



**CPH** Certified in  
Public Health

by National Board of Public Health Examiners

# **CPH Learning Institute**

## **Social and Behavioral Sciences**

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# Social and Behavioral Sciences in Public Health

- A multidisciplinary approach to the promotion of health and prevention of disease through:
  - Enhanced understanding of the behavioral and social determinants of health
  - Theoretically-driven, evidence-based strategies for health promotion and disease prevention
  - Systematic models for program planning and evaluation

# Topics



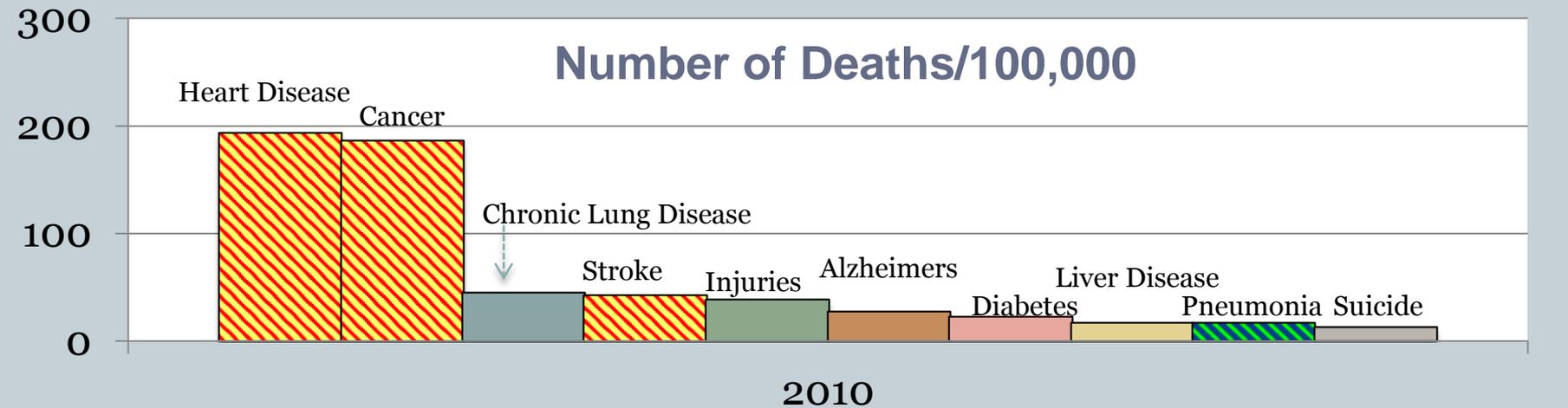
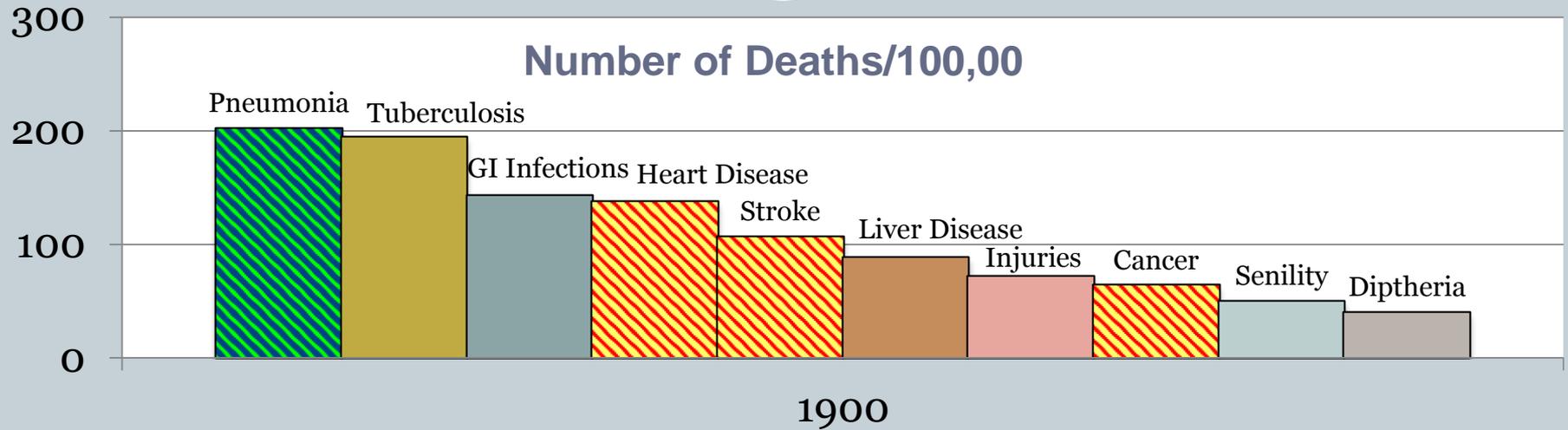
## Part I

1. Pattern Of Disease
2. The Social Ecological Model
3. Theories Of Change
4. Health Promotion And Disease Prevention

## Part II

5. Ethical Issues In Planning & Evaluation
6. Planning Models
7. Evaluation Methods
8. Scaling Up Programs And Sustainability

# Changing Pattern of Disease, US, 1900 vs. 2010

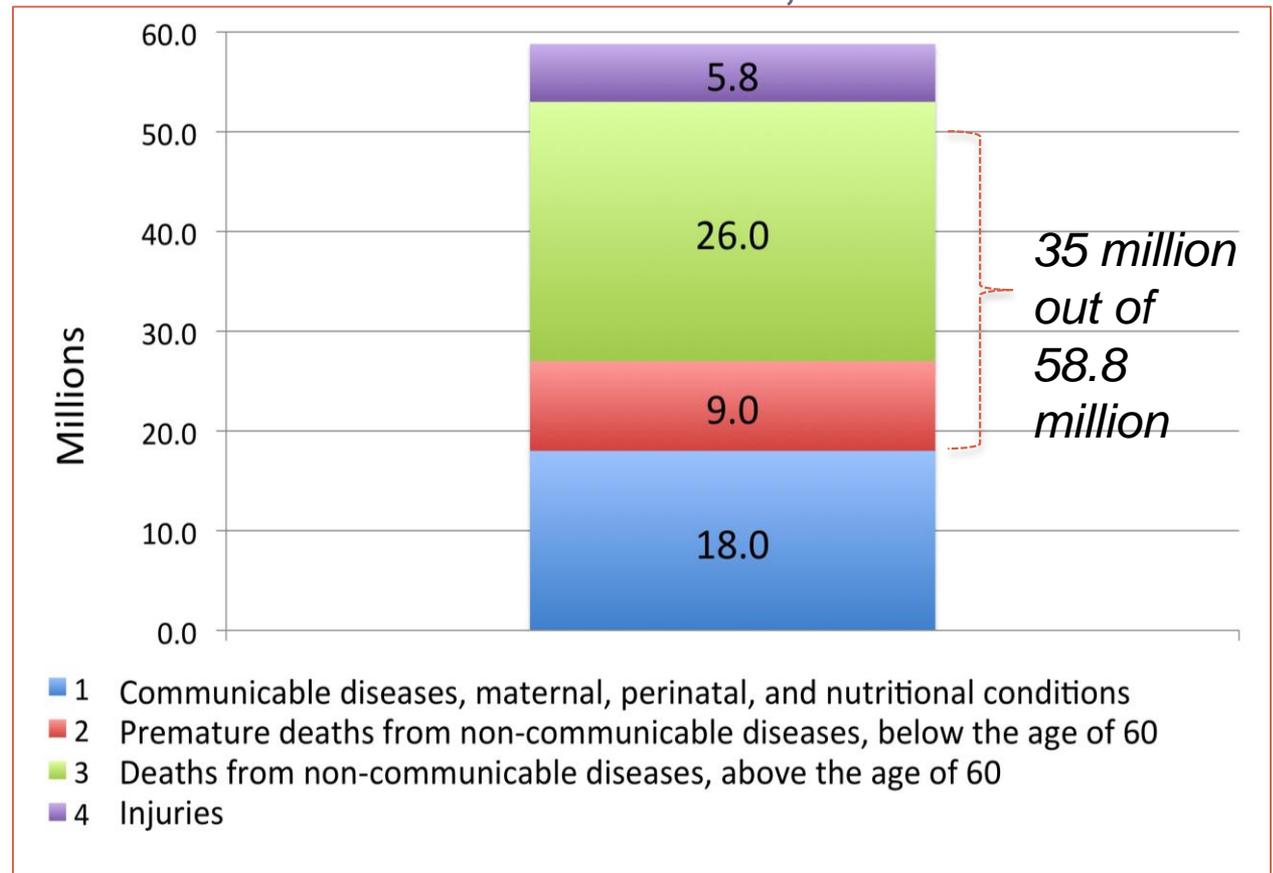


# Global Mortality Pattern

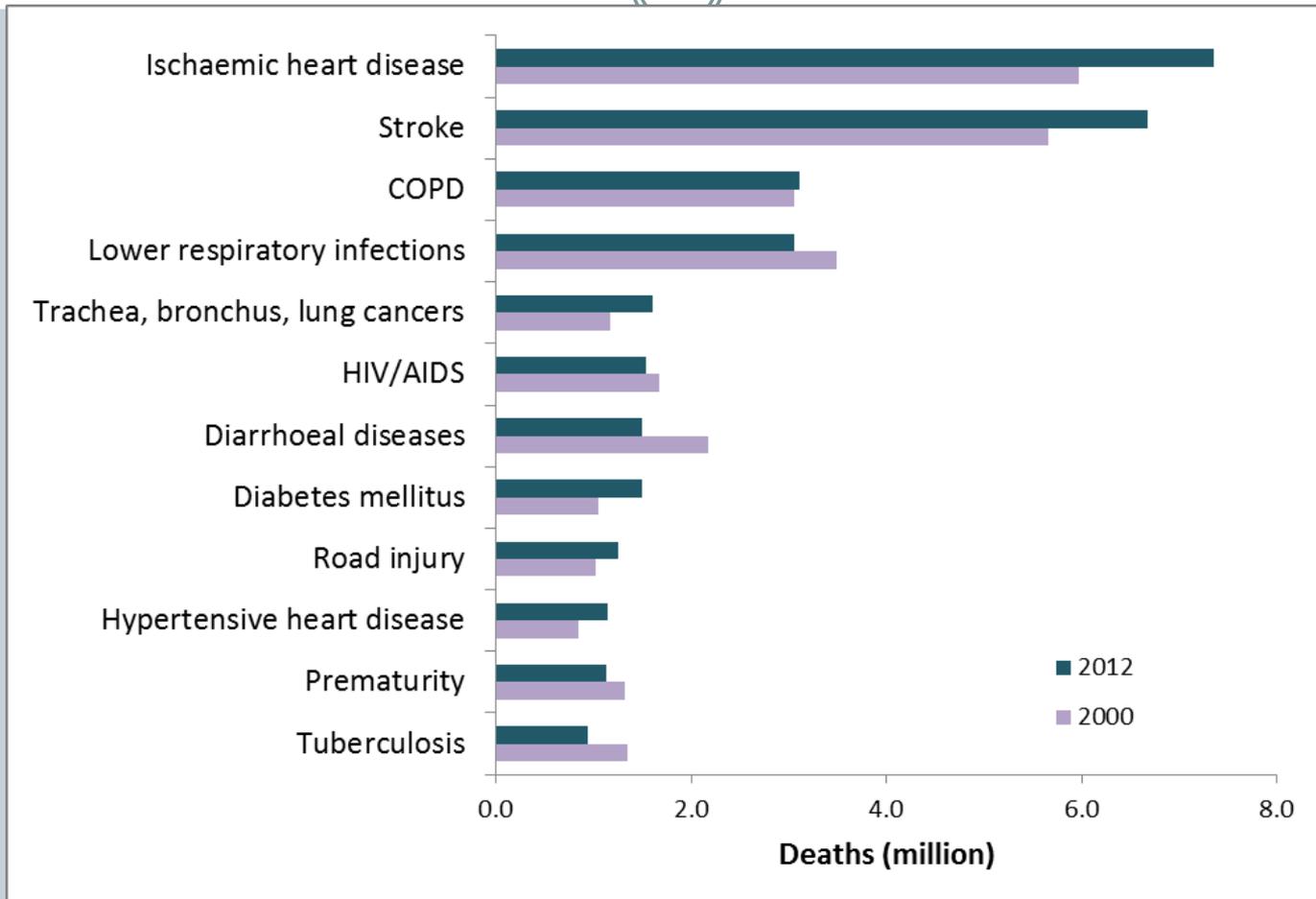
Chronic disease accounts for 60% of deaths worldwide

*(35 out of 58.8 million)*

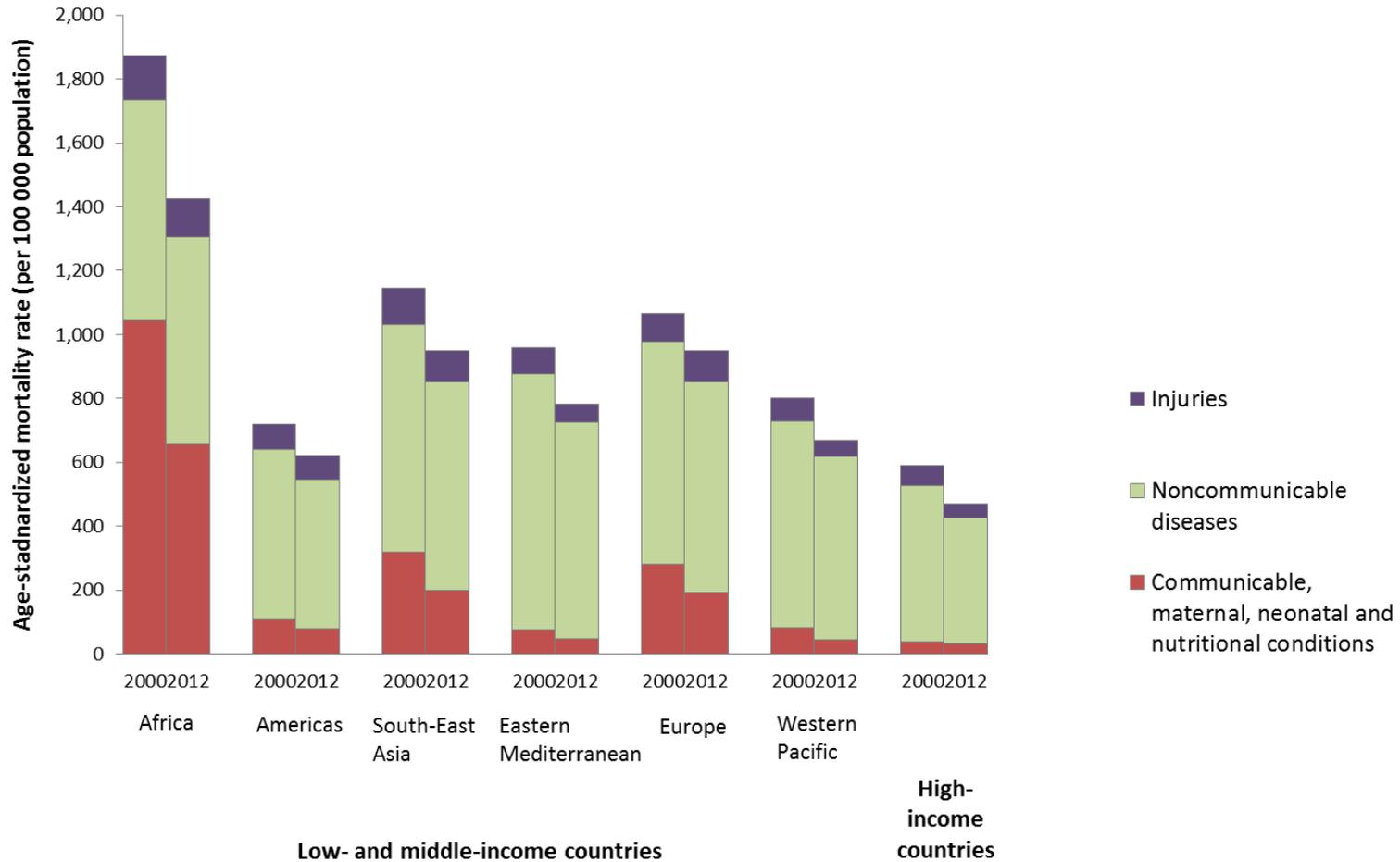
## Number of Deaths, Worldwide



# Comparison of leading causes of deaths, Global, 2000 and 2012



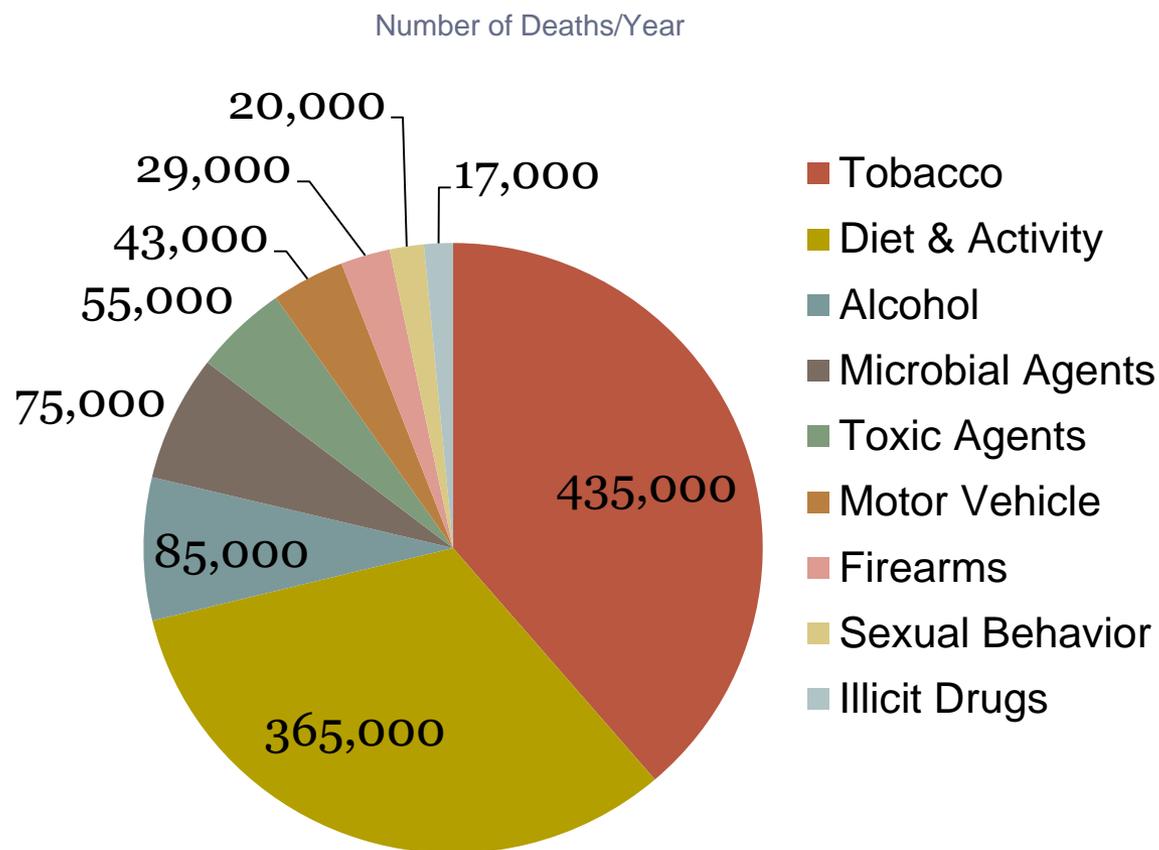
# Age-standardized Mortality Rates by Cause by WHO Region and World Bank Income Categories, 2000-2012



# Behavioral Risk Factors & Preventable Death

Behavioral risk factors, including tobacco use, poor diet & physical inactivity, and excess alcohol consumption are the major determinants of early preventable death.

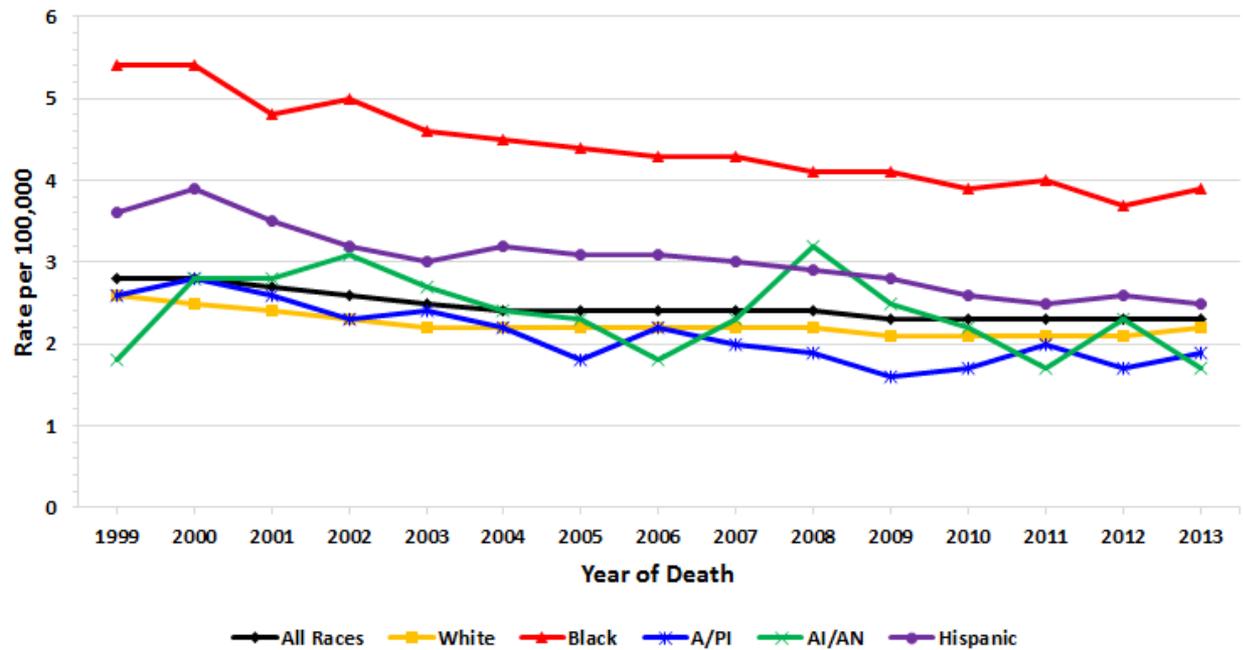
## Actual Causes of US Deaths



# Health Disparities

Poorer health outcomes for groups experiencing discrimination or exclusion because of gender, age, race/ethnicity, education/ income, geographic location, disability, or sexual orientation

Cervical Cancer  
Death Rates\* by Race and Ethnicity,† United States, 1999–2013<sup>§</sup>

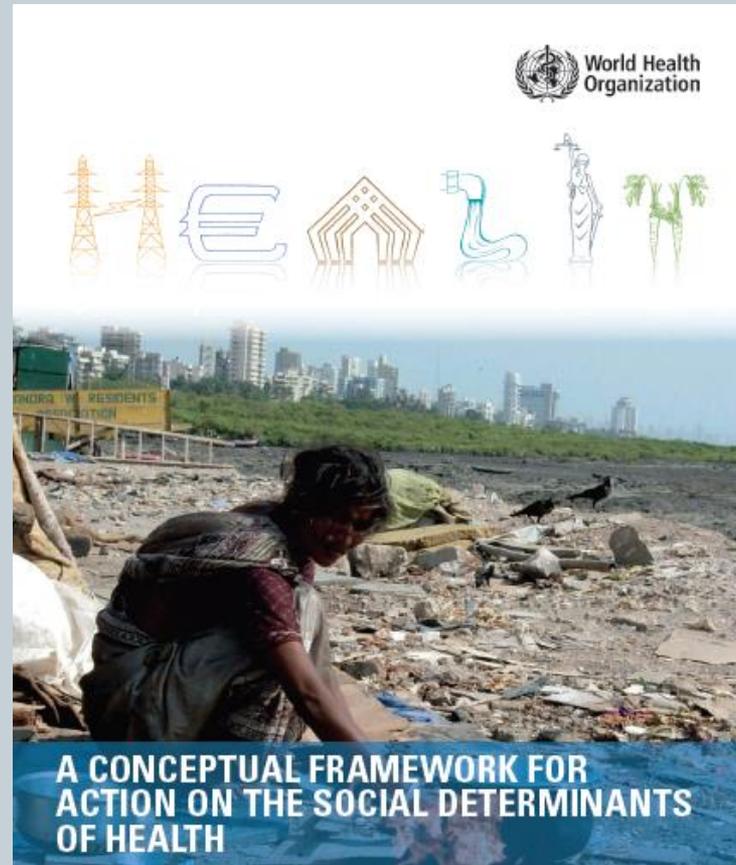


# Health Disparities: Conceptual Issues



- Inequality
- Difference in condition, rank
- Lack of equality as of opportunity, treatment, or status
- Inequity
  - Unfair and unjust
  - Unnecessary and avoidable

# WHO Resource



[http://www.who.int/social\\_determinants/thecommission/finalreport/en/index.html](http://www.who.int/social_determinants/thecommission/finalreport/en/index.html)

# Launch Poll Questions 1&2





# Question #1

Which of the following statements is FALSE?

- a. Mortality rates from chronic diseases have increased in the last 100 years
- b. Mortality from infectious diseases declined between 1990 and 2010
- c. In 1900, the leading causes of death were infectious diseases
- d. In 2010, the leading causes of death were infectious diseases



## Question #2

Which of the following is NOT an example of a health disparity:

- a. Low-income individuals experience more barriers to care and receive poorer quality care than high-income individuals
- b. Lesbian, gay, bisexual, and transgender (LGBT) individuals are more likely to experience challenges obtaining care than heterosexuals
- c. Hispanic women are as likely to have liver cancer as non-Hispanic white women
- d. Stomach cancer incidence and mortality rates are twice as high in men as in women

# Social Ecological Model

## A Framework of Determinants That Promotes Action

1. Multiple factors influence health behavior
2. Influences interact across levels
3. Multi-level interventions are the most effective
4. Most powerful when behavior specific

*Policy level influences* are macro-level factors such as religious or cultural belief systems, societal norms, economic or social policies, and national, state, and local laws.

*Community level influences* include relationships among organizations, informal community networks, and community norms.

*Organizational level influences* are rules, regulations and policies and norms of institutions such as schools and workplaces.

*Interpersonal level influences* include role modeling, social support, and social norms through relationships with families, friends, and peers.

*Individual level influences* include biology, knowledge, attitudes, beliefs, self-efficacy, and skills

# Colorectal Cancer and the Social Ecological Model

<b>Level of Influence</b>	<b>Activities to facilitate behavior change</b>
Intrapersonal	Knowledge and attitudes about: <ul style="list-style-type: none"><li>• Need for screening</li><li>• Intentions to be screened</li><li>• Risks and benefits</li></ul>
Interpersonal	<ul style="list-style-type: none"><li>• Sources of interpersonal messages and support</li><li>• HC provider recommendations</li><li>• Patient navigators to remove logical barriers to screening</li></ul>
Organizational	<ul style="list-style-type: none"><li>• Use of reminder systems</li><li>• Encourage coverage/expansion of benefits for screening</li><li>• Adopt worksite policies that support preventive care</li></ul>
Community	<ul style="list-style-type: none"><li>• Work with coalitions to promote screening/expand resources</li><li>• Conduct public awareness and educational campaigns</li></ul>
Policy	<ul style="list-style-type: none"><li>• Policy decisions (example: insurance mandates for screening).</li><li>• Translate local policies for community members (example: proclamation by a mayor for colorectal cancer awareness month)</li></ul>

# Theories of Change



## Individual Level

- Health Belief Model
- Theory of Planned Behavior
- Transtheoretical Model

## Interpersonal Level

- Social Cognitive Theory
- Social Support/Social Network Theory
- Stress and Coping
- Social Influence

## Organization & Community Level

- Organizational Change Theory
- Community Organization Theory
- Communication Theory
- Diffusion of Innovation



***Theories of  
Change  
Focusing on  
Factors  
Within  
Individuals***

- Used to understand and change individual health behaviors.
- Focus on factors within the individual that influence health behavior, including beliefs, attitudes, and readiness to change.

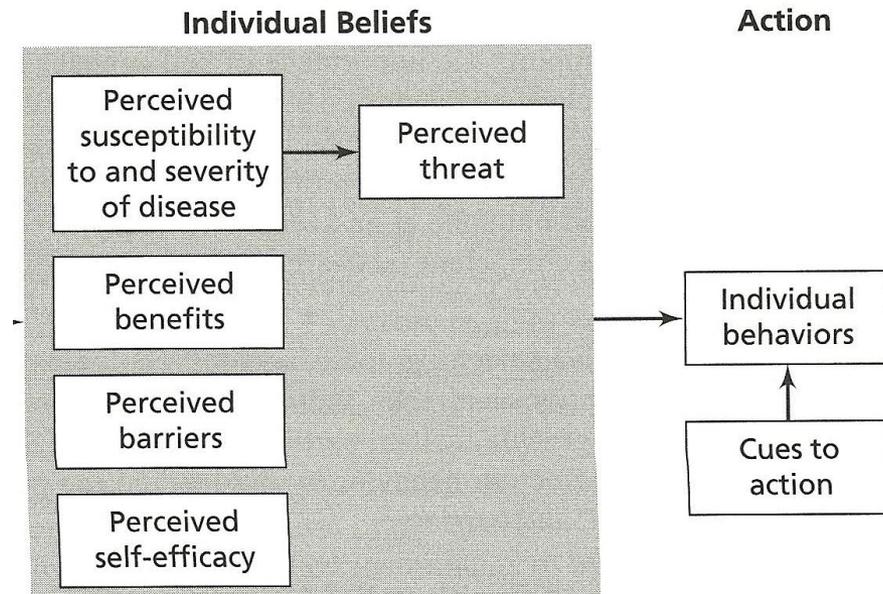
# The Health Belief Model

## Focus

Individual beliefs as determinants of behavior

## Basic Premise

Health behavior is determined by perception of the threat of a health problem, appraisal of the recommended behavior to prevent problem, and cues to action.



Major constructs include:

1. *Perceived Susceptibility*, belief about the chances of experiencing a risk of getting a condition or disease
2. *Perceived Severity*, belief about how serious a condition and its related consequences are
3. *Perceived Benefits*, belief in the efficacy of the advised action to reduce the risk of seriousness of impact
4. *Perceived Barriers*, belief about the tangible and psychological costs of the advised action
5. *Cues to Action*, strategies to activate an individual's readiness to perform the advised action
6. *Self-efficacy*, confidence in one's ability to perform the advised action

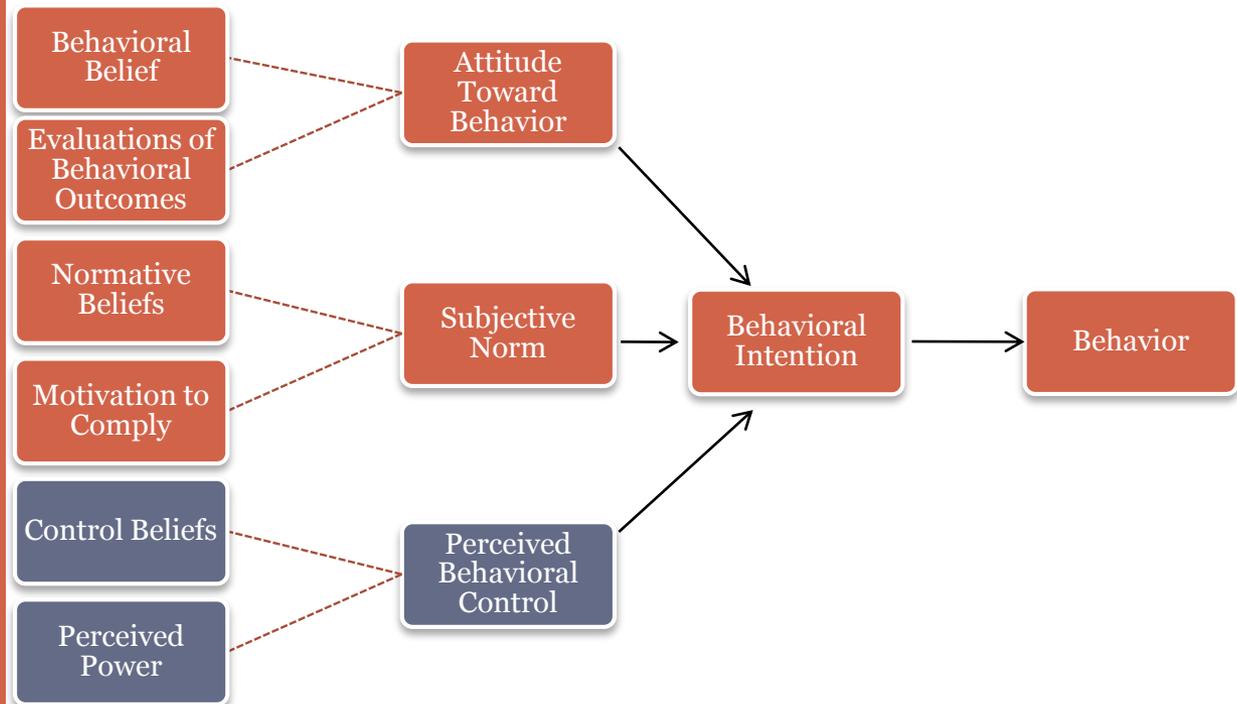
# Theory of Reasoned Action

## Focus

Individual attitudes as determinants of behavior.

## Basic Premise

Behavioral intentions are the best predictors of behavior, and behavioral intentions are directly influenced by the attitude about performing the behavior and the belief whether important others approve or disapprove



Major constructs include:

1. *Behavioral Intention*, the intent to enact the behavior
2. *Attitude*, the evaluation of the behavior
3. *Subjective Norm*, the perceived expectation to perform the behavior from others:

The Theory of Planned Behavior expands TRA by adding a construct of *Perceived Behavioral Control* over performance of the behavior

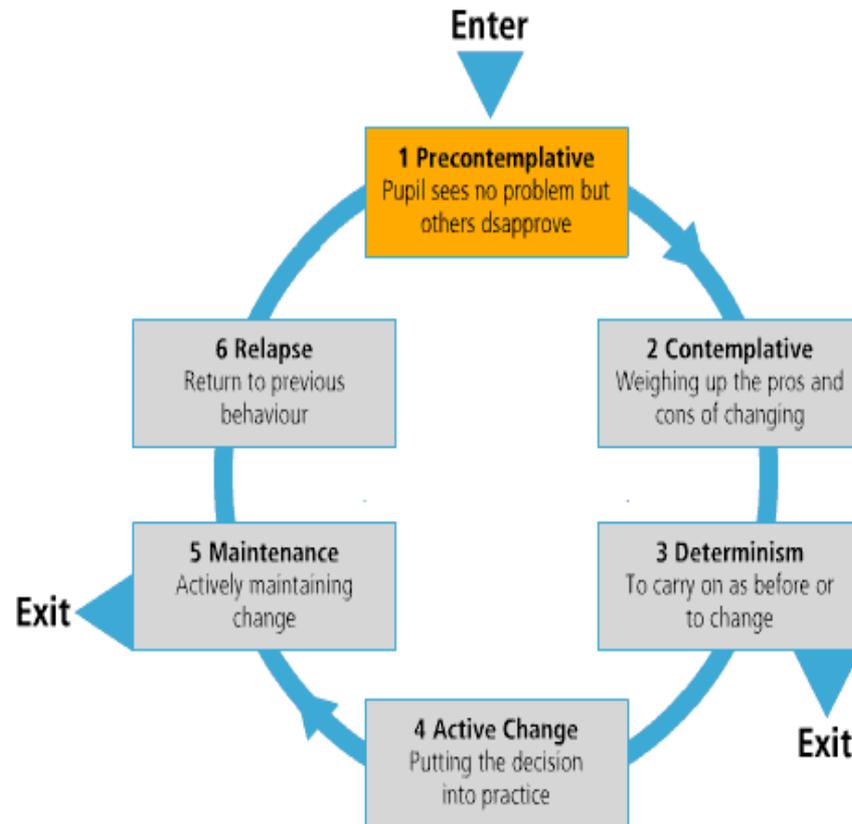
# Trans-Theoretical Model

## Focus

Individual readiness to change as a determinant of behavior

## Basic Premise

Behavior change is a process, individuals differ in their readiness to change, and intervention strategies must be tailored for each stage of readiness to change



Moving successfully through the stages requires *Decisional Balance*, weighing the benefits of changing versus the costs of changing, and *Self-efficacy*, the perceived ability to engage in healthy behavior.



## *Theories of Change Focusing on Relationships*

- Used to understand and change interpersonal interactions related to health behaviors and health status.
- Focus on factors in the individual's social relationships that influence health, including learning processes, relationships between individuals, and coping strategies.

# Interpersonal Theories



## **Social Cognitive Theory**

- Focus: Learning processes as a determinant of health
- Basic Premise: Individuals learn both from their own experiences and vicariously, by watching the behaviors and the attendant behavioral consequences of others.
- Reciprocal determinism: behavior, interpersonal factors, and environmental events interact as determinants of each other

# Interpersonal Theories



## **Social Support/Social Network Theory**

- Focus: Relationships between individuals and how the nature of these relationships influences beliefs and behaviors

# Interpersonal Theories



## **Stress and Coping Theory**

- Focus: Coping strategies as determinants of health
- Basic Premise: Stressful experiences are constructed as person-environmental transactions, where the impact of an external stressor is mediated by the individual's appraisal of the stressor and the psychological, social, and cultural resources at his/her disposal.

# Interpersonal Theories



## **Social Influence Theory**

- Social influence is a process directed at behavior change through communication as part of formal (doctor-patient) and informal (parent-child) interpersonal relationships
- Behavior change may occur from interactions with others who are similar, others who are esteemed/valued, and others who are considered expert.



## ***Theories of Change Focusing on Organizations and Communities***

- Used to understand and change the role organizations and communities play in supporting or inhibiting behavior change.
- Focus on factors in orgs and communities that influence health, including organizational policies and practices; community organization and community building; production and exchange of information; and widespread dissemination of innovations.

# Organizational & Community Change Theories



## Organizational Change Theory

- Focus: Organizational policies & practices as determinants of health
- Basic Premises:
  - Stage approach - orgs go through set of stages as they engage in a change process, including:
    - awareness of a problem
    - initiating action to solve the problem
    - implementing changes
    - institutionalizing changes
  - Development approach - factors related to org functioning must be identified and changed.

# Organizational & Community Change Theories



## Community Organization Theory

- Focus: Community organization and community building as determinants of health
- Basic Premise: Community groups identify problems, mobilize resources, and design and implement strategies to reach common goals.

# Organizational & Community Change Theories



## Communication Theory

- Focus: Production and exchange of info as a determinant of health
- Basic Premise: Uses media and communications to provide information, influence behavior change, and influence what individuals are concerned about.

# Organizational & Community Change Theories



## Diffusion of Innovation Theory

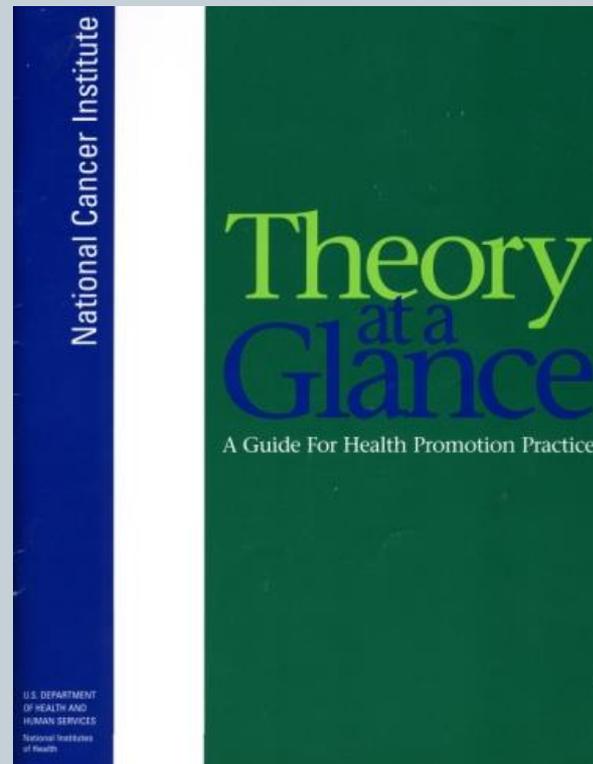
- Focus: Widespread dissemination of successful innovations as a determinant of health.
- Basic Premise: Process of dissemination includes the development of the innovation, the process to communicate about the innovation, the “uptake” of the innovation by the target population, the regular use of the innovation, and a focus on sustainability and institutionalization of the behavior.

# Diffusion of Innovation: Example



- US Public Health Service guidelines recommend early initiation of antiretroviral treatment (ART) for human immunodeficiency virus infection (HIV)-infected patients and preexposure prophylaxis (PrEP) as a prevention option for persons at risk for HIV acquisition.
- Before issuance of guidelines, few clinicians reported prescribing PrEP.
- Interventions that help health care providers identify missed opportunities to provide PrEP could enhance HIV prevention.

# Resource for Theories of Change



<http://sbccimplementationkits.org/demandrmnch/ikitresources/theory-at-a-glance-a-guide-for-health-promotion-practice-second-edition/>

# Launch Poll Questions 3-5





## Question #3

Which individual-level health behavior theory argues that behavior change is a process recognizing that individuals differ in their readiness to change?

- a. Health belief model
- b. Theory of planned behavior
- c. Transtheoretical model



## Question #4

Which interpersonal-level health behavior theory includes reciprocal determinism as a key element (idea that there is dynamic interaction between the person, behavior, and environment)?

- a. Social cognitive theory
- b. Social support/social network theory
- c. Stress and coping theory
- d. Social influence theory



## Question #5

Which organizational/community-level theory includes stages of awareness, interest, evaluation, trial, and adoption?

- a. Organizational change theory
- b. Community organization theory
- c. Communication theory
- d. Diffusion of innovation

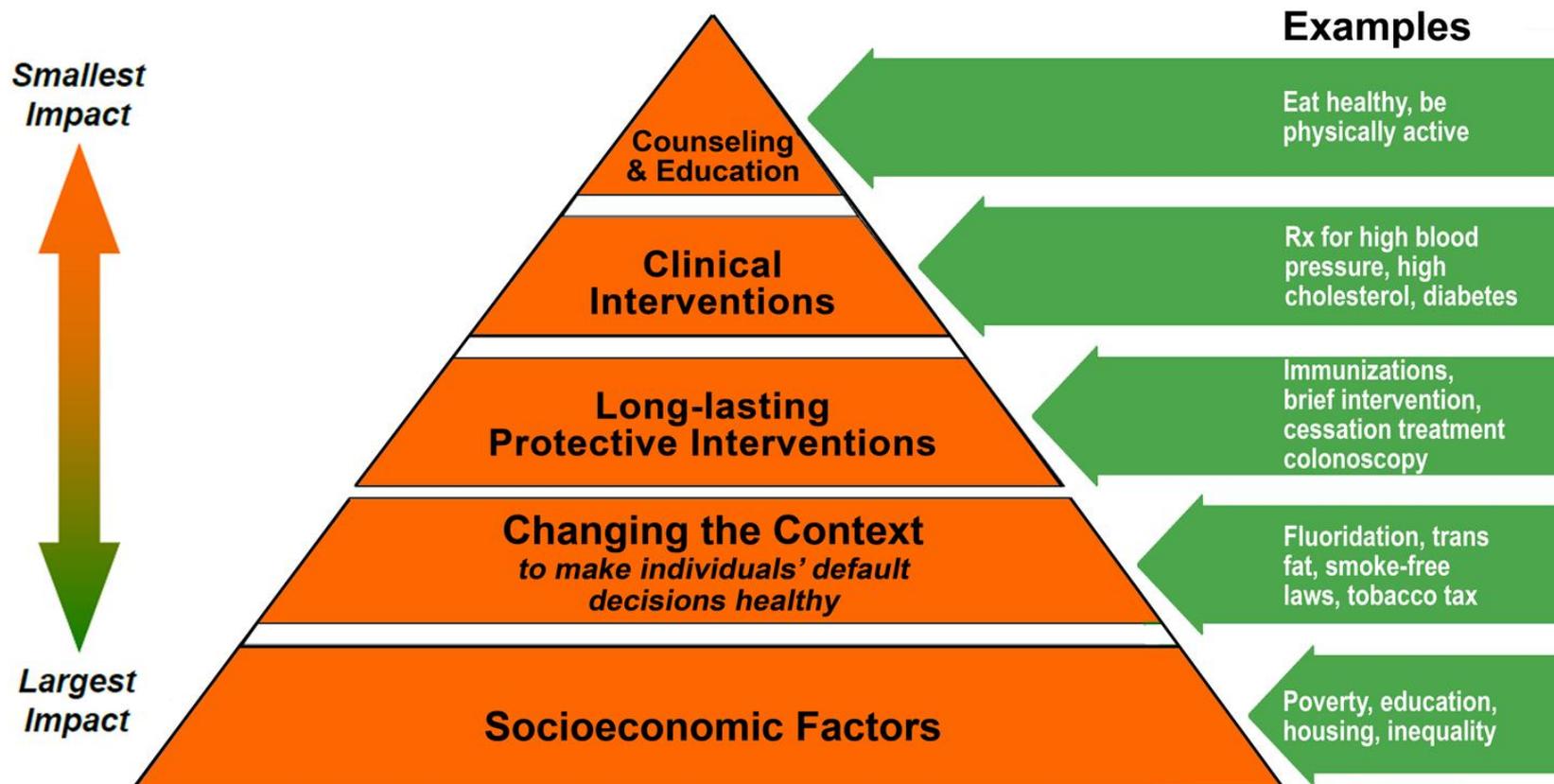
# Health Promotion and Disease Prevention



- **Health Promotion** - *“the process of enabling people to increase control over their health and its determinants, and Health promotion activities focus on changing individual knowledge, attitudes, and skills, as well as enacting laws, policies, and regulations that address air and water quality, housing, food supply, income, and working conditions”*
- **Prevention** - *“approaches and activities aimed at reducing the likelihood that a disease or disorder will affect an individual, interrupting or slowing the progress of the disorder, or reducing disability”*

# CDC Framework for Public Health Action

## CDC Health Impact Pyramid *Factors that Affect Health*



Check the Tarrant County Public Health Web site to learn more.

<http://health.tarrantcounty.com>



# Prevention Based on the Disease Continuum

## Prevention Services

## Clinical Services

Primary Prevention Strategies are delivered prior to disease onset in order to prevent disease occurrence.

Examples: air bags, immunizations, safe drinking water and food system, adequate diet and physical activity, sunscreen and protective clothing, workplace safety regulations

Secondary Prevention Strategies are delivered at the earliest stages of disease to identify and detect disease and provide prompt treatment.

Examples: screening for cancers, heart disease, diabetes, lead exposure, TB, HIV, mental illness, and substance abuse.

Tertiary Prevention Strategies are delivered when person already has a disease to limit disability and complications, and reduce severity or progression of disease.

Examples: retinal exams for diabetic retinopathy, stroke and post- heart attack rehabilitation programs, cancer survival programs, hospice programs that ensure dignity and reduce suffering in terminal conditions.

# Prevention Activities Targeted to Different Groups in the Population

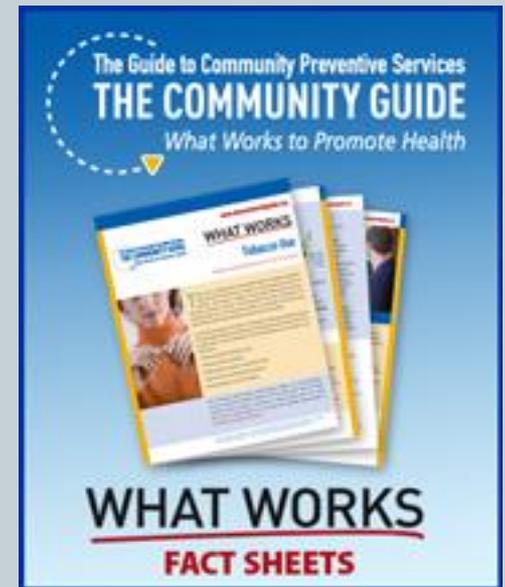


- **Universal Interventions** - designed for reception by all segments of the population
- **Selected Interventions** - directed towards populations characterized by epidemiologically established risk factors
- **Indicated Interventions** - strategies designed to reverse, in specific individuals, an already initiated pathogenic sequence

# Evidence-based Prevention Programs and Policies



- The Task Force on Community Preventive Services is an independent group of public health and prevention experts appointed by the Director of CDC.
- The Task Force produces the Community Guide, which assesses interventions, and includes recommendations about evidence-based interventions to improve public health.



<http://www.thecommunityguide.org/index.html>

# Evidence-based Strategies for Major Risk Factors

## Avoid smoking

- Smoking cessation programs
- School-based prevention curricula
- Minor access laws
- Cigarette excise taxes
- Smoke free environments

## Physical activity

- Moderate amounts of low intensity physical activity
- Accessible stairwells and sidewalks
- Safe neighborhoods
- Affordable facilities for exercise

## Healthy diet

- Include more fruits/ vegetables
- Increase grains/ fiber-rich foods
- Decrease total fat/ saturated fat
- Decrease salt and sugar
- Restaurants encourage healthy eating habits
- Food manufacturers lower fat content of processed food

## Control alcohol misuse

- Alcohol reduction programs
- School-based prevention curricula
- Minor access laws
- Alcohol taxes
- Supervision in alcohol risk work environments

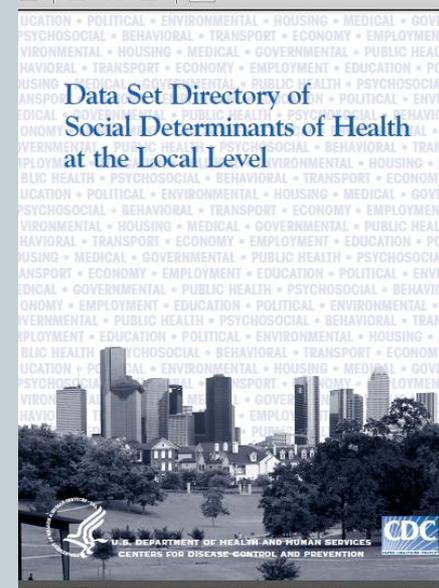
# Community Health Practice



- **Identification of Stakeholders** - Program sponsor, decision makers, organizations, and individuals that will be affected by the program.
- **Community Mobilization**. A collective effort by groups and community members to increase awareness about a problem and advocate for change.
- **Community Assessment**. Basic information for community needs assessment and surveillance includes morbidity and mortality data from the National Vital Statistics System; behavioral factors from BRFSS; and social, economic, and environmental indicators from the Directory of Social Determinants of Health at the local level. The process of mapping community assets identifies community capacity for addressing community needs

[http://www.cdc.gov/dhdsp/docs/data\\_set\\_directory.pdf](http://www.cdc.gov/dhdsp/docs/data_set_directory.pdf)

- **Community-based Participatory Research**. (CBPR) is a collaborative approach to research that equitably involves all stakeholders in the process of defining the problem, identifying and implementing solutions, and evaluating outcomes



# Launch Poll Questions 6-8





## Question #6

From the CDC Health Impact Pyramid, prescriptions for high blood pressure are examples of:

- a. Counseling and education factors
- b. Clinical interventions
- c. Long-lasting protective interventions
- d. Changing the context



# Question #7

Promoting the use of sunscreen is an example of:

- a. Primary prevention
- b. Secondary prevention
- c. Tertiary prevention
- d. Treatment



## Question #8

Screening for HCV infection of patients with a history of injection drug use is an example of:

- a. Primary prevention
- b. Secondary prevention
- c. Tertiary prevention
- d. Treatment



**10 minute  
break**

# Topics



## Part I

1. Pattern Of Disease
2. The Social Ecological Model
3. Theories Of Change
4. Health Promotion And Disease Prevention

## Part II

5. Ethical Issues In Planning & Evaluation
6. Planning Models
7. Evaluation Methods
8. Scaling Up Programs And Sustainability

# Timeline of Major Ethical Developments Leading to the Belmont Report



- 1932 Tuskegee Syphilis Study
- 1939 Nazi experiments
- 1946 Nuremberg Trial, resulting in the Nuremberg Code
- 1948 United Nations adopts Universal Declaration of Human Rights
- 1963 Willowbrook Study (hepatitis research on mentally retarded children)
- 1964 Declaration of Helsinki
- 1972 Public exposure of Tuskegee syphilis study
- 1974 First federal protections for human research participants
- 1979 Belmont Report promoting three principles for research

# Tuskegee Syphilis Study



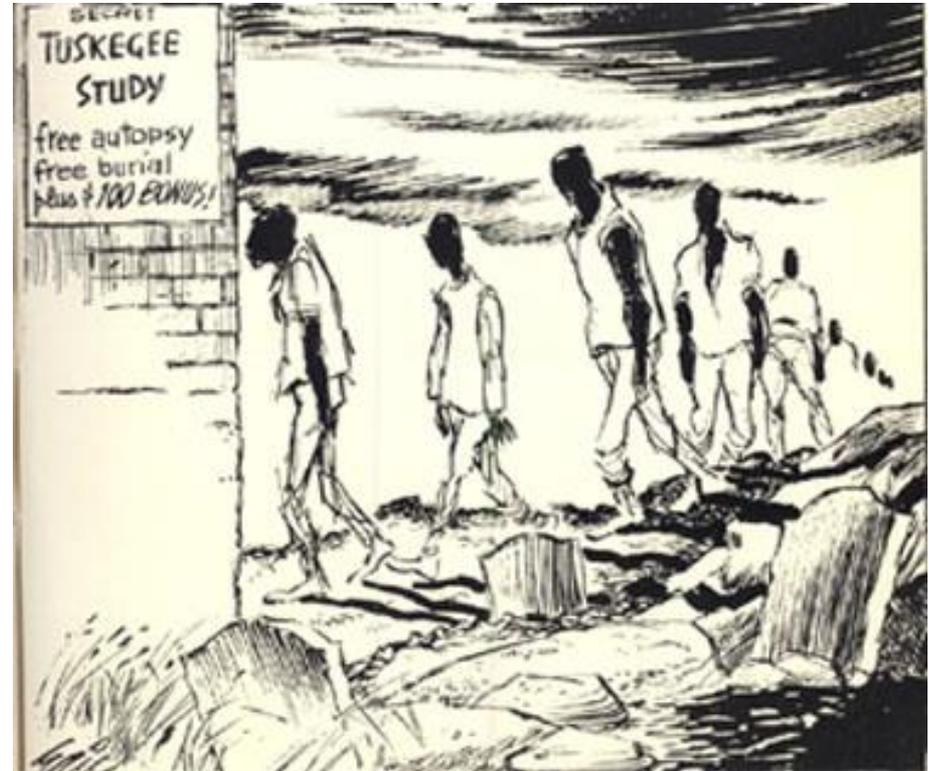
In 1932 the American Government promised 600 men --- all residents of Macon County Alabama, all poor, all African-American --- free treatment for “Bad Blood”, a euphemism for syphilis.

- ◆ 600 low-income African American males were recruited by government health workers and monitored for 40 years.
- ◆ Throughout the 40 year study, the men were never told of the experiment

# Tuskegee Syphilis Study



- The study continued for decades after effective treatment became available.
- When subjects were diagnosed as having syphilis by other physicians, researchers intervened to prevent treatment





**Buxtun**

- In 1966, Peter Buxtun, a United States Public Health Service venereal disease investigator in San Francisco, sent a letter to the director of the Division of Venereal Diseases which expressed concerns about the morality of the experiment

*“The excuses and justifications that might have been offered in 1932 are no longer relevant. Today it would be morally unethical to begin such a study with such a group”*

# Syphilis Patients Died Untreated

Jean Heller

July 25, 1972 AP. For 40 years, the U.S. Public Health Service has conducted a study in which human guinea pigs, not given proper treatment, have died of syphilis and its side effects.

- Early in 1972, Buxtun complained of the study to Edith Lederer, an international affairs reporter with the Associated Press in San Francisco. On July 25, 1972, the story appeared in the *Washington Star* by Associated Press reporter Jean Heller
- A class-action suit against the federal government was settled out of court for \$10 million in 1974.
- That same year the U.S. Congress passed the National Research Act, requiring institutional review boards to approve all studies involving human subjects.
- In 1997 President Bill Clinton issued a formal apology for the study

# The Belmont Report



- Congress passed the National Research Act in 1974, creating the National Commission for the Protection of Human Subjects of Biomedical and Behavioral Research.
- Commission goal: ID basic ethical principles guiding the conduct of research with human subjects.

# The Belmont Report



- Boundaries between practice and research
- Basic ethical principles:
  - Respect for persons
  - Beneficence
  - Justice
- Areas of application:
  - Informed consent
  - Assessment of risks and benefits
  - Subject selection

# Want to Learn More?



- Bad Blood: <http://www.newsy.com/videos/what-we-ll-never-know-about-the-tuskegee-syphilis-study/>
- Deception and Research: The Stanford Prison Experiment <http://www.prisonexp.org/>
- Responsible Conduct in Research: <http://www.youtube.com/watch?v=wIBjGV3OB0o>



# Launch Poll Question 9





# Question #9

- The Belmont Report's core principles are respect for persons, beneficence, and justice. In addition, the three primary areas of application are:
  - a. Informed consent, beneficence, and harm reduction
  - b. Universality, justice and informed consent
  - c. Universality, informed consent, and selection of subjects
  - d. Informed consent, assessment of risks and benefits, and selection of subjects

# Priority PH Issues



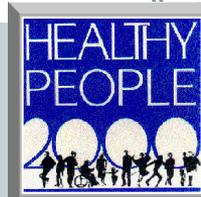
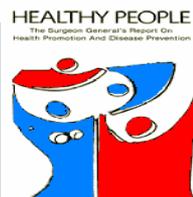
## CDC's Winnable Battles

1. Tobacco
2. Nutrition, physical activity, obesity
3. Food safety
4. Healthcare-associated infections
5. Motor vehicle safety
6. Teen pregnancy
7. HIV

## DHHS Major Priority Areas for Health Disparities

1. Infant mortality
2. Cancer screening and management
3. Cardiovascular disease
4. Diabetes
5. HIV / AIDS
6. Immunizations

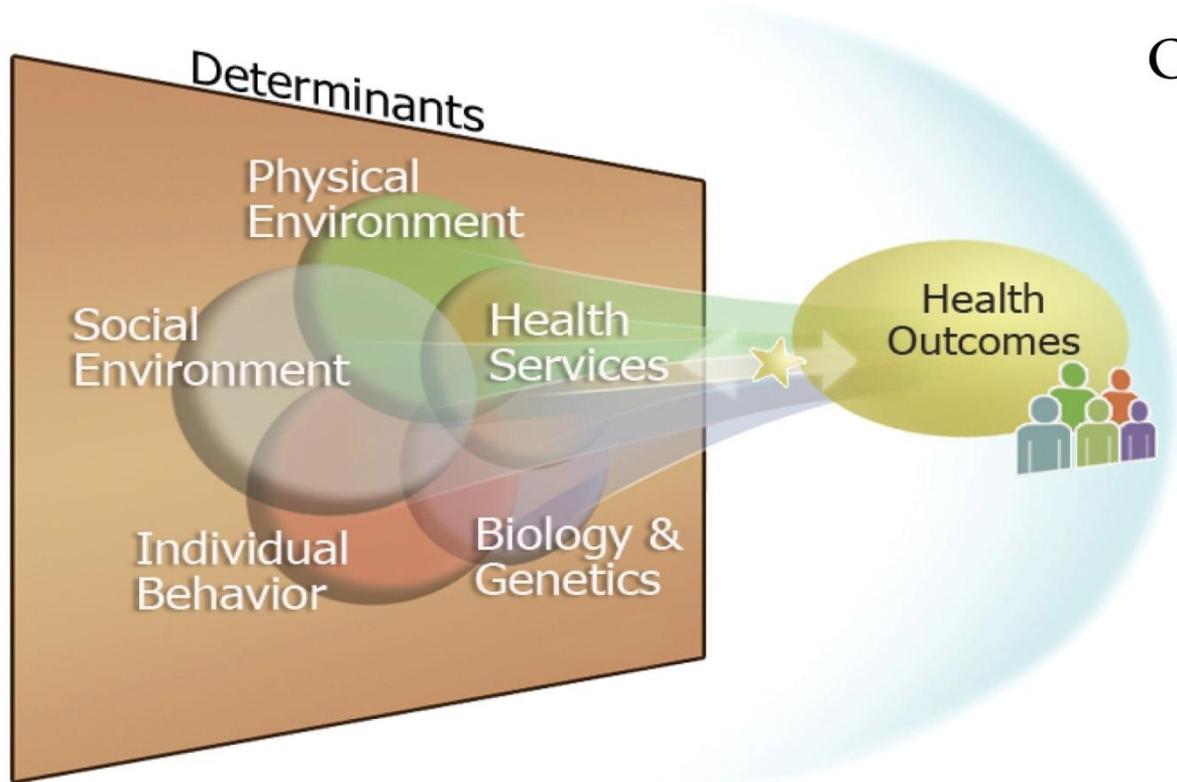
# Evolution of Healthy People



Target Year	1990	2000	2010	2020
Overarching Goals	<p>Decrease mortality: infants-adults</p> <p>Increase independence among older adults</p>	<p>Increase span of healthy life</p> <p>Reduce health disparities</p> <p>Achieve access to preventive services for all</p>	<p>Increase quality and years of healthy life</p> <p>Eliminate health disparities</p>	<p>Attain high quality, longer lives free of preventable disease...</p> <p>Achieve health equity, eliminate disparities...</p> <p>Create social and physical environments that promote good health...</p> <p>Promote quality of life, healthy development, healthy behaviors across life stages...</p>
# Topic Areas	15	22	28	41
# Objectives	226	312	467	>580

# Healthy People 2020

*A society in which all people live long, healthy lives*



## Overarching Goals:

- Attain high quality, longer lives free of preventable disease, disability, injury, and premature death.
- Achieve health equity, eliminate disparities, and improve the health of all groups
- Create social and physical environments that promote good health for all.
- Promote quality of life, healthy development and healthy behaviors across all life stages.

# PRECEDE-PROCEED



The initial PRECEDE component has four phases:

1. *Social Diagnosis*: ask community what it wants and needs to improve community health and quality of life, resulting in identification of a community health outcome;
2. *Epidemiological Diagnosis*: ID the health behaviors, interpersonal factors, organizational factors, and community factors that influence the community-identified outcome, determining which risk factors are most significant and malleable, and developing program objectives;
3. *Educational and Organizational Diagnosis*: ID predisposing, enabling, and reinforcing factors that may facilitate or impede changing the factors identified during Phase 2;
4. *Administrative and Policy Diagnosis*: ID and modify internal administrative issues and policies and external policies as needed to generate the funding and other resources for the intervention.

**Results from Phases 3 & 4 lead to the intervention plan**

# PRECEDE-PROCEED

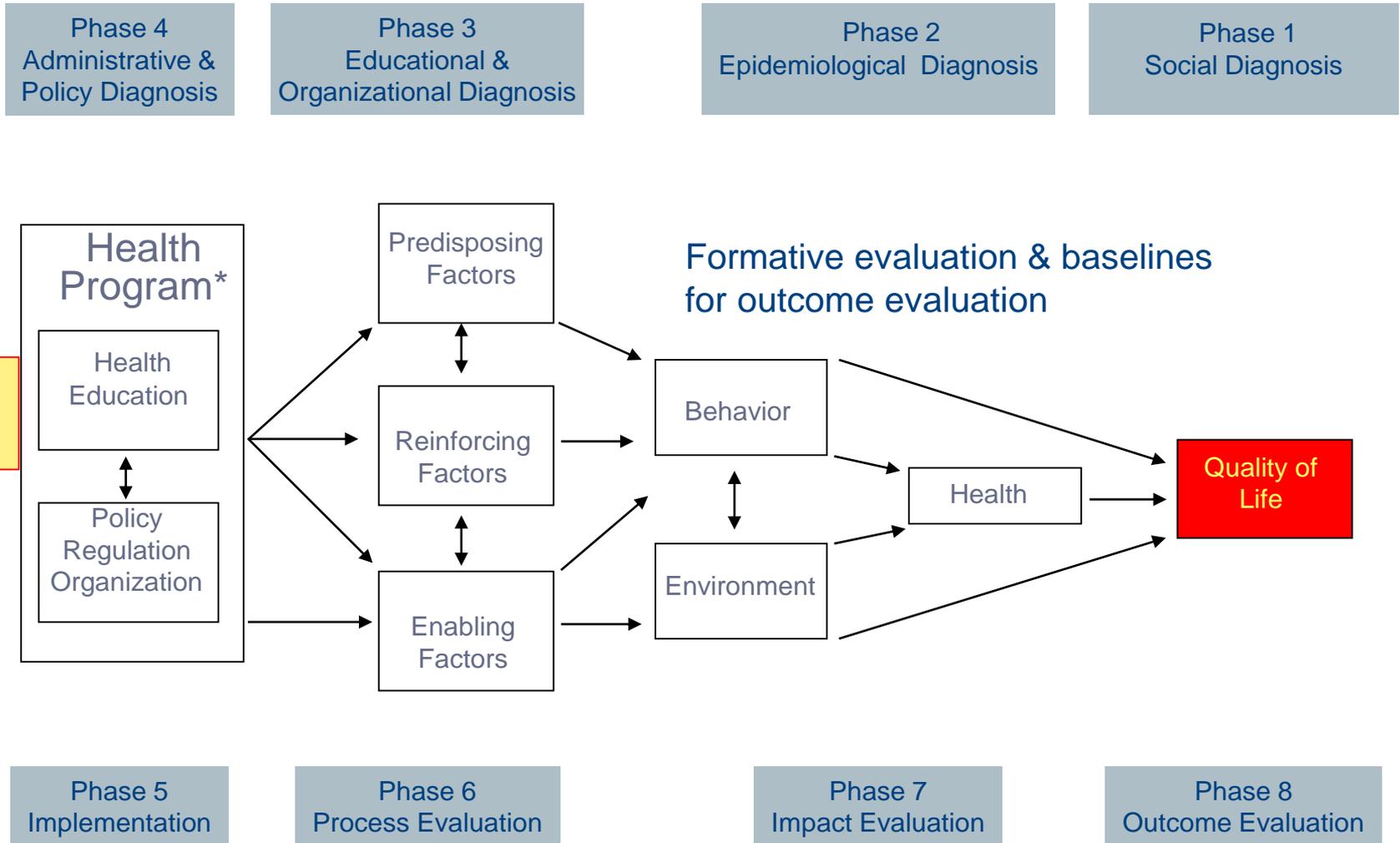


The PROCEED component adds on an additional four phases

5. *Implementation*: starting up and conducting the intervention;
6. *Process Evaluation*: a determination whether the intervention is proceeding as planned, with adjustments as needed;
7. *Impact Evaluation*: a determination whether the intervention is changing the planned risk factors, with adjustments as needed;
8. *Outcome Evaluation*: a determination whether the intervention is producing the outcome identified in Phase 1, with adjustments as needed.

More information about the 8-phase precede-proceed model:  
[http://ctb.ku.edu/en/tablecontents/sub\\_section\\_main\\_1008.aspx](http://ctb.ku.edu/en/tablecontents/sub_section_main_1008.aspx)

# PRECEDE-PROCEED Framework



# Social Marketing



- Applies principles of marketing to planning interventions at all levels of the social ecological model
- Goal: influence “consumers” to “buy” a behavior change or health-related product/technology

Social marketing campaigns built around the “four Ps”

1. *Product*: behavior, program, technology
2. *Price*: cost of adoption
3. *Place*: where the product available or promoted
4. *Promotion*: how to promote the first three “Ps” through persuasive strategies

# Other Planning Models



- Assessment Protocol for Excellence in Public Health (APEXPH)
- Multi-Level Approach to Community Health (MATCH)
- Planned Approach to Community Health (PATCH)
- Mobilizing Action through Planning and Partnerships (MAPP)

# Common Elements Among Planning Models



- Community involvement and mobilization
- Needs assessment at community and organizational levels
- Selection of specific target audiences
- Development of specific, measurable, attainable and time-bound objectives and their indicators (SMART)
- Action plan development and implementation
- Evaluation of program processes and outcomes
- Institutionalization

# Launch Poll Questions 10-11





## Question #10

In what phase of Precede are you assessing the community's wants and needs to improve health?

- a. Social Diagnosis
- b. Epidemiological Diagnosis
- c. Educational and Organizational Diagnosis
- d. Administrative and Policy Diagnosis



## Question #11

In what phase of Proceed are you determining the extent to which the intervention is having the desired impact on the target population?

- a. Implementation
- b. Process Evaluation
- c. Impact Evaluation
- d. Outcome Evaluation

# Program Evaluation



- Systematic process using qualitative and quantitative methods to answer questions about:
  - Nature and Magnitude of the Problem
  - Processes
  - Outcomes
  - Efficiency
- Helps to orient PH efforts towards outcomes
- Encourages the use of scientific evidence to guide decisions about PH programs and policies

# Nature and Magnitude of the Problem



## Needs Assessment Purpose

- Investigates the extent of the problem, its consequences, and subgroups of people or places affected by the problem.

## Needs Assessment Methods

- Key Informant interviews
- Community Forum
- Agency records
- Community Indicators from public datasets
- Community Surveys

# Process Evaluation



## Process Evaluation Purpose

- Investigates fidelity of program implementation and investigates outputs

## Indicators

- what program activities are delivered
- who delivers program activities
- when and where activities are delivered
- # of people served

# Outcome Evaluation



## Outcome Evaluation Purpose

- Investigates effect of the program on short-term outcomes, intermediate outcomes, and long-term outcomes

## Examples of Different Outcomes

- *Short-term Outcomes* - increased knowledge, improved attitudes and beliefs, and increased skills
- *Intermediate Outcomes* - behavior change
- *Long-term Outcomes* - decreased rates of disease, disability, death, or disparity

# Efficiency Evaluation



- Compares incremental cost of the program to its effects (cost-effectiveness analysis) or to monetized effects (cost-benefit analysis).
- May also investigate several competing programs to determine whether alternative, less costly programs achieve the same results as more expensive programs.

# CDC Framework for Program Evaluation in Public Health



- Systematic method for evaluation
- Promotes a participatory approach
- Focuses on using evaluation findings

# 1. Engage Stakeholders



- Engaging stakeholders in development of the evaluation plan, conduct of the evaluation, and use of evaluation results.
- Who are potential stakeholders?
  - Funders, program management and leadership, grantees, program partners, evaluation team, those served or affected by the program, and users of the evaluation.

## 2. Describe the Program



- **Developing a logic model to guide the evaluation**
  - Includes inputs, activities within each program component, and a trajectory of client outcomes detectable immediately following intervention (short-term outcomes), at follow-up (intermediate outcomes), and after a sustained period of program implementation (long-term outcomes).
- **Case studies may also be used to provide descriptive data about the program.**

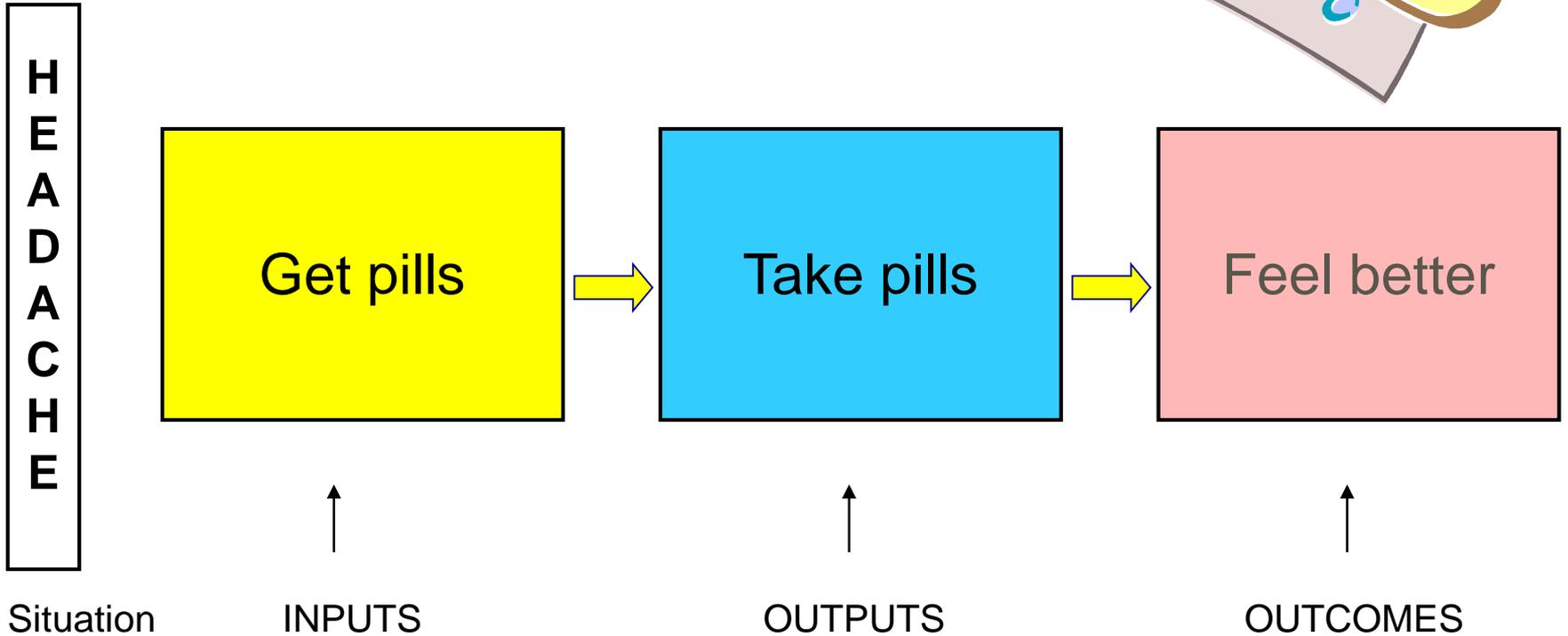
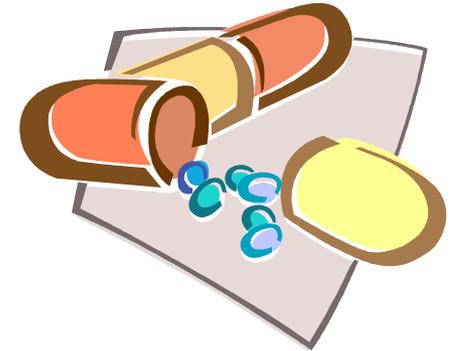
# Logic Model Components



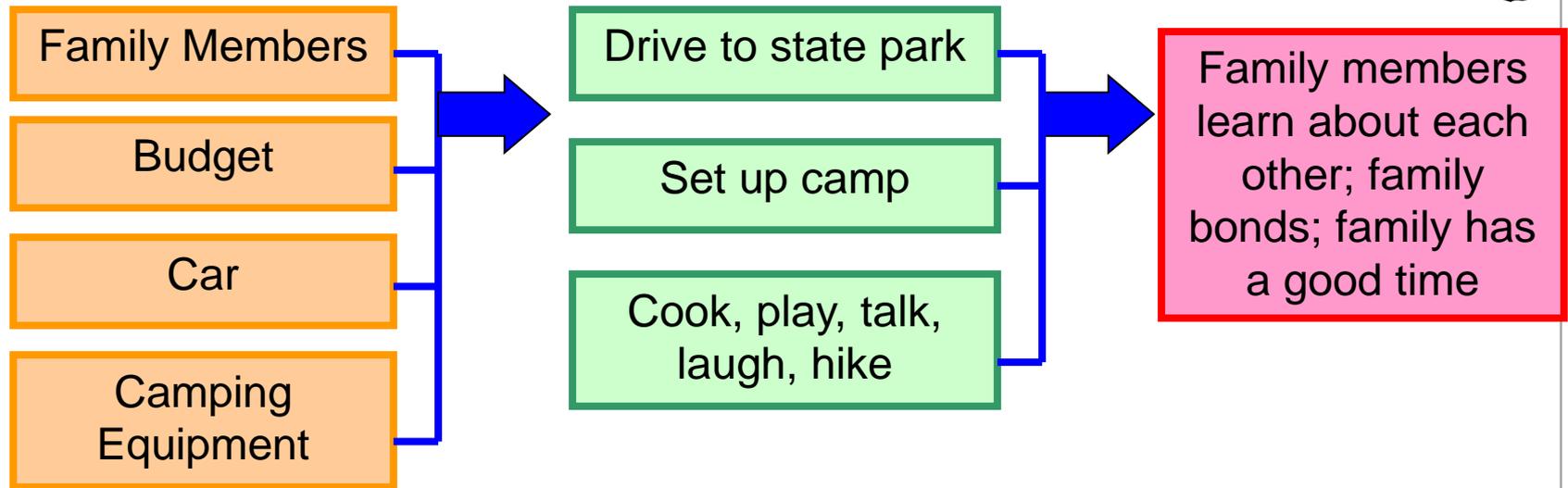
- **Resources (Inputs)**
  - What resources are available to conduct the program activities?
- **Activities**
  - What are program staff doing to accomplish program objectives?
- **Outputs**
  - What are the direct and immediate results of program activities (materials produced, services delivered, etc.)?
- **Outcomes**
  - What are the intended effects of the program activities?



# Logic Model Example



# Logic Model Example Family Vacation



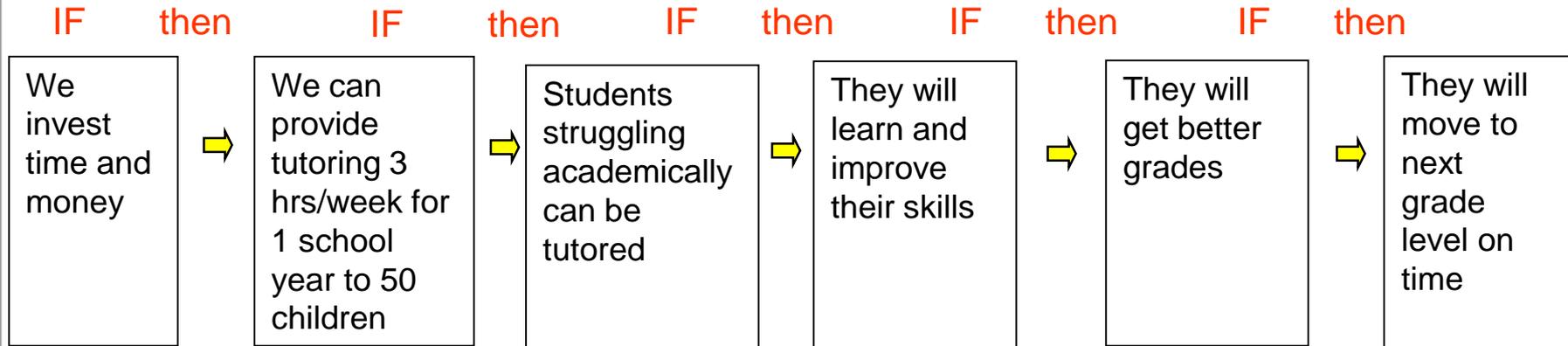
INPUTS

OUTPUTS

OUTCOMES

# A series of if-then relationships

## Tutoring Program Example



# 3. Focus the Evaluation Design



- Different evaluation Qs are relevant for different stages of a program
  - implementation fidelity Qs: at program initiation
  - short-term outcome Qs: once fidelity is assured
  - long-term outcome Qs: appropriate once the program has documented short- and intermediate-term effects.
- Stakeholders should be involved in developing evaluation Qs at each stage

## 4. Gather Credible Evidence



- While existing data should be used whenever possible, evaluation tools should be developed as needed, and piloted prior to use in the evaluation.

## 5. Justify Conclusions



- Both quantitative and qualitative data analysis methods may be used to analyze implementation fidelity, program processes, and program outcomes.

# 6. Ensure Use and Share Lessons Learned

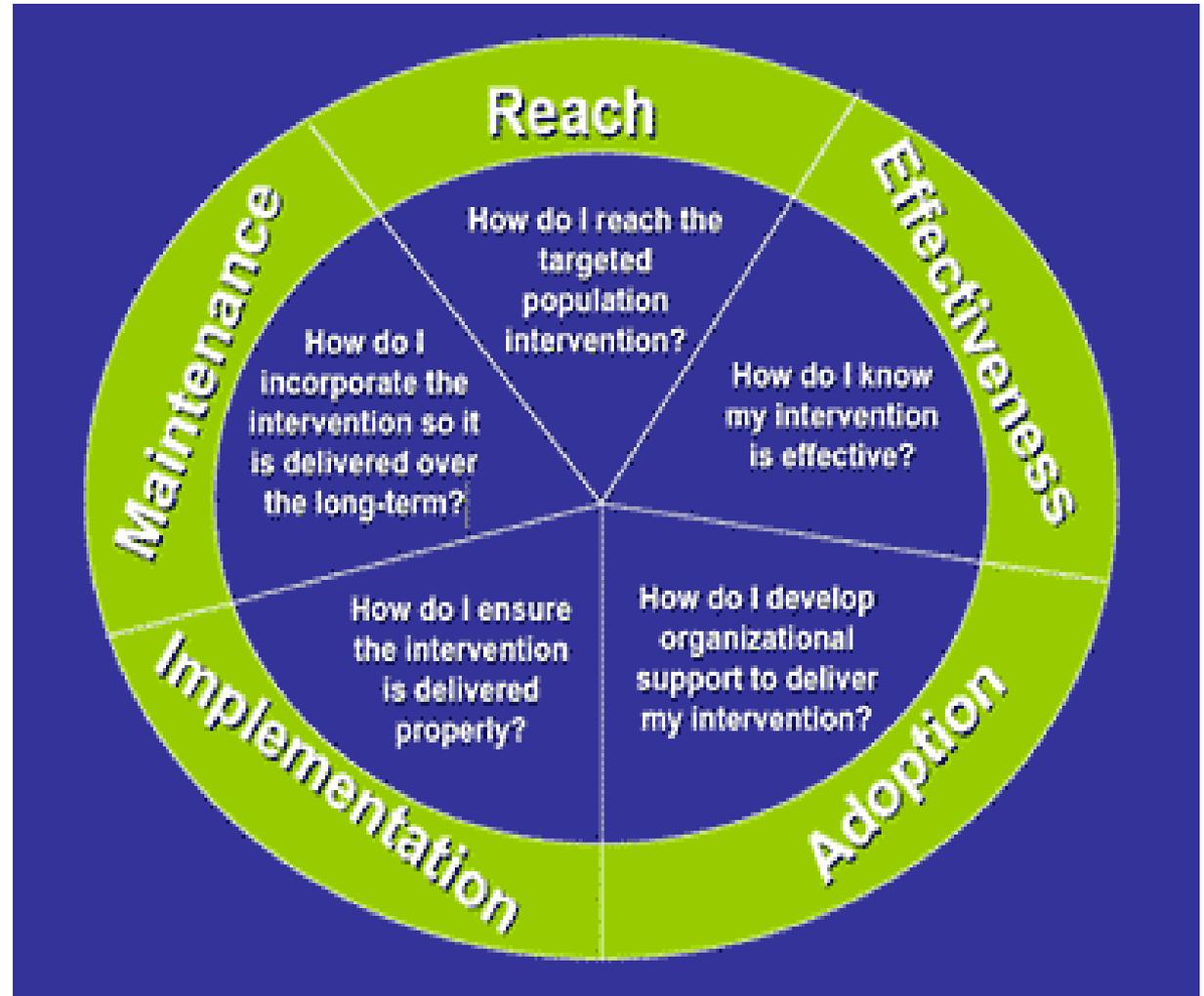


- A communication and dissemination plan for the evaluation should include
  - internal communication strategies
  - strategies for communicating with stakeholders
  - program and provider dissemination
  - scientific dissemination
  - policy-relevant dissemination
  - public access dissemination



The RE-AIM Model encourages translating an effective program to practice

1. Reach of the program
2. Effectiveness of the program
3. Adoption by large number of diverse settings
4. Implementation with fidelity
5. Maintenance through institutionalization or by becoming part of organizational policies and practices



**RE-AIM**

# Dissemination & Scaling Up



- *Dissemination*: targeted distribution of information and intervention materials to a specific public health or clinical practice audience
- *Scaling up*: increasing a program's impact while maintaining quality

# Four Categories of Scale-up



- **Quantitative**: Increasing # of clients reached by a program
  - Addition of new target audience
  - Expansion into new geographic area
  - Adoption and use of programs novel materials and approaches by others
  - Diffusion of innovations theory may be of use
- **Functional**: Expanding program breadth
  - Increasing # and type of technical areas addressed by a program

# Four Categories of Scale-up



- **Political:** Ability to address national-level barriers to effective program services
  - Advocating for and/or developing efficient processes
  - Advocating for and/or developing clear policies and guidelines
  - Standardizing materials and techniques for education + training
- **Organizational:** improving ones own or another org's ability to continue to support an initiative in effective and sustainable manner
  - Diversifying and/or stabilizing funding base
  - Increasing use of effective financial schemes
  - Developing strategic alliances to increase resources
  - Building technical and management capacity of collaborating agency in order to sustain efforts

# Strategies for Ensuring Program Sustainability



- Build community and organizational capacity in management, advocacy, fundraising, training, etc.
- Utilize simple, user-friendly materials and tools
- Involve community members in every step of the program
- Develop, implement, and institutionalize cost-recovery mechanisms
- Develop, implement and institutionalize quality assurance and self assessment tools
- Build on pre-existing structures
- Develop program leaders and “champions”
- Encourage cross-community learning

# Launch Poll Questions 12-13





## Question #12

Which of the following is NOT a step in the RE-AIM framework?

- a. Reach
- b. Assessment
- c. Implementation
- d. Maintenance
- e. Organizational



## Question #13

Which of the following is not a category of scaling-up?

- a. Quantitative
- b. Qualitative
- c. Functional
- d. Organizational