

Occupational Settings for Public Health and Prevention

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The Goal/Role of Public Health:

- Improve the Health of the Entire Community (Population-based)
- Surveillance, intervention development and implementation, outcome evaluation
- Both etiologic information and interventions often require specificity
- Numbers at risk vs. severity of need
- Context vs. Behavior

Public Health Education

- Professional vs. Research Training
 - M.P.H., Dr.P.H.
 - M.S., Ph.D. (thesis requirements)
- Core disciplines for Professional Degrees
 - Epidemiology, Biostatistics, Health Policy and Administration, Behavioral Sciences, Environmental Health
- Research, engineering, industrial hygiene, nursing, nutrition, health education may miss each other.

Environmental Health

- Classic public health prevention: water, sewage, food, vector-borne disease
- Industrial effluents
- Gene-environment interactions
- Behavior and the built environment



Occupational Health: Numbers/Need

- What are the etiologic questions?
- What are the structural concerns?
- How do behavioral sciences apply?
- How do we teach these?
- What are the pitfalls?



Reported Causes of Death in the United States in 2000

Mokdad et al, JAMA, 2004:

DEATHS

● Heart Disease	710,760
● Cancer	553091
● Cerebrovascular Disease	167661
● Chronic Lower Respiratory Tract Disease	122009
● Unintentional Injuries	97900
● Diabetes Mellitus	69301
● Influenza and Pneumonia	65313
● Alzheimer's Disease	49558
● Kidney Disease	37251
● Other	530507

Actual Causes of Death in the United States in 2000:

CAUSE	ESTIMATED #	% TOTAL DEATHS
● Tobacco	435,000	18.1%
● Diet/Physical Inactivity	400,000	16.6%
● Alcohol	85,000	3.5%
● Microbial Agents	75,000	3.1%
● Toxic Agents	55,000	2.3%
● Motor Vehicles	43,000	1.8%
● Firearms	29,000	1.2%
● Sexual Behavior	20,000	0.8%
● Illicit use of Drugs	17,000	0.7%
● TOTAL	1,159,000	48.8%

Heart Disease

- Smoking
- Diet: marketing, availability
- Exercise: sprawl, safety
- Particulate pollution
- Stress - Boring work, job loss, racism
- Community, residence



Working

- Income
- Respect
- Skills
- Health Insurance
- Social interaction
- Creative outlet
- Societal Contribution
- Safety and health hazards
- Stress
- Loss
- Home responsibilities
- Transportation

“Without work all life goes rotten” Albert Camus



Sweatshops in Chicago: A survey of working conditions in low-income and immigrant communities

- 800 interviews in community outreach settings
- Sweatshop defined as violating 2 or more labor laws (36% of respondents)
- Probability of sweatshop employment
 - 27.4% for U.S. citizens
 - 36.8% for legal permanent residents
 - 69.6% for “others”
 - R. Levin and R. Ginsberg, 2000

Immigrant workers:

- “I work 12 hours every day – every single day of the week. I have no time, no connections with other people, no church, no organization. I am alone. All alone.”
 - Vietnamese male, 24, printshop worker.
- “People are afraid to say they won’t handle [the chemicals] because they might lose their jobs. If one person complains, he is fired. They quickly find another person to replace him. And there are many people looking for a job.”
 - Polish female, 36, office cleaner

Social determinants of occupational health

- Community-based participatory research.
- Contextual-behavioral model for empowerment.
- Examples of what matters (occupational): pay, overtime, training, promotion opportunities, control, organization of work, benefits, safety.
- Environmental: Guns and gangs; water vs. soft drinks; vermin; housing; education.

What is an outcome? A mediator?

- Clinic-based maternal depression rates in childhood intervention trials
- Organization of work, downsizing, outsourcing and illness/ lost work time
- Trauma and long term sequellae
- Need rigorous evaluation of proposed interventions across populations
- Workplace as sheltered space