

# Translating Epidemiology into Action: Towards a Research-to-Policy Framework

Patricia Hartge, Sc.D., M.A.

September 15, 2009

Division of Cancer Epidemiology & Genetics  
Epidemiology & Biostatistics Program

# The Challenge of Translation

- Relevance of epidemiology to policy
  - Public health and clinical domains
  - Power of epidemiologic data to motivate action
  - Disconnects between epidemiology and policy
- Continuum of advocacy for an epidemiologist
- What does a policy maker look for?
  - Short or long time from epidemiology to policy action
  - Incremental nature of policy development
- Needed framework for translation

# Physical Activity & Childhood Obesity

- Defining the problem & choosing endpoints (PA, diet)
  - Obesity, energy intake, and energy expenditure
  - Ecologic context and individual action
- The role of evidence
  - Acting with limited evidence, gathering more evidence
  - Considering costs and benefits
  - “Promise Table” with cost considerations added
- Key analytic tools: systematic reviews
  - What does the evidence show?
  - What are the gaps in evidence?
    - Need for a broad based team

# Physical Activity & Childhood Obesity Cont.

- Key considerations in dissemination of evidence
  - What policy-makers need and want
  - What information “works”?
- The need for a broadly-based team/advocates
- The role of an epidemiologist
  - Demonstrating the risks
  - Conducting surveillance
  - Adding measurement expertise to intervention/policy studies
  - Being an advocate (defined broadly)

# Lowering the Blood Alcohol Concentration

- Epidemiologic data to shape the problem
  - Dose-response curves
- The power of timely evidence
  - Partnering with advocates
- The utility of expert reports
  - The need for systematic reviews and pooling
- The commitment of epidemiologists
  - Implications for career tracks
- Causal interpretation
  - Follow-up evaluation

# Secondhand Smoke

- The importance of evidence on causation
  - The powerful role of critics
- When evidence does not motivate action
  - Understanding the hurdles
- The value of local data
  - Skills brought by an epidemiologist
- Policy evaluation
  - Akin to epidemiology

# Compensation of Veterans for Injuries

- High-stakes decisions with multiple exposures
  - Difficulty in classifying causation
- Focus on elements of one existing process
  - Epidemiologic evidence → IOM → VA
- Real-world framework provides an opportunity to assess
  - Two step nature of process
  - New framework proposed to better use evidence
- Association vs. causation
  - Classification of strength of evidence
- Agencies need transparency
  - Assimilating and disseminating data

# Cross-Cutting Themes Emerged

- Commonalities emerge from these case studies
  - Start with the big picture
  - Consider risks and benefits of action and inaction
- Expect some proactive and much reactive decision making
  - Have epidemiologic evidence ready when the time is ripe
- Understand the context in which policy will be made
  - Ask whether epidemiologic data can help define that context
  - There are cycles (albeit complex ones) in making policy
- Transdisciplinary teams are the “new normal”
  - The science of team science is emerging but we need more
- Be clear on the roles for epidemiologists



# What Does This Imply for the Discipline?

- Where do epidemiologists fit?
  - What is the role of networks, coalitions, and professional organizations?
- What training for policy-making should epidemiologists get?
  - Can we find or develop modular teaching materials?
- Can we find new approaches for reaching policy-makers with epidemiologic data?
  - Do we have the communications models to frame issues?

# Case Studies

- Shawna L. Mercer, CDC
  - Alcohol Case Study: On .08% Blood Alcohol Content Laws
- Rachel Widome, CCDOR, University of Minnesota
  - Smoke-Free Environments
- Allen J. Wilcox, NIEHS
  - Veterans Compensation