Risk Assessment

Definition of Risk Assessment
• A scientific process of evaluating the adverse effects caused by a substance, activity, lifestyle, or natural phenomenon.
• Characterized by uncertainty
• Establishes a range of probability

Definition of Risk Factor
• Risk Factors increase the probability of disease, injury, or death.

Healthy People
• Disease prevention and health promotion instead of only finding the cure (since 1979)
• Studying the risk factors for getting a disease became increasingly important.

Types of Disease
• Communicable (infectious)
• Non-communicable
• Acute
• Chronic

Examples of Risk Factors
• Obesity
• Alcoholism
• Poverty
• No helmet
• Tobacco use
• Environment
Establishing Risk Factors

How do we know what the risk factors are?

Analytical Studies

- Retrospective
  - Case
  - Control
- Prospective
  - Cohort

Considerations of Risk Assessment

- Culture
- Religion
- Age
- Socioeconomics
- Environment
- Physical Biology
- Behavior/attitude
- Resources

Resource Theory

- Define the resource reservoir
  - Pathways to obtain resources?
  - Status to obtain resources?
- Recognize the lack of resources
  - Women’s HIV prevention example

Risk Vs Resource Need Vs Strength

- Needs should be prioritized using the availability of resources.
  
  “Giving people medicine for TB and not giving them food is like washing your hands and drying them in the dirt.”
  
  “You want to stop HIV in women? Give them jobs.”
  
- Resources can be determined by “mapping” a community.

“Ownership” is crucial

There is no point in intervening if the community does not feel that they own the problem!
**Prevention Marketing Theory**

- **Step 1: Communitywide risk assessment**
  - Who is doing what, with whom, where, when, how and how often

- **Step 2: Social Marketing**
  - Commercial marketing principles and techniques achieve socially beneficial goals
  (Kotler & Zaltman, 1971)

**Examples of Prevention Marketing**

- Adolescents: “Brain on Drugs”
- Children and Adolescents: Vaccines
- All ages: Santa Claus eating cheese
- All ages: “Got Milk”
- Children and Parents: Bill Cosby

**National Reports**

- Monthly Vital Statistics
- Morbidity and Mortality Weekly Report (MMWR)
  - Includes outbreaks, environmental hazards

**Exemplary Tools of Risk Assessment**

- Individual
- Community/population

**Examples of Risk Assessment on the Web**

- Harvard Center for Cancer Prevention
  [www.yourcancerrisk.harvard.edu](http://www.yourcancerrisk.harvard.edu)
  - Breast, Prostate, Lung, Colon, etc.
- National Institutes of Health
  [www.nih.gov](http://www.nih.gov)
  - 10 year risk of heart attack
- Memorial Slone Kettering Cancer Center
  [www.mskcc.org](http://www.mskcc.org)
  - Lung cancer, etc.

**Classifying BMI**

- **Underweight**
  - BMI < 5th percentile
- **Healthy weight**
  - 5th > BMI < 85th percentile
- **At Risk of Being Overweight**
  - 85th > BMI > 95th percentile
- **Overweight**
  - BMI ≥ 95th percentile

*Dennison, Barbara A., MD. Risk Evaluation in Pediatric Practice. Pediatric Annals (Jan 2004)*
Comorbidity!

- One risk factor is never enough
- A good Risk Assessment identifies all the risks!

National Health Surveys

- National Health Care Survey
- Behavioral Risk Factor Surveillance System
- Your Risk Behavior Surveillance System
- National Health and Nutrition Examination Survey
- National Minority Substance Abuse and HIV Prevention Initiatives Survey [SAMHSA]

In Conclusion

Nurses don’t necessarily need to know
1. The cure
2. The causative agent

*But we can’t prevent the disease from occurring without knowing the RISK*