The Social Ecological Model for Public Health

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Overview

- Causes of Death
- Public health approach
- Levels of public health intervention
- Social Ecologic Model with examples
- Disparities
# Leading Causes of Death in the United States 2000

<table>
<thead>
<tr>
<th>Cause of Death</th>
<th>Number of Deaths</th>
<th>Death Rate/100,000 population</th>
</tr>
</thead>
<tbody>
<tr>
<td>Heart disease</td>
<td>710,760</td>
<td>258.2</td>
</tr>
<tr>
<td>Malignant neoplasm</td>
<td>553,091</td>
<td>200.9</td>
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<tr>
<td>Cerebrovascular disease</td>
<td>167,661</td>
<td>60.9</td>
</tr>
<tr>
<td>Chronic lower respiratory tract disease</td>
<td>122,009</td>
<td>44.3</td>
</tr>
<tr>
<td>Unintentional injuries</td>
<td>97,900</td>
<td>35.6</td>
</tr>
<tr>
<td>Diabetes mellitus</td>
<td>69,301</td>
<td>25.2</td>
</tr>
<tr>
<td>Influenza and pneumonia</td>
<td>65,313</td>
<td>23.7</td>
</tr>
<tr>
<td>Alzheimer disease</td>
<td>49,558</td>
<td>18.0</td>
</tr>
<tr>
<td>Nephritis, nephrotic syndrome, and nephrosis</td>
<td>37,251</td>
<td>13.5</td>
</tr>
<tr>
<td>Septicemia</td>
<td>31,224</td>
<td>11.3</td>
</tr>
<tr>
<td>Other</td>
<td>499,283</td>
<td>181.4</td>
</tr>
<tr>
<td><strong>Total</strong></td>
<td><strong>2,403,351</strong></td>
<td><strong>873.1</strong></td>
</tr>
</tbody>
</table>
## Actual Causes of Death in the United States 1990 & 2000

<table>
<thead>
<tr>
<th>Actual Cause of Death</th>
<th>Number of deaths (%) 1990</th>
<th>Number of deaths (%) 2000</th>
</tr>
</thead>
<tbody>
<tr>
<td>Tobacco</td>
<td>400,000 (19)</td>
<td>435,000 (18.1)</td>
</tr>
<tr>
<td>Poor diet and physical inactivity</td>
<td>300,000 (14)</td>
<td>400,000 (16.6)</td>
</tr>
<tr>
<td>Alcohol consumption</td>
<td>100,000 (5)</td>
<td>85,000 (3.5)</td>
</tr>
<tr>
<td>Microbial agents</td>
<td>90,000 (4)</td>
<td>75,000 (3.1)</td>
</tr>
<tr>
<td>Toxic agents</td>
<td>60,000 (3)</td>
<td>55,000 (2.3)</td>
</tr>
<tr>
<td>Motor vehicles</td>
<td>25,000 (1)</td>
<td>43,000 (1.8)</td>
</tr>
<tr>
<td>Firearms</td>
<td>35,000 (2)</td>
<td>29,000 (1.2)</td>
</tr>
<tr>
<td>Sexual behavior</td>
<td>30,000 (1)</td>
<td>20,000 (0.8)</td>
</tr>
<tr>
<td>Illicit drug use</td>
<td>20,000 (&lt;1)</td>
<td>17,000 (0.7)</td>
</tr>
<tr>
<td>Total</td>
<td>1,060,000 (50)</td>
<td>1,159,000 (48.2)</td>
</tr>
</tbody>
</table>
The River
Moving Upstream

Adapted from Jones, CP, Jones, CY, Perry, GS, Barclay G and Jones CA. Addressing the social determinants of health: a cliff analogy. Journal of Health Care for the Poor and Underserved. 2009(4 suppl):1-12
Levels of Intervention
Addressing the social determinants of health

Primary prevention

Safety net programs and secondary prevention

Medical care and tertiary prevention
Individual
Enhancing skills, knowledge, attitudes and motivation

Interpersonal
Increasing support from friends, family and peers

Organizational
Changing policies and practices of organizations

Community
Collaborating and creating partnerships to effect change in the community

Public Policy
Developing, influencing, and enforcing local, state and national laws

Social-ecological Model
Socio-ecological Model – Tobacco Prevention

**Public Policy**
Enforcing the Smoking in Public Places (SIPP) RCW, tobacco retailer compliance checks

**Community**
Clark County PREVENT! Coalition, Speak Out! Coalition, partnering with other organizations around smoke-free housing, Alternative to Ticketing program,

**Organizational**
Smoke-free workplaces, smoke-free multi-unit housing and condos

**Interpersonal**
Teens Against Tobacco Use (TATU), tobacco intervention classes with youth and retailers, Speak Out! coalition

**Individual**
Quit line, tobacco intervention classes with youth and retailers, healthy choices class for drug offenders, renter education classes at YWCA, business/employer education
Disparities

• Health outcomes seen to a greater or lesser extent between populations.

• Race, ethnicity, sex, sexual orientation, age, disability, socioeconomic status and geographic location all contribute to an individual’s ability to achieve good health.

Source: Healthy People 2020
https://www.healthypeople.gov/2020/about/foundation-health-measures/Disparities
How do Disparities Arise?

• Differential access to care, including preventive and curative services
• Differential quality of care received through the healthcare system
• Differences in life opportunities, exposures and stresses that affect health status
Institutionalized Disparities

• Differential access to goods, services and opportunities of society due to “race” and other individual characteristics

• Examples:
  – Housing, education, employment, income
  – Medical care
  – Environment
  – Information, resources, voice

• Explains the association between SES and race/ethnicity
Personally-mediated Disparities

• Differential assumptions about the abilities, motives and intents of others by “race,” ethnicity and other personal characteristics
• Prejudice and discrimination
• Examples:
  – Interpersonal violence
  – Physician disrespect
  – Shopkeeper vigilance
  – Waiter indifference
  – Teacher devaluation
Differences in exposures and opportunities

Differences in access to care

Differences in quality of care
(ambulance slow or goes the wrong way)
Addressing health disparities:

Why are there differences in resources along the cliff face?

Why are there differences in who is found at different parts of the cliff?