Health Promotion: Key issues on evaluation and evidence of its effectiveness

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Greetings
Health Promotion: Key issues on evaluation and evidence of its effectiveness

Seminar on Evaluation and Public Health Policies: Responding to Health Determinants
Santiago de Cali, Columbia June 14, 2005; Intercontinental Hotel
Today’s Talk

- The concept of evidence
- Methodological efforts
- Critical elements of the debate
- Strategic alliances
A digression (first)
History and Theory of Public Health: Slowly Changing Paradigms

- Sanitary Era (when we knew it)
- Germ Theory
- Infectious & Chronic Disease Epidemiology (individual risk factor epidemiology-“social” Epidemiology)

* Health Promotion (finding it again)
### The Historical Development of Health Promotion in the 20th Century: Two Traditions, Two Origins - Both Western

<table>
<thead>
<tr>
<th>The continent</th>
<th>North America</th>
</tr>
</thead>
<tbody>
<tr>
<td>Framed by concerns with the social, economic and political roots of health</td>
<td>Framed by the enlargement of the traditional scope of health education</td>
</tr>
<tr>
<td>Focus on the sociopolitical</td>
<td>Focus on the individual</td>
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</tbody>
</table>
## The Historical Development of Epidemiology in the 20th Century: Two Traditions, One Old, One Recent

<table>
<thead>
<tr>
<th>Epidemiology</th>
<th>Social Epidemiology</th>
</tr>
</thead>
<tbody>
<tr>
<td>Framed by concerns with etiology, traditional biomedical model and a developed disciplinary base in scientific method</td>
<td>Framed by the enlargement of the traditional scope of epidemiology</td>
</tr>
<tr>
<td></td>
<td>Focus on the individual plus focus on the sociopolitical</td>
</tr>
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</table>
**Dominant Patterns of Work**

<table>
<thead>
<tr>
<th>Epidemiology</th>
<th>Health Promotion</th>
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</thead>
<tbody>
<tr>
<td>Methods</td>
<td>Action</td>
</tr>
<tr>
<td>Action</td>
<td>Concepts and Principles</td>
</tr>
<tr>
<td>Theory</td>
<td>Methods</td>
</tr>
<tr>
<td><strong>Concerned with CAUSE</strong></td>
<td><strong>Concerned with CHANGE in a CONTEXT</strong></td>
</tr>
</tbody>
</table>

Thus evidence takes on a different meaning; in epidemiology it is often associated with etiology. In health promotion it is associated with what works.
Health Promotion Perspective: The Components of Context

- **LIFESTYLE**: Collective pattern of life conduct
- **LIFE CONDUCT**: Pattern of behavior of an individual in their day-to-day lives
- **LIFE CONDITIONS**: Patterns of resources of an individual or group (including health status)
- **LIFE SITUATION**: Collective pattern of life conditions
- **LIFE CHANCES**: Structural-based probability of correspondence of lifestyle and life situation

The concept of evidence in health promotion
You cannot look at the concept of evidence without taking into account the history of public health over the past century that we just reviewed.

Part of the history during the latter part of the 20th Century was the rise of evidence as a critical idea.
The three ‘Es’*

Evaluation

Evidence

Effectiveness

*very different animals
Effectiveness is a broad, loosely defined term, generally linked to the notion of “outcomes.”

- Tied to the notion that effective health promotion leads to changes in the determinants of health.
- Raises the “spectre” of costs.
- Underlying epistemology of “outcomes” remains complicated.
The concept of and search for evidence depends on:

- Your point of view
- Your training
- Your view of “science”
- Your view of “knowledge”
- Your context
- Your way of working

Evidence does not exist as a “Thing in itself”
Where is the evidence found? This is both a conceptual problem and a methodological problem.

- Refereed science literature
- General published literature
- Fugitive literature
- Internet
- The community
- Other
Finding Evidence Is Difficult

- Databases and keywords are typically not well suited to find intervention studies efficiently
- Interventions are not categorized systematically
Over the years the “evidence search” in health promotion has expanded beyond looking for RCTs

- Every design has strengths and limitations
- Randomization rarely appropriate or feasible
- Many other intervention and research approaches prove to be more appropriate
General Comments on the efforts to evaluate health promotion interventions

- What appears to be a relatively straightforward task is not so simple
- Despite more than a decade of efforts, we are still in early stages
- Many considerations, methods a key problem
Methodological approaches to evaluate effectiveness in health promotion
<table>
<thead>
<tr>
<th>Quantitative Factors</th>
<th>Qualitative Factors</th>
</tr>
</thead>
<tbody>
<tr>
<td>How big is the problem?</td>
<td>Is it health promoting?</td>
</tr>
<tr>
<td>How much of the problem can be prevented?</td>
<td>Is it feasible?</td>
</tr>
<tr>
<td>How much of the problem will an intervention prevent?</td>
<td>Is it acceptable?</td>
</tr>
<tr>
<td>What are the benefits and harms?</td>
<td>Is it appropriate?</td>
</tr>
<tr>
<td>What does the intervention cost?</td>
<td>Is it equitable?</td>
</tr>
<tr>
<td>How do benefits compare to costs?</td>
<td></td>
</tr>
<tr>
<td>How much do I gain compared to what is already happening?</td>
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</tbody>
</table>
Why Systematic Reviews of Health Promotion Interventions are seen as Useful

- Methods first developed by social scientists Distill and summarize large and diverse bodies of evidence
- Reduce errors and biases in interpretation
- Make assumptions explicit
Systematic Reviews Are Not:

- Limited to randomized controlled trials
- Limited to healthcare interventions
- Restricted to a “biomedical model” of health
- Without serious limitations
Logic Models are often used to Organize Large Numbers of Variable and Complex Intervention Options.
Sociocultural Environment
Logic Framework

Determinants

EQUITY AND SOCIAL JUSTICE

SOCIAL RESOURCES
standard of living
culture and history
social institutions
built environments
political structures
economic systems
technology

PHYSICAL ENVIRONMENT
natural resources
sustainable development

Strategic Points for Interventions

Neighborhood Living Conditions

Community, Development & Employment Opportunities

Civic Engagement & Participation in Decision-Making

Community Customs, Norms, & Processes

Opportunities for Learning and Developing Capacity

Health Promotion, Prevention, & Care Opportunities

Health Outcome

HEALTHIER COMMUNITIES
No Two Community Interventions Are Identical

- Carefully combining information about related but not identical interventions helps to
  - Fully represent an intervention construct
  - Enhance external validity and usefulness
  - Identify common aspects of effective interventions
Defining Suitability of Study Design?

- Greatest
  - Prospective with concurrent comparison

- Moderate
  - Multiple before-and-after measurements but no concurrent comparison OR
  - Retrospective

- Least
  - Single group before-and-after
  - Cross-sectional
What Factors Determine Quality of Execution?

- Description of intervention and study population
- Sampling procedures
- Exposure and outcome measurements
- Approach to data analysis
- Interpretation of results
- Other issues
Drawing an Overall Conclusion About the Strength of Evidence- a Complicated Task

- Number of studies
- Design suitability
- Quality of execution
- Consistency
- Effect size
- Other Factors – zone of complexity
<table>
<thead>
<tr>
<th>Evidence of Effectiveness</th>
<th>Quality of Execution</th>
<th>Design Suitability</th>
<th>Number of Studies</th>
<th>Consistent Design or Execution</th>
<th>Effect Size</th>
</tr>
</thead>
<tbody>
<tr>
<td>1. Strong</td>
<td></td>
<td></td>
<td></td>
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<td></td>
<td>Good</td>
<td>Greatest</td>
<td>≥ 2</td>
<td>Yes</td>
<td>Sufficient</td>
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<tr>
<td></td>
<td>Good</td>
<td>Greatest or Moderate</td>
<td>≥ 5</td>
<td>Yes</td>
<td>Sufficient</td>
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<td></td>
<td>Good or Fair</td>
<td>Greatest</td>
<td>≥ 5</td>
<td>Yes</td>
<td>Sufficient</td>
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<tr>
<td></td>
<td>Fair</td>
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<td></td>
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<td></td>
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<td></td>
<td></td>
<td></td>
<td></td>
<td>Meet criteria for sufficient evidence</td>
<td>Large</td>
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<tr>
<td>2. Sufficient</td>
<td></td>
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<td></td>
<td></td>
</tr>
<tr>
<td></td>
<td>Good</td>
<td>Greatest</td>
<td>1</td>
<td>--</td>
<td>Sufficient</td>
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<tr>
<td></td>
<td>Good or Fair</td>
<td>Greatest or Moderate</td>
<td>≥ 3</td>
<td>Yes</td>
<td>Sufficient</td>
</tr>
<tr>
<td></td>
<td>Good or Fair</td>
<td>Greatest, Moderate or Least</td>
<td>≥ 5</td>
<td>Yes</td>
<td>Sufficient</td>
</tr>
<tr>
<td>3. Insufficient</td>
<td>Insufficient design or execution</td>
<td>Too few</td>
<td>No</td>
<td>Small</td>
<td></td>
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</tbody>
</table>
Broad Participation in the Process Improves the Product

- Multiple perspectives and backgrounds
  - Improve completeness and accuracy of information
  - Reduce impact of individual or institutional perspectives
  - Enhance usefulness of products
Identifying appropriate change processes

- Focus on areas with high certainty and high agreement
- Understand and utilize effective change processes

**Certainty about what works**
- High: Standards, Guidance
- Low: Experiment, Trial & Error

**Agreement about how to do it**
- High: Innovation, Creativity
- Low: Political compromise

**Zone of Complexity**
Critical elements of the evidence debate
Evaluation of effectiveness is part of the ongoing debate around evidence.
The “evidence debate”

Why is evidence so important?

- Many believe that the success of health promotion will depend upon its ability to demonstrate scientifically that it is an effective field of public health action.

- In contrast, many believe that evidence, the very word, is inappropriate for the field of health promotion.

- Between these two extremes are those who question the appropriateness of the various forms of evidence and consider the basic issues of knowledge development in the field of health promotion.
Finding Evidence Is Difficult

- Databases and keywords are typically not well suited to find intervention studies efficiently
- Interventions are not categorized systematically

Requires
- Database searches
- Reviews of reference lists
- Consultation with experts
Critical questions

- How do you convince decision makers to use evidence?
- How do you convince decision makers that you have evidence?
- How much evidence do you need?
- What to do with insufficient evidence?
Insufficient Evidence as Applied by the Task Force

85 (56%) of 153 completed reviews

Only 2 (1.3%) “Recommend Against”
## Insufficient Evidence Applied in the Tobacco Reviews

<table>
<thead>
<tr>
<th>Interventions with Insufficient Evidence</th>
<th>Too Few Studies</th>
<th>Qualifying Studies</th>
<th>Inconsist. Effects</th>
<th>Serious Flaws</th>
</tr>
</thead>
<tbody>
<tr>
<td>Community Education</td>
<td>X</td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>Cessation Series</td>
<td></td>
<td>X</td>
<td>X</td>
<td>X</td>
</tr>
<tr>
<td>Cessation Contests</td>
<td></td>
<td>X</td>
<td></td>
<td>(X)</td>
</tr>
<tr>
<td>Provider Education</td>
<td></td>
<td>X</td>
<td>X</td>
<td></td>
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<tr>
<td>Provider Feedback</td>
<td>X</td>
<td></td>
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<tr>
<td>Youth Access Laws</td>
<td>X</td>
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<tr>
<td>Retailer Laws</td>
<td>X</td>
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<tr>
<td>Active Enforcement</td>
<td>X</td>
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<tr>
<td>Retailer Education+</td>
<td>X</td>
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<tr>
<td>Retailer Education</td>
<td>X</td>
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<tr>
<td>School-based education</td>
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<td>X</td>
<td>X</td>
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<td>School policy</td>
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<td>X</td>
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**Student Advocacy**

Safer. Healthier. People™

CDC
Reasons for Insufficient Evidence

(n=52 intervention reviews)

- Too few studies: 33 (63%)
- Too few qualifying studies: 7 (13%)
- Inconsistent effects: 8 (15%)
- Applicability: 2 (3.8%)
- Serious flaws: 8 (15%)
Strategic alliances as an international response: Focus on the IUHPE
There have been and are many efforts to produce evidence for health promotion and the IUHPE GPHPE is part of this effort.

- E(EURO)WG Europe/Canada/USA
- CPSTF USA, Community Preventive Services Task Force, also called the “Community Guide”
- IUHPE EU
- Cochrane
- GPHPE
- Many others
A strategic question

What contribution can an international organization make to the body of knowledge on the effectiveness of community based health-related interventions, given the context of community based funding programs?
Examples of efforts to produce evidence:

- CPSTF USA, Community Preventive Services Task Force, also called the “Community Guide”
- E(EURO)WG Europe/Canada/USA
- IUHPE EU, GPHPE
- PAHO
- WHO
- Many others
Evaluating Health Promotion: Recommendations to Policy-makers

WHO-EURO Working Group* on Health Promotion Evaluation

*The working group met many times over a ten year period, with membership from Europe, Canada and the USA
Objectives

- provide guidance to policy-makers and practitioners to foster the use of appropriate methods
- examine current range of methods
- provide guidance to policy-makers and practitioners to increase quality of health promotion evaluations
Major publication of the EWG was the “Yellow Book”: Evaluation in health promotion: Principles and perspectives*

*This monograph, edited by Rootman, Goodstadt, Hyndman, McQueen, Potvin, Springett and Ziglio Was published by WHO in 2001 and contains critical articles in valuation from 55 authors, comprising 23 chapters. The monograph was the product of an extensive series of discussions and reviews, setting a standard for addressing the issues involved in evidence and evaluation.
EWG Principles for Evaluation of Health Promotion Initiatives

- Participation
- Multiple methods
- Capacity-building
- Appropriateness
IUHPE Report

A Report for the European Commission by the International Union for Health Promotion and Education

- Title: The Evidence of Health Promotion Effectiveness: Shaping Public Health in a New Europe
- A core document, 30 pages
- An Evidence Book, 164 pages
IUHPE Report

Three Components of Working Group

- International Project Advisory Group
- Lead project Authors
- A Witness Group of Political Experts
1. Commission urged to develop appropriate infrastructure for the development of successful health promotion programs.

2. The impressive body of evidence in health promotion best practice needs to be made available widely and systematically updated.
Characteristics of Working Groups on Evidence and Evaluation

- Multi-disciplinary
- Often multi-cultural/multiple nations
- Large endeavors
- Time consuming
- Raising many questions
- Reviewing published, Western sources
The Global Programme on Health Promotion Effectiveness (GPHPE)

A programme coordinated by the International Union for Health Promotion and Education in collaboration with the World Health Organization, the US Centers for Disease Control and Prevention and many other partners:

African Medical and Research Foundation; Health Promotion Switzerland; National Institute for Health and Clinical Excellence, England; The Netherlands Institute for Health Promotion and Disease Prevention; Pan-American Health Organization; Public Health Agency of Canada; Victorian Health Promotion Foundation; Voluntary Health Association of India, among other international and regional partners.
The GPHPE aims to raise the standards of health promotion policy and practice worldwide by:

- Reviewing evidence of effectiveness in terms of health, economic, social and political impact;
- Translating evidence to policy-makers, teachers, practitioners and researchers;
- Stimulating the debate on the evidence of health promotion effectiveness.
GPHPE : Products (global level)

- Special global issue of proceedings from the Francophone seminar on health promotion effectiveness (available)
- Special global issue on mental health promotion effectiveness (available)
- Special global issue on health promoting schools and effectiveness (in development)
- Special global issue on urbanisation (under consideration)
- Articles published on the GPHPE, its aims and goals
- Global monograph to be released in Vancouver, 2007
GPHPE : Products (regional level)

- Europe : new publication on the challenges of getting evidence into practice
- Latin America : report on state of the art of the evidence of health promotion effectiveness, rapid evaluation guide, and numerous articles and tools
- Africa : conceptual framework and working paper, publication commissioned
- North America : evaluation tool kit, website, framework for community efforts to create conditions that promote health
GPHPE : Operational structure

- Global and Regional Leaders/Coordinators
- Global Steering Group
- Partners, interested parties, collaborators, and independent scientific consultants across the globe
- Potential for creating inter-regional forum around particular areas of interest
GPHPE : Regional projects

Regions focus on developing their own priorities and definitions of evidence of effectiveness:

• Regions move at their own pace;
• Regions take into account their own context and develop plans accordingly;
• Regions feel ownership, while at the same time being full partners in the global programme.
The GPHPE:

- Is a worldwide programme.
- Advocates the importance of effectiveness to researchers, practicioners and decision-makers.
- Will support regional approaches, given the different stages of the development of the field.
- Is about drawing into the programme what can be learned and valued from each region while giving the opportunity for regions to learn from each other.
The GPHPE is a programme intended to uncover and find evidence for effectiveness. This may translate into various approaches in regions given their current capacity to carry out this kind of research or related activities. The intention and goal is to find answers and solutions based on best practice in order to be able to advise on how interventions could be better carried out based upon the evidence.
GPHPE: Next steps

- Enlargement and strengthening of regional initiatives
- Development of content for the Global Monograph series
- Increased networking and exchange across regions, increasing synergy to develop capacity
Some indicators of achievement by the GPHPE will be:

1. Representativeness

- the extent to which health promotion initiatives from a diversity of countries, cultures and peoples is represented in the project;
- how complete it is in identifying all the potential health promotion projects that should be included;
- the extent to which health promotion interventions are distinctively recognised.
Some indicators of achievement by the GPHPE will be:

2. Quality of reflection

- the ability of the analytical review framework(s) developed to distinguish the features of effective projects;
- the ability of an adequate number of reviews to take place.
Some indicators of achievement by the GPHPE will be:

3. Relevance of knowledge for use

- the extent to which the knowledge obtained from the project is translated into use by practitioners;
- the extent to which the knowledge obtained influences research priorities as well as policy and decision makers;
- the general improvement in the knowledge, education and training of health promotion professionals.
Summing up

- Evaluation is a critical hallmark of good public health and health promotion

- Need to understand the complications and dimensions of the task we are undertaking
Summary with regard to concepts, methods, and alliances

- Conceptualization of evidence must relate to the concepts of health promotion
- Methods are many and varied; context is related to method
- Alliances promote a synergy among efforts that add value
- **Investment in evaluation for evidence has been seen as critical by governments, international organizations and the general field of public health researchers**
Thank You!!

03/08/2004