Changing Behavior

Jill Gallin BSN, MS, CPNP
Health Promotion Disease Prevention N4225

The Extended Parallel Process Model
- Two appraisal processes
  - Threat Appraisal
  - Efficacy Appraisal
- Three Outcomes
  - No response with low perceived threat
  - Acceptance when perceived threat and efficacy are high
  - Rejection when perceived threat is high, but efficacy is low
- Example (seat belts)

Persuasive Message Theories
- Health Belief Model
- Theory of Reasoned Action
- Social Cognitive Theory
- Elaboration Likelihood Model

Health Belief Model
- Very popular!
- Example (immunization campaigns)
- Five Factors
  - Perceived barriers to performing the recommended response
  - Perceived benefits of performing the recommended response
  - Perceived susceptibility to a health threat
  - Cues to action (media, family, etc.)

Theory of Reasoned Action
- One’s own beliefs about performing a behavior (attitude)
- Subjective norm
  - Beliefs about what other people think about the behavior and the motivation to comply with those other people (referents).

Social-Cognitive Theory
- Self Efficacy
  - Peoples beliefs that they can exert control over their motivation and behavior and over their social environment (people doubt this)
- Outcome Expectation
  - What you think will happen if you take a certain action
Elaboration Likelihood Model

Promote central processing (not peripheral processing).
This takes work. Results in long lasting behavior change.

Theories

- Explain how variables work together to influence health behaviors
- Variables are threat, efficacy and barriers

(Detail is beyond the scope of this class)

Approaches

- Describe different steps to increase the persuasiveness of a health risk message
- Stages of Change Model & Social Marketing are approaches

Stages of Change Model

- Prochaska & DiClemente 1992
- Characterized by incremental steps, relapse, and sustainability
- Not a linear progression, rather a spiral with relapses

Table 4.2 Summary of Health Behavior Change Theories

<table>
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<th>Theoretical Origin of Variables</th>
<th>Theorized Model</th>
<th>Theory of Reasoned Action</th>
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The Stages

- Pre-contemplation
- Contemplation
- Preparation
- Action
- Maintenance

Precontemplation

- Denial
- No perceived problem
- No association of problem with behavior

Contemplation

- Realistic assessment of one self
- Unable to confront problem or behavior

Preparation

- Actively gathering information in preparation for behavior change

Action

- A change in behavior

Maintenance

- Constant vigilance to avoid relapse
- Remember behavior related illness are always potentially “chronic!”
Levels of Prevention (3)

- **Primary**
  - Aimed at those who have not started a risk behavior

- **Secondary**
  - Aimed at those who do not exhibit chronic behavior

- **Tertiary**
  - Aimed at Treatment & Maintenance

Elements of Prevention (4)

- **Education**

- **Treatment**
  - Removal physical & environmental conditions that contribute to behavior (AA, NA)
  - Psychological and physical hooks

- **Public Policy**

- **Law Enforcement**

Education

- Limit demand by providing information
- Changing attitudes and beliefs
- Providing skills (examples)
- Changing behavior

Treatment

Public Policy & Law Enforcement

- Courses of Actions pursued by the government

All the levels & Elements of Prevention

Save Money
Where can we apply Stages of Change Model?

- All levels of prevention
  - Primary
  - Secondary
  - Tertiary
- Two elements of prevention
  - Education
  - Treatment

Categorize the Behavior

- Addictive Behavior (physical & psychological)
  - Tobacco use (Nicotine)
  - Drug abuse (Heroin, crack, cocaine)
  - Alcohol abuse (ETOH)
- High Risk Behavior (psychological hook)
  - Over eating/under exercising
  - Violence
  - Unsafe practices
    - Injury related
    - Sex related

Techniques for Stage Placing

- The Techniques of Skilled Interviewing (NO THREATS)
  - Active listening
  - Adaptive questioning
  - Nonverbal communication
  - Facilitation
  - Echoing
  - Empathetic responses
  - Validation
  - Reassurance
  - Summarization
  - Highlighting Transitions

Take an Excellent Health History

- Ask
- Advise (personalize)
- Assist
- Arrange

Understand the Difference

- Illness
  - How the patient experiences the symptoms
- Disease
  - The explanation the clinician brings to the symptoms

The 4 A's

- How does the patient react?
Be Informed!

Applying the Stages of Change Model

Individual Applications & Societal Applications

Smoking Cessation

Tobacco Facts

Tobacco kills more people than all of these causes of death combined:

- Car crashes
- AIDS
- Suicide
- Homicide
- Illicit Drug use
- Alcohol

American Cancer Society, Living Well Tobacco Free (2001)
One in every five deaths in the United States is smoking related.

On average smokers die about seven years earlier than nonsmokers.

Cigarette smoke contains 4,000 chemicals
• 43 known carcinogens
• 401 highly toxic substances
• Examples of poisons: carbon monoxide, cyanide, formaldehyde

Why Smoke?
Psychological & Physical Hooks

Nicotine is Not Addictive?!
Commercial Break
CEO's of Big Tobacco Congress 1994

Smoking Cessation
An individual Application
Living Well . . . Tobacco Free

Presented by the American Cancer Society
Eastern Division Inc.

Refer to the book for Stages of Change Page

Four Program Components
(enshrine the elements of prevention)

• Tobacco Education
• Clearing the Air
• Freshstart **
• Staying off smoking **

Freshstart Sessions
(enshrine the stages of change)

• Understanding Why and How  (contemplation & preparation)
• Managing the First Few Days  (Action)
• Mastering the Obstacles  (Action)
• Staying Quit and Enjoying it Forever  (Maintenance)

Smoking Cessation
A Societal Application

CDC recognizes Tobacco Cessation as one of the ten greatest public health achievements of the 20th Century

Where have we begun to succeed as a society?
Public Policy & Law Enforcement elements of prevention
### Legislation

- 1964 Surgeon general established advisory committee on Tobacco which suggested relationship to cancer in writing.
- 1965 Federal Cigarette Labeling and Advertising Act requiring surgeon general’s warning on all packs.
- 1971 all broadcast advertising was banned.
- 1990 smoking banned on all interstate buses and domestic airline flights lasting six hours or less.

### More legislation

- 1992 Synar Amendment passed: federal law that requires all states to adopt legislation that prohibits the sale and distribution of tobacco products to people under age 18.
- 1995 Bill Clinton announced FDA plans to regulate tobacco, especially sales to minors.
- 1998 6.5 billion dollar settlement in Minnesota. Public knowledge of deceit.
- Set back in 1998- Senate rejected M Cain bill to raise taxes and change policy.

### Achievements

- Smoking prevalence rates among adults aged 18 years and older decreased from 42.4% in 1965 to 24.7% in 1997.
- 1.6 million deaths were postponed, saving more than 3 million person-years of life.

### BUT

- Since 1990 smoking prevalence among adults is virtually unchanged.
- Adolescent smoking increased 28.3% from 1991 to 1997.
- Second hand smoke is still a big problem.

### Where do providers fall short?

- Only 15% of smokers who saw a provider in the past year were offered assistance with quitting.
- Only 3% were given a follow up appointment to address this topic.
- Only 9% of managed care organizations have fully implemented the guidelines for coverage.

### Smoking Cessation Clinical Practice Guideline, 2000

- Effective treatments exist (psychiatric hook).
- Every patient who uses tobacco should be offered treatment.
- Strong dose-response relationship, effectiveness increases with intensity of treatment.
- Treatment is insured & clinicians are reimbursed (far from 100%).
- Pharmacotherapy (physical hook).
- Clinically effective and cost effective.
As a society, we are SLOWLY changing our behavior

- Providers
- Legislators
- Consumers
- Big tobacco (because they have to!)

Weight Loss

Individual Applications

Examples

- "Practical Clinical Behavioral Treatment of Obesity," by Ingela Melin & Stephan Rossner (2003) refer to the article for Prochaska reference #15

Westehoefer’s Stages

- Problem consciousness (contemplation)
- Attitudinal change (preparation)
- Behavioral change (action)
- Behavioral trial (action)
- Behavioral stabilization (maintenance)

Westehoefer, "The therapeutic challenge: behavioral changes for long-term weight maintenance," (date)

Are the programs effective?

- Westenhoefer says, yes and no.
  - "Isolated changes of single behaviors will not suffice for long-term success, but more complex changes of many behaviors and perhaps life-style as a whole are necessary for long-term weight maintenance."
  - Meal rhythm and frequency, quality of food, meal situations, restriction of food
- Melin & Rosner don’t have patient data.
  - But they do feel that they changed the attitudes of the health care personnel. "850 nurses, dietitians and other health care personnel have been educated – overall these participants find their education and supervisions meaningful and valuable."

Why does this research seem inconclusive?
Levels of Prevention

- Education (little has been done)
  - Fast food healthy choices
  - Public schools

- Treatment
  - For Profit 'Diets'
    - Weight Watchers
    - Atkins
    - LA weight loss

- Public Policy & law enforcement
  - Schools: California (has ban in place) & New York
  - 17 states (NY) have "sin taxes" on soda & junk food
  - What if things were different? Will Doritos get sued?

Safer Sex

Abstinence

ESID

- Experimental Social Innovation and Dissemination (1977) Fairweather & Tornatzky
- Behavior Change Model Variant for Societal implications carried out traditionally by scientists

Weight Loss

Societal Implications

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Safer Sex

Individual Applications

? 

Societal Applications

(Because people have sex with somebody else)
**ESID parameters**
- Must address a pressing social issue
- Be guided by humanitarian values
- Include representative of the affected community

**Why?**
- In 1989 68% of all adult/adolescent AIDS cases were of MSM
- Not because they are homosexual, but because of their high risk behavior.

**ESID Principles**
- Adoption of an idea with verification of peer support
- “Opinion Leaders”
  - Safe Sex Endorsers
  - Behavior Change Advocates
  - Chosen by bartenders

**Results at 2 months**
- 25% decrease in unprotected anal intercourse
- 30% decrease in unprotected receptive anal intercourse
- 16% increase in condom use
- 18% decrease in proportion of men with more than one partner

**Results after 1 Year**
- 65% decrease in unprotected anal intercourse
- 50% increase in condom use

**In conclusion**
What’s in common?

- Ownership of the problem
- Group support
- Program longevity
- “Life Savors”
- Facilitators
- Harm reduction
- No vaccines, limited pharmacology Tx
- Fatality when not adhered to

What is Different?

- Unfortunately, you can’t use a condom in stages

Complementary Medical Interventions

- Pharmacotherapy
  - Methadone maintenance
  - Nicotine gum, patch, nasal spray, Zyban, clonidine
- Surgery
  - “Stomach stapling” Gastric Bypass Surgery
- Alternative Therapy
  - Acupuncture
  - Hypnosis
  - Herbal Therapy

Changing Behavior of Providers

- Increases ownership of a societal behavior problem
- Shares the burden of the problem behavior
- Validates a behavior as a problem
- Makes a difference