The Changing Face of Public Health in an Information Age

Fox Wetle, Ph.D.
Associate Dean of Medicine
Public Health and Public Policy
Brown Medical School
Goal of Public Health

- Protecting and improving the health of populations through:
  - research
  - surveillance and regulation
  - information
  - interventions
Conceptual Model of Public Health

- Innate traits, biology of disease
- Individual Behavior
- Family/intimate relationships
- Social/Community networks
- Living/Working conditions
- Broad social environmental conditions
Public Health Challenges

- Globalization
- Emerging Pathogens/Infectious diseases
- Bioterrorism/Disaster Response
- Demographic Transformation
- Scientific and Medical Technology
  - Information systems
  - Genetics
- Cultural Competence
- Community participation/advocacy
- Ethics/Law
Globalization

- Emerging pathogens a plane ride away
- Exportation of economies and lifestyles

  - Good news:
    - health promotion
    - longevity
  - Bad news:
    - Unhealthy lifestyles
    - Smoking, diet, exercise, nursing
Bioterrorism Preparedness
Disaster Response

- Surveillance
- Planning and Coordination
- Research
- Response
Demographic Transition

- Population Aging
  - Increased Longevity
  - Decreased Fertility

- Infectious Disease → Chronic Conditions
World Population by Age

Source: United Nations data
Scientific Advances and New Technologies

- **Opportunities for Prevention**
- **Genetic Revolution**
  - Understanding of Disease Etiology
  - Identification of Risk
  - Gene Therapy
- **New Medications and Interventions**
  - Vaccines, treatments, behavioral interventions
Cultural Competence

- Increasing Diversity of US Population
- Health Disparities
- Cultural Differences in Health Beliefs and Behavior
- Differences in Access and Treatment
Participation and Advocacy

- Empowerment of Individuals
- Access to Health Information
  - Professionals
  - Public
  - Consumers and special populations
Knowledge Transmission in Medicine
20th Century

Science
Clinical Practice
M.D.
Patient
Friends
Neighbors
Readers Digest
Knowledge Transmission in Medicine
21st Century
Internet Use by Age Group

Internet Access by Education

HRS Experimental Mail-out Study, 1999
Alzheimer’s Disease on the Web

- Search on Google: 410,000 hits
- Search on Yahoo: 119 sites found
- Search on Alta Vista: 382,334 pages
Public Health Degrees

- BS or BA (Major, concentration, certificate)
- Masters of Public Health (MPH) or MS, MA
- DPH or PhD
- Post-doctoral training (MD-MPH)
- Certification
Disciplines/Areas of Emphasis

- Epidemiology
- Statistics
- International Health
- Maternal and Child Health
- Health Services Research
- Tropical Medicine
- Infectious Disease
- Behavioral Medicine
- Population Health
- Health Communications
- Public Health Nursing
- Occupational Health
- Health Law
- Ethics
Brown Public Health Program

Mission

To improve population health by:

- conducting research to better understand disease risk factors and health promotion,

- educating future generations of health researchers and policy makers, and

- providing public service through translation of research into public policy.
Public Health Program: Components of Mission

- Integrated Educational Program
- Research Agenda and Centers
- Public Service and Public Policy
Brown Public Health Educational Program

Concentrations and Degrees

- Undergraduate concentration in Community Health
- Community Medicine Clerkship
- Graduate degrees
  - Masters
    Biostatistics, Epidemiology, MPH
  - Doctoral
    Epidemiology (Health Services), Biostatistics
  - Post-Doctoral Fellowship Programs
Masters of Public Health

- Director, Patrick Vivier, MD, DPH
  - Coordinator, Joann Barao – 863-2059

- MPH Program focus:
  - developing and translating research data into information for public health policy and practice
Public Health Program

Research Centers and Institutes
Research Centers and Institutes

- Alcohol and Addiction Studies*
- Behavioral and Preventive Medicine
- Gerontology and Health Care Research*
- Primary Care and Prevention
- Clinical Trials in Evidence-Based Health Care*
- AIDS program**
- International Health Institute*
- Statistical Sciences*
- Institute for Community Health Promotion*

* Brown based
** Mixed
# Program in Public Health

## Affiliated Centers and Institutes

<table>
<thead>
<tr>
<th>Center</th>
<th>Current Year</th>
<th>Total (All Years)</th>
</tr>
</thead>
<tbody>
<tr>
<td>Alcohol and Addiction Studies</td>
<td>$ 8,516,410</td>
<td>$ 35,300,983</td>
</tr>
<tr>
<td>Gerontology &amp; Health Care Research</td>
<td>$ 4,201,291</td>
<td>$ 16,016,550</td>
</tr>
<tr>
<td>Brown University AIDS Program</td>
<td>$ 10,113,311</td>
<td>$ 35,051,565</td>
</tr>
<tr>
<td>International Health Institute</td>
<td>$ 1,705,690</td>
<td>$ 7,554,814</td>
</tr>
<tr>
<td>Statistical Sciences</td>
<td>$ 3,846,377</td>
<td>$ 15,208,542</td>
</tr>
<tr>
<td>Primary Care and Prevention</td>
<td>$ 6,854,113</td>
<td>$ 42,662,763</td>
</tr>
<tr>
<td>Behavioral &amp; Preventative Medicine</td>
<td>$ 16,093,273</td>
<td>$ 64,613,622</td>
</tr>
<tr>
<td>Clinical Trials/Evidence-based Healthcare</td>
<td>$ 2,618,195</td>
<td>$ 15,069,584</td>
</tr>
<tr>
<td>Institute for Community Health Promotion</td>
<td>$ 2,942,143</td>
<td>$ 14,325,592</td>
</tr>
<tr>
<td><strong>TOTALS</strong></td>
<td><strong>$56,890,800</strong></td>
<td><strong>$245,804,015</strong></td>
</tr>
</tbody>
</table>
Public Health Program

Public Service and
Public Policy
Public Service Activities

- Bioterrorism preparedness in RI
- Providence Science and Health Technology High School
- Governor’s Advisory Committee on Health
- Rhode Island Public Health Association