

Obesity in the Context of Other Epidemics: *Lessons to be Learnt*

Shiriki K. Kumanyika, Ph.D., M.P.H.
University of Pennsylvania School of Medicine
International Obesity Task Force
Prevention Group



What are we trying to accomplish?

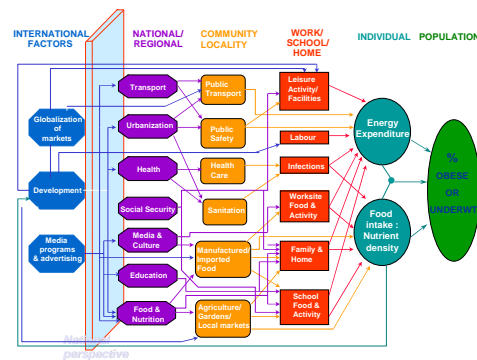
- Vision is social transformation
- Reframing problem as an environmental and political issue rather than individual or medical problem
- Expectation of both planned and unplanned alterations in obesity-related phenomena
- Policy changes will be a critical element of the process

Sommer A. How public policy is created. Scientific processes and political reality.

Am J Epidemiol 2001;154:12 (S4-S6)

"In an ideal world, health policy would be formulated in a rational, linear process, moving from data collection, to interpretation, to scientific consensus...
...Translating science to policy is far messier and convoluted, involving as it does societal priorities, resource allocation, opportunity costs, changing cultural mores, special interests, politics, prejudice, and pure greed"

Source: International Obesity Task Force www.iof.org; See *Int J Obesity* 2002; 26:425-436.



Questions

- Where have we previously solved a problem of this magnitude and complexity?
- What can we learn from these examples, about...

- The pathway to success
- Where and how "evidence" played a role
- What types of evidence are potentially involved

Comparative Historical Study

Political change...is highly contextual and contingent, influenced by an array of prior institutional arrangements, practices, actors, and ideas. Comparative historical study, identifying particular types of historical change as a *class*, can illuminate otherwise obscured developments...

...Treating the obesity case in the context of other private behaviors subject to social disapproval and, eventually, state political action provides analytic traction not immediately apparent in previous studies of obesity and politics." (p.174)

Source: Kersh and Morone, *Studies in American Political Development* 2002

Nutrition Reviews 2001;59(3, Pt II):S40-S56.

What lessons have been learned from other attempts to guide social change?

Economos CD, Brownson RC, DeAngelis MA, Novelli P, Foerster SB, Foreman CT, Gregson J, Kumanyika SK, Pate RR.

Partnership to Promote Healthy Eating and Active Living, Working Group 3

- Selected 4 social models
 - Tobacco control
 - Automotive safety
 - Waste recycling
 - Breastfeeding
- Each required a shift in behavior of the general population as well as the involved business and industry
- Each resulted in adoption of new, increasingly dominant social norms.

Economos et al, 2001

Methods

- Identification of key informants
- 32 semi-structured interviews
- Content analysis for cross cutting themes prioritized by potential for influencing & guiding change in nutrition & physical activity

PPHEAL Working Group 3

Semi-structured Interview

- Stimulus for change
- Original objectives
- Population segments targeted
- Behavior change models used
- Planning/goal-setting process utilized
- Influential people;
- Roles of government and non-government groups
- Importance of legislation
- Opposition
- Effective and non-effective strategies
- Evaluation process employed
- Funding sources
- Professional activities
- Community enablers and barriers
- Transferable lessons

Commonalities

- Change is slow – all required decades to achieve success
- All took advantage of opportunities
- All used broadly-based public- private coalitions
- All used multiple strategies

PPHEAL Working Group 3

Key Components of Success

- Government involvement
- Policy and environmental change
- Crisis
- Science base
- Plan
- Economic Interests
- “Spark Plugs”
- Champions
- Coalition development
- Advocacy
- Mass communication
- Plan

Key Components of Success

- Government involvement
- Policy and environmental change
- Crisis
- Science base
- Plan
- Economic Interests
- “Spark Plugs”
- Champions
- Coalition development
- Advocacy
- Mass communication

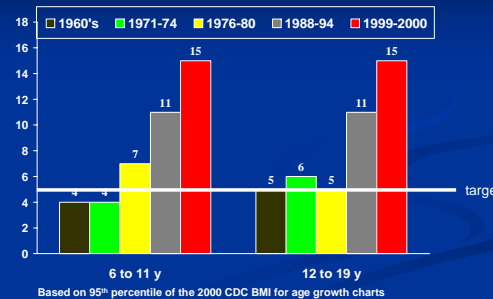
Science Base

- Construction of credible risks using the authority of science and medicine
 - Tobacco
 - 1996 U.S. Surgeon General's Report on Physical Activity and Health re-defining physical activity as a health issue that drives multiple chronic diseases, not simply fitness and athletics
- Steady stream of such evidence required

Perceived Crisis to Mobilize Public Action

- Identification of a clear, dramatic, life-threatening problem that would personally affect many individuals.
- Sense of increasing urgency (seminal events; **key reports**, economic projections)
- Increasing public awareness, e.g.,
 - Long Island garbage barge incident (1987; recycling)
 - Surgeon General's Report on Passive Smoking (1986; tobacco)

INCREASING OVERWEIGHT IN U.S. CHILDREN



Diabetes Projected Risks: For Babies Born in 2000

Girls: 38% lifetime risk

If diabetic before age 40, lifespan shortened by 14 years (Quality of life by 19 years)

Boys: 33% lifetime risk

If diabetic before age 40, lifespan shortened by 12 years (Quality of life by 22 years)




V Narayan et al: JAMA 8 Oct 2003



American Journal of PUBLIC HEALTH
 Vol. 93, No. 9, September 2003


Built Environment and Health
 September, 2003



CDC

Agricultural Policy as Health Policy: Price Supports for Corn


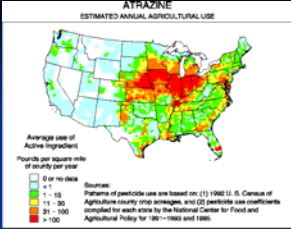
- All US Crop Subsidies:
 - 1996 to 2002: total \$114 Billion
- Corn Subsidies
 - 2002: \$2 Billion
- 80 million acres are planted with corn



<http://water.usgs.gov/pubs/circ/circ1139/htdocs/boxp.htm>

CDC

US Corn Related Pesticide Use

- Atrazine use (nearly all on corn) 70,000,000 pounds
- All US agriculture Pesticide use: 1,000,000,000 pounds

http://www.epa.gov/oppbead1/pestsales/95pestsales/tables_chart_s1995_4.html#table8

CDC

Economic Considerations

- Recycling:
 - government funded businesses to recycle
 - increased tipping fees deterred dumping and encouraged recycling
 - recycling was profitable

Economic Considerations

- Tobacco:
 - Economic costs of tobacco related diseases were estimated
 - Models were developed to allow states and counties to project economic costs and the strategy to increase cigarette prices has been highly effective in lowering rates of consumption

Economic Considerations

- Automotive safety:
 - Cost savings of 55% in terms of reduced inpatient charges for belted passengers admitted to a medical facility as a result of a crash injury.
 - Estimated \$3 billion saving if all states had a primary enforcement seatbelt law.

US Obesity Woes Put a Strain on Hospitals



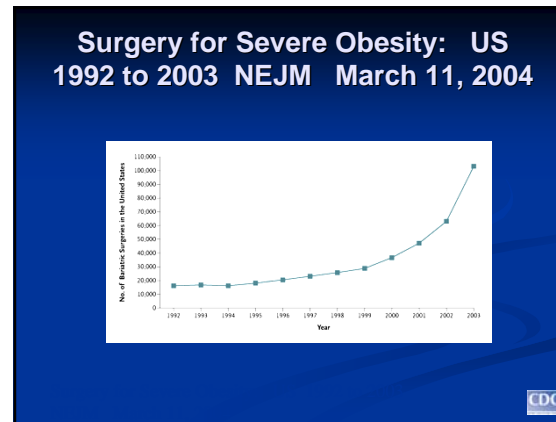
THE WALL STREET JOURNAL
 08/24/03
 U.S.'s Obesity Woes Put a Strain on Hospitals in Unexpected Ways

When an obesity clinic was opened several months ago at a Denver Veterans Hospital in Denver, 1000, the center was overwhelmed with a flood of surgery patients needing care for the nearly 500-pound man.

Health Care Costs
 Dr. Robert E. Taylor, Director of Veterans and Community Health at the University of Colorado, Denver, says that the hospital's experience "is a national issue, and it is a challenge for the health care system to respond to the needs of these patients."

Dr. Taylor says that the hospital's experience is a national issue, and it is a challenge for the health care system to respond to the needs of these patients.

CDC



Unintended Costs of Epidemic of Obesity

- Mean weight gain of Americans in 1990s: 10 pounds
- Airline distance flown in 2000 in US: 515 billion passenger-miles
- Weight transported 1 mile by 1 gallon of fuel: 7.3 tons (passengers or cargo)
- Jet fuel to transport added weight in 2000: 350 million gallons
- Cost of extra fuel: \$275 million
- CO₂ emissions from extra fuel: 3.8 million tons



Data sources: NCHS; US Dept. of Transportation

CDC

Studies in American Political Development, 16 (Fall 2002), 162-175.

How the Personal Becomes Political: Prohibitions, Public Health, and Obesity

Rogan Kersh, *Syracuse University*
 James Morone, *Brown University*

Health Affairs. 2002; 21(6):142

The politics of obesity: Seven steps to government action

Rogan Kersh, *Syracuse University*
 James Morone, *Brown University*

Historical Comparative Analysis

- Examples of several situations in which the U.S. government has been willing to intervene on a personal behavior
 - Drink (prohibition)
 - Drugs (drug abuse)
 - Sex (family planning)
 - Tobacco (cigarette smoking)

7 Triggers to Government Action

- Social disapproval—
 - Challenge to private behavior always begins with shifting social norms
 - Can involve events and crisis
- Medical Science—to show harm
 - Necessary but not sufficient; not always true or completely true
 - Must be promoted

As we have noted, political debates have routinely turned on distinctions between more or less healthful substances. Perhaps scientific evidence will allow regulators to identify “dangerous” foods based on their percentage of saturated fat and cholesterol, for example, and apply policies accordingly. It is not immediately obvious that the realm of food and nutrition is dramatically more complex than that of tobacco, alcohol, or drugs (p 174)

7 Triggers, continued

- Self-help movements
- Demonization of individuals
- Demonization of industry

“In each case, the fiendish producer threatens decent people and innocent children. And in the name of stopping such evil characters, the line between public and private begins to erode. Demonize the provider, sometimes with reason, sometimes not, and the classic American roster of rights evaporates.”

7 Triggers, continued

- Mass movement
 - Evidence to mobilize the population at large
 - Mass effort can counteract industry power
- Interest group action
 - Evidence to demonstrate potential benefits from proposed solutions used to recruit interest groups

Summary: Evidence is needed for

- Creating the sense that there is a problem that will not go away
- Finding new angles to keep the problem on the agenda (worsening crisis, new sectors affected; documenting the costs of not acting)
- Documenting shifts in stakeholder attitudes

- Supporting specific solutions
 - Potentially modifiable determinants
 - Identifying economic or societal benefits from addressing the problem to offset concerns about economic losses
 - Providing evidence to help in choosing among solutions (e.g., feasibility of interventions; outcomes of interventions)

**Opponents may appreciate
the value of evidence more
than do the scientists who
create it**



Phillip Morris Sound Science Campaign

- ...one component of a multipronged attack that has included:
 - letters to journals written by industry consultants that are critical of peer-reviewed publications
 - sponsorship of targeted research apparently intended to cloud interpretation of the evidence;
 - attempts to discredit accepted research approaches, for example, meta-analysis and even epidemiology in general;
 - convening of meetings and expert panels to provide seemingly credible forums for highlighting scientific uncertainties.

Although the tobacco industry campaign failed to achieve its goal of undermining efforts to reduce ETS exposures, the terms “junk science” and “sound science” have stuck and continue to polarize the debates on many public health policy issues. Attacking the science underlying difficult public policy decisions with the label of “junk” has become a common ploy for those opposed to regulation.

“Although the tobacco industry’s campaign attempted to create criteria that could never be met by individual studies, the criteria produced ...have much in common with the principles that underlie the conduct of good epidemiologic research. It is their intended use that warrants concern, not the content. The EPA itself offers criteria for assessing the quality.

Resistance from scientists

- May not be prepared for or comfortable with having a role in governmental or non-governmental venues where policy decisions are made
- May find that policy-makers are not sufficiently familiar with interpreting epidemiologic findings
- May encounter well-prepared critics who cite the inherent limitations of observational data and dismiss epidemiology as ‘soft science’.

Samet JM, Lee NL. Bridging the gap: perspectives on translating epidemiologic evidence into policy. Am J Epidemiol. 2001 Dec 15;154(12 Suppl):S1-3.

New York Times
Developing Countries Reject Obesity Plan
 By EMMA ROSS
 By THE ASSOCIATED PRESS February 10, 2004

A group of developing countries rejected the science driving the United Nations’ effort to fight obesity worldwide, saying Monday the dietary recommendations are based on flawed research and “not worthy of serious consideration.” The scientific report underpinning the global obesity strategy recommends that governments strive to limit their people’s intake of sugar and fat while encouraging increased consumption of fruits and vegetables. The developing countries said the report was shoddy and urged better nutrition education, not arbitrary limits of specific types of food. Their argument mirrors what sugar and other food industry representatives contend. The report “labels various food items as good and bad. It concludes, without any scientific evidence, that bad food is the main cause of chronic diseases. This arbitrary conclusion, apart from its shaky scientific foundation, is indeed prejudicial,” a Colombian delegation told the U.N. Food and Agriculture Organization, speaking on behalf of the G77 group of developing nations and China

Conclusions

Value of Learning from the Past

- No case is entirely unique
- Empirical understanding of the process of policy development and other aspects of social transformation
- Evidence for precedents
- Anticipation of resistance
- Evidence of devious tactics of opponents, including some that have been institutionalized

- Use of evidence is more important than its existence, which has implications for dissemination

Quoting Einstein

- Not everything that can be counted counts; Not everything that counts can be counted.
- Of course, good policy can come from poor evidence..