditure, 1988–2015
Note: The totals are based on the data on 172 states in the SIPRI Military Expenditure Database, <http://www.sipri.org/databases/milex/>. The absence of data for the Soviet Union in 1991 means that no total can be calculated for that year.
Global Military Spending Nearly $1.7T Amid Mideast Conflicts

By THE ASSOCIATED PRESS   APRIL 5, 2016, 1:12 A.M. E.D.T.

DUBAI, United Arab Emirates — Global military spending rose in 2015 to nearly $1.7 trillion, the first increase in several years, driven by conflicts including the battle against the Islamic State group, the Saudi-led war in Yemen and fears about Iran, a report released Tuesday shows.

The study by the Stockholm International Peace Research Institute also noted that the Chinese expansion in the South China Sea and Russia's annexation of Crimea and support of Ukrainian separatists also accounted for nudging spending up 1 percent in real terms, compared to 2014.

For weapons manufacturers, the nonstop pace of airstrikes targeting Islamic State fighters in Iraq and Syria, as well as Saudi-led bombing of Yemen's Shiite rebels and their allies, means billions of dollars more in sales.

But activists question continued U.S. arms deals to Saudi Arabia as its Yemen campaign has killed civilians, while American fighter jet sales to both emerging military buyer Qatar and longtime ally Kuwait appear stalled.

The United States, with $596 billion in defense spending, and China, with an estimated $215 billion, led all countries in 2015, the annual report by SIPRI said. Saudi Arabia, however, came in third with spending of $87.2 billion — double what it spent in 2006, according to the report. That fueled the first worldwide increase
“A nation that continues year after year to spend more money on military defense than on programs of social uplift is approaching spiritual death.”

The Reverend Dr. Martin Luther King, Jr. Beyond Vietnam: A Time to Break Silence Riverside Church, NYC April 4, 1967
NO NUKES!

Convert Livermore

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