

A Transdisciplinary Graduate Program in Public Health

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Outline

- Transdisciplinary Approach to Public Health
- Washington University's MPH Curriculum
 - Overall MPH Curriculum Approach
 - Transdisciplinary Problem Solving Courses
- Early Results and Experiences



Transdisciplinary Approach to Public Health



Meeting Public Health Challenges

- U.S. and world faces a number of major public health challenges
- The Brown School unveiled an innovative new MPH program in Fall 2009, designed to provide the training students need to face these issues



IOM and the Transdisciplinary Approach

- The Institute of Medicine recommended in two reports that programs in public health move from disciplinary to *transdisciplinary* approach
 - Transdisciplinary research is *“intended to solve research questions that are, by definition, beyond the purview of the individual disciplines.”*
 - *“Faculty in schools of public health come from multiple disciplines, making schools uniquely poised to embrace the transdisciplinary approach ...”*
 - *“future research in public health will ...be transdisciplinary in nature, involving applications of basic biology and social sciences, and direct participation of the community.”*



TD Metaphors

- Disciplines in silos
- Disciplines in burrows



Outcomes of Scientific Collaboration

- *Novel Integrative Ideas*
- *Scientific Advances*
- *Training Outcomes*
- *Institutional Changes*
- *Public Policy Innovations*
- *Public Health Outcomes*



Presumed Benefits of Transdisciplinary Scientific Collaboration

- Greater Explanatory Power
- Methodological Pluralism
- Broad-Gauged Public Policies
- Advantages of Generalist Training Programs



Transdisciplinary Collaboration...

in Principle

and

in Practice



Washington University's Transdisciplinary Approach to Public Health

- Cross-Cutting Themes
- Transdisciplinary Problem-Solving
- Research Methods Sequence
- Practical Experience and Skills Focus



Cross-Cutting Themes in Public Health

- In the Brown School's MPH program, several cross-cutting themes are emphasized throughout the curriculum:
 - Evidence-based public health
 - Dissemination and implementation (to policy and practice)
 - Transdisciplinary problem-solving
 - Health disparities
 - Ethics in Public Health



Program Overview

- 45 credit-hour, 2-year, generalist degree
- Draws on the expertise of nationally-recognized faculty within Brown School and across the University
 - Also draws on the considerable reputations of the Brown School and the rest of the University
 - And a variety of active research programs
- Dual degrees available
 - MPH/MSW dual degree
 - MPH/MBA dual degree

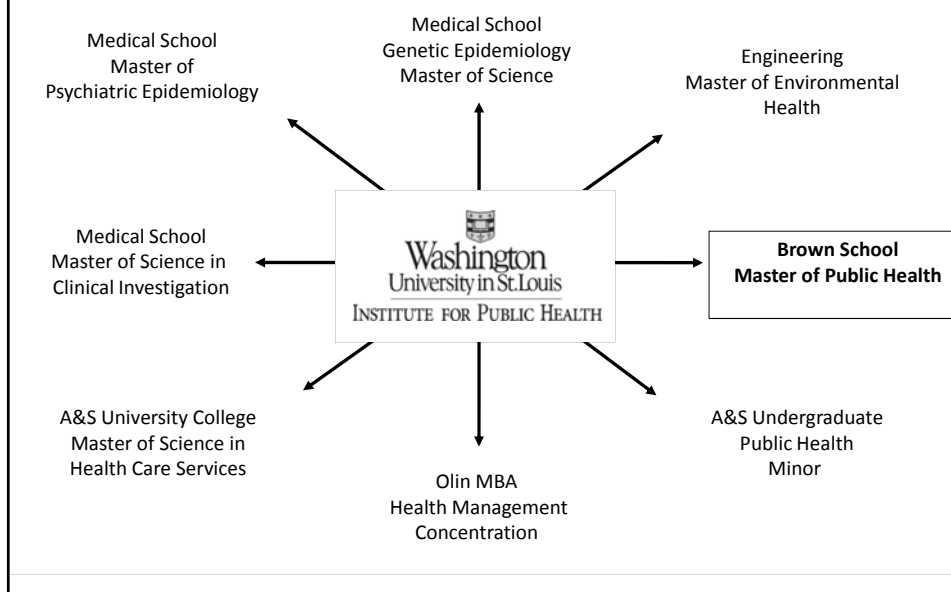


MPH Curriculum

	Credit Hours
Foundations in Public Health	15
<i>epidemiology, biostatistics, behavioral health, environmental health, health administration and policy</i>	
Cross-cutting Themes in Public Health	3
<i>evidence-based public health, transdisciplinary practice, dissemination and implementation science, health disparities, ethics</i>	
Transdisciplinary Problem Solving	9-12
<i>Repeated 2-3 times (3 credits each). Themes chosen from key public health topics</i>	
Research Methods	9
<i>Research design, Applied Linear Modeling, Program Planning Implementation and Evaluation</i>	
Electives	6-9
Internship/Practicum	3
Culminating Experience	--
TOTAL	45



Public Health at Washington University



Transdisciplinary Problem-Solving Courses



IOM, the Transdisciplinary Approach and Teams...

- *“In **transdisciplinary** research broadly constituted teams of researchers work across disciplines in the development of the nature of the public health problem to be resolved....”*



-- Institute of Medicine, “Who Will Keep the Public Healthy?” (2003)



Transdisciplinary Competencies

- MPH program has developed a set of competencies to guide the program
 - Including a set of 8 competencies focused on transdisciplinary public health



LEARNING PROCESS

- **Co-learning**
- **Group-based**
- **Process Oriented**



Evaluation

- **Evaluation based on:**
 - individual work, as well as
 - group participation, including a final group presentation and individual written assignment.



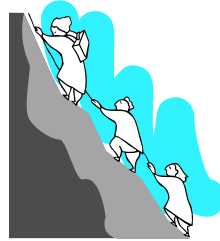
GROUP PROJECT

- **Application of the problem solving methodology to a specific public health problem**
- **Each group produces a written report and presents the main findings and recommendations to the class**
- **All group members participate in the process**



GROUP PROCESS: GROUP DEVELOPMENT STAGES

- Forming
- Storming
- Norming
- Performing
- Adjourning

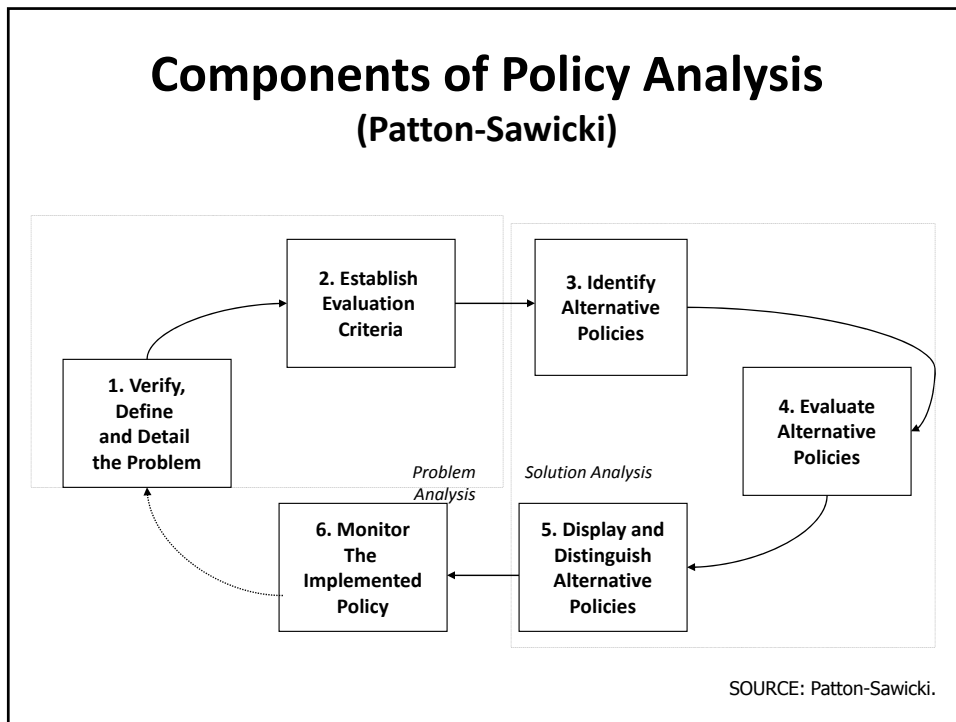


Problem-Solution Framework

- **Problem Analysis**
 - Defining the problem
 - Measuring the magnitude of the problem
 - Developing a conceptual framework for understanding the problem
- **Solution Analysis**
 - Identifying and developing strategies
 - Setting priorities and recommending interventions and/or policies
 - Implementing interventions and/or policies and evaluating outcomes
 - Developing a communication strategy



Components of Policy Analysis (Patton-Sawicki)



Transdisciplinary Course Example: U.S. Health Care Reform

- Health reform preoccupied the country in 2009-10
 - “Will health reform create the conditions so that low and moderate income families may be more likely to lead livable lives?”
- Groups analyzed the effects of health reform on public health of individuals and communities
 - Accomplished by applying a problem-solution transdisciplinary approach to the analysis
 - Microsimulation model available for the analysis.
 - Groups divided into teams, based on parts of the health reform legislation focused on public health and prevention.



Livable Lives



Center for Social Development

GEORGE WARREN BROWN SCHOOL OF SOCIAL WORK

- *“A major goal of public policy should be to achieve ‘livable lives,’ that is, lives with a reasonable degree of social, health, and economic security.*
 - *The phrase livable lives extends beyond the basic consumption orientation of traditional social welfare policy, focusing attention on the positive conditions that should be achieved for social and economic development.”*
 - *Livable life: “**individuals able to reach their potential, achieve their dreams, and live out their biography to its fullest extent.**”*



Transdisciplinary Course Example: Chronic Disease/Obesity

- Public health problem: early childhood (age 0-5) obesity
- Focus: Cells to society approach; using Transdisciplinary presenters
- Group Project:
 - with U.S. national organization focused on early childhood obesity prevention
 - Outcome was several potential projects for organization’s board to consider for funding



Future Transdisciplinary Courses?

- Prevention: Tobacco Policy
- Strategies for Eliminating Health Disparities
- International/Global health
- Violence Prevention



Early Results and Experiences



The Benefits of a Transdisciplinary Curriculum

- Students energized by transdisciplinary approach
 - Reviews of program overwhelming positive
- Connection to real-world problems
- Skill set unique
- Attachment to top researchers
- Program attracts those oriented to “thinking outside the box” (students and faculty)



Challenges

- Labor Intensive
- Administratively Complex
- Analytic Breadth vs. Depth Tradeoffs
- Diffuse vs. Focused Conceptual Models
- Sustainability
- Communication to outside world



Conclusions

- It is possible to develop a curriculum focused on transdisciplinary public health
- There is great receptivity to the idea
 - Links research to curriculum to community
- Challenges: need supportive administration and faculty, and resources, and no inertia



QUESTIONS?



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We invite you to become a part of our inaugural class of MPH students and take advantage of a unique opportunity to shape not only your education, but the future of public health at the Brown School and Washington University.

Tackling today's public health challenges requires new approaches. We aim to leverage our academic strengths and the wide range of resources at Washington University to train a new cadre of public health leaders to improve health for all.