



# USING THE PRECEDE- PROCEED MODEL

Claudine Matlo  
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# Outline

1. Introduction
2. Defining the PROCEDE-PRECEED model
3. 2 visual examples of program planning
4. The steps of the PROCEDE-PRECEED model
5. Case studies

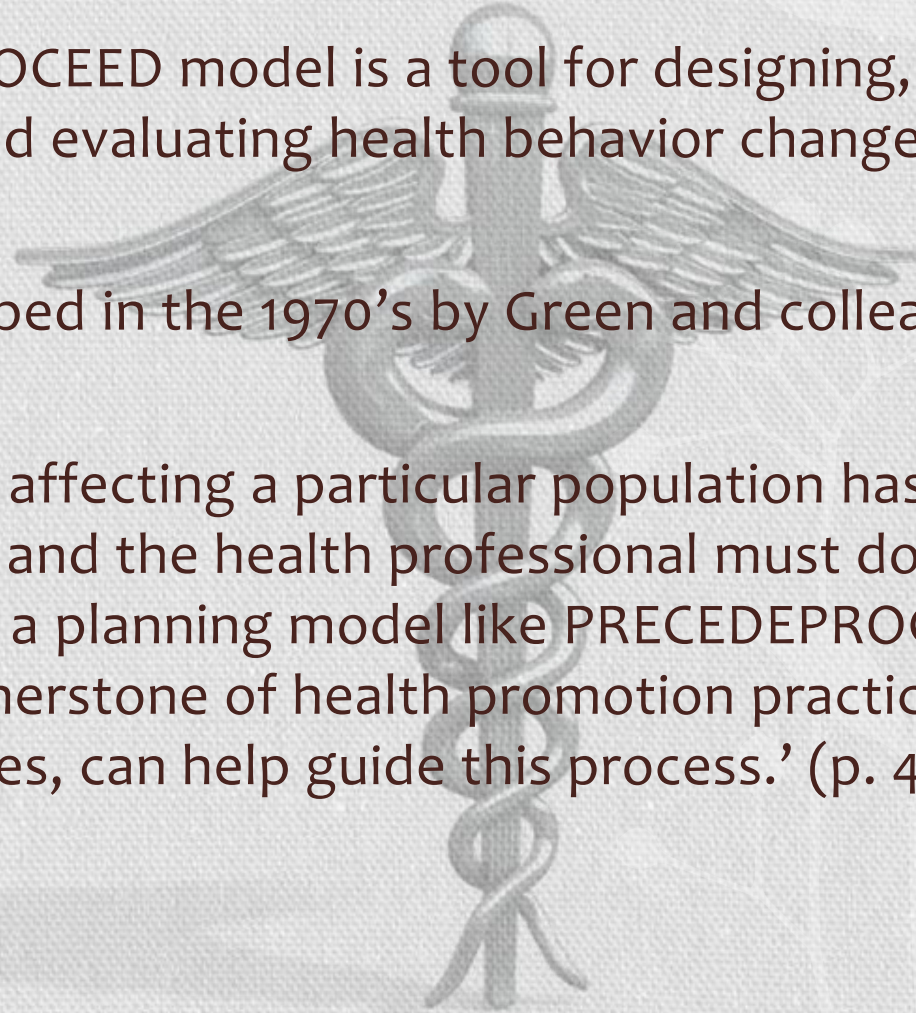


# Introduction

- This chapter emphasizes the application of behaviors change theory to program planning.
- The PRECEDE-PROCEED Model is used both for delivery programs in practice settings and when conducting behavior change interventions.
- The model offers a framework within which individual level theories, community level theories, interpersonal communication, interactive technologies media campaigns and grass roots organizing can be utilized.

# Introduction:

- The PRECEDE-PROCEED model is a tool for designing, implementing, and evaluating health behavior change programs.
- Originally Developed in the 1970's by Green and colleagues
- 'When a problem affecting a particular population has been identified health, and the health professional must do something to fix the problem... a planning model like PRECEDEPROCEED, which has been the cornerstone of health promotion practice for more than three decades, can help guide this process.' (p. 408)



## PRECEDE -

Predisposing

Reinforcing

Enabling

Constructs

In

Educational / Environmental

Diagnosis

Evaluation

## PROCEED

Policy

Regulatory

Organizational

Constructs

Educational

Environmental

Development

PRECEDE – based on the premise that just as a medical diagnosis precedes a treatment, so should an educational diagnosis precede an intervention plan.

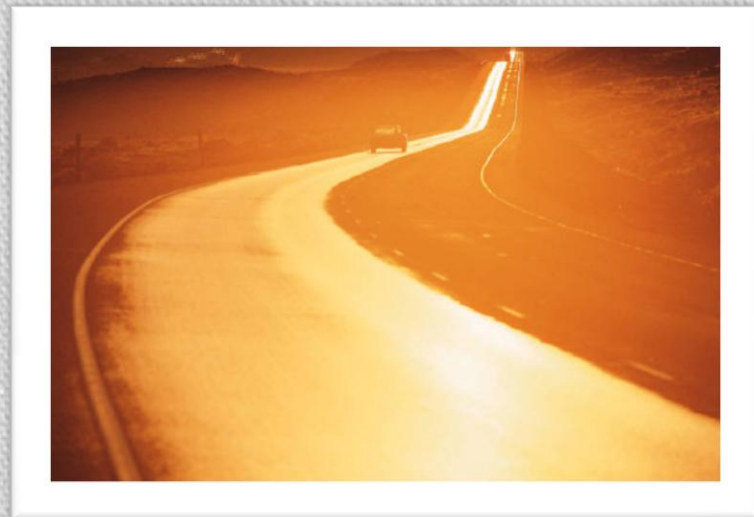
Criticism was that there was too much emphasis on implementing programs and too little on designing interventions to strategically meet needs.

PROCEED - was added in 1991 to recognize environmental factors as determinants of health and health behavior.

Lifestyle (Environment) – recognition of impact, behaviors sometimes being influenced outside of the individual i.e. media campaigns for ‘health’ medications.

# Overview of the model

- In 2005 the model was revised again to reflect the growing interest in ecological and participatory approaches
- Through these additions there is
  - recognition of genetic factors
- The model can be thought of as a road map
- And specific behavior change theories *as directions* to the destination



The map provides all possible avenues, and the theories help us to choose *which* avenue.

Purpose is not to predict or explain but to give a structure to applying theories in a systematic fashion for planning and evaluating health behavior change programs.

# The 'new' version...

- Is a streamlined, more efficient planning model.
  - 1. merges two phases Epidemiological assessment & Behavioral + Environmental assessment
  - 2. provides options for skipping phases when appropriate evidence already exists
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- I.e. the use of secondary data
  - What has stayed the same is the emphasis on the 'fundamental principle of participation which states that success in achieving change is enhanced by the active participation of the intended audience...' (p. 409).



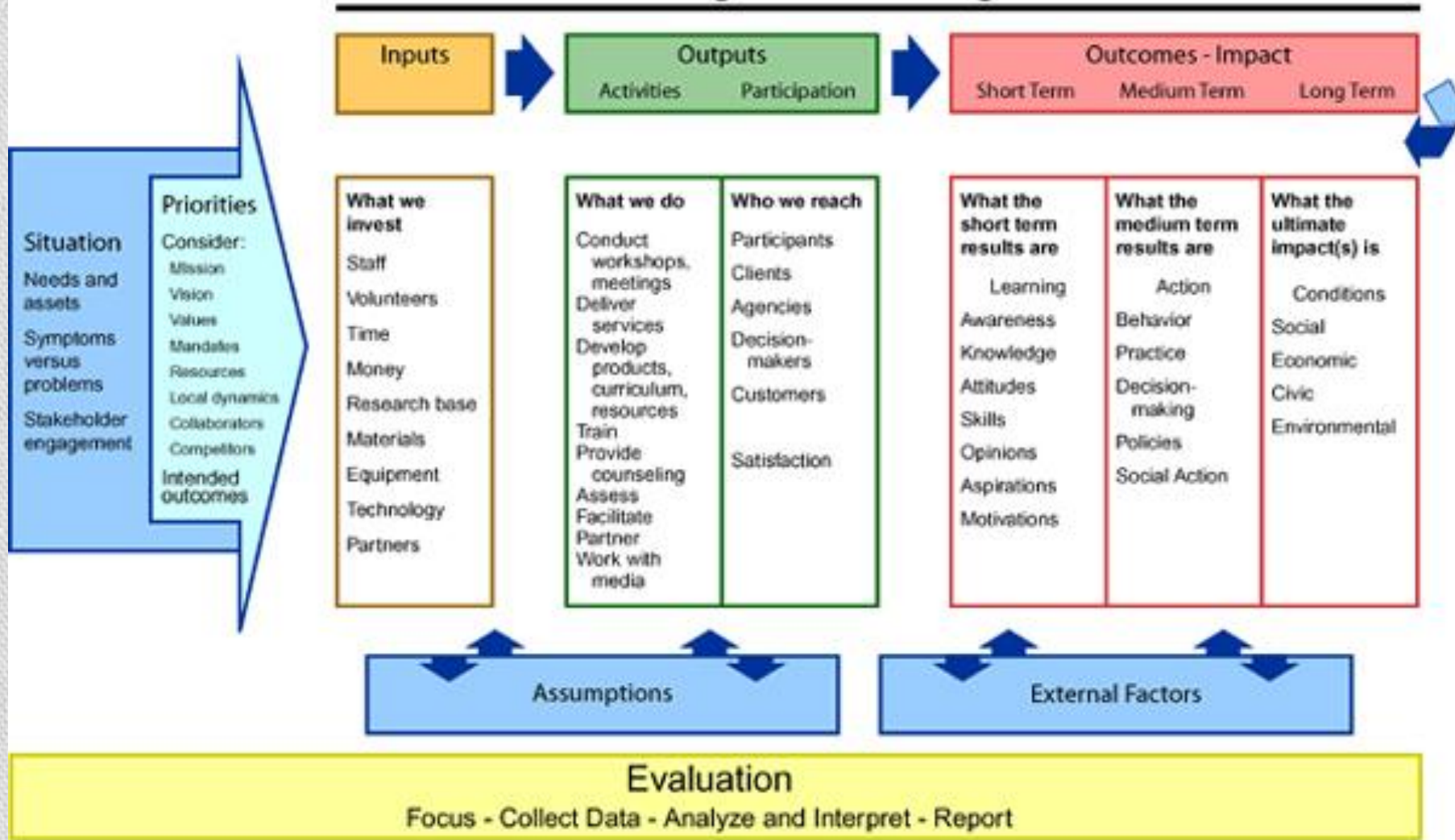
# Causal and action

- Causal Theory – seeks to identify the determinants of an outcome
- Action theory – explain how interventions affect the determinants and outcomes.
  - Causal + Action = program theory depicted as logic models
  - PROCEDE-PRECEED is a form of a logic model
  - Assessment, intervention planning and evaluation into one framework or model



# Logic model example

## Program Action - Logic Model



# PRECEDE-PROCEED Framework

## PRECEDE-PROCEED Framework (L. Green)

### PRECEDE

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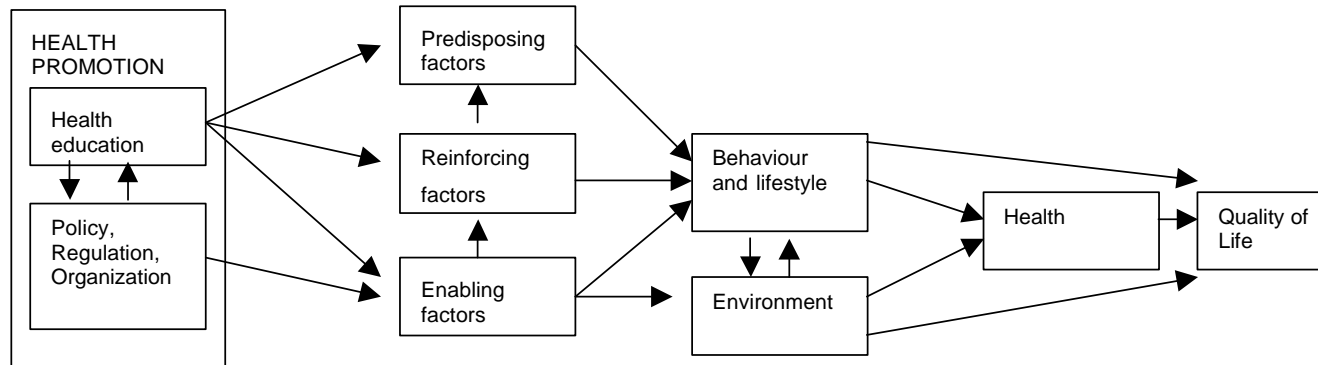
**Phase 5**  
Administrative  
Policy Assessment

**Phase 4**  
Educational and  
Ecological  
Assessment

**Phase 3**  
Behavioural and  
Environmental  
Assessment

**Phase 2**  
Epidemiologic  
Assessment

**Phase 1**  
Social  
Assessment



**Phase 6**  
Implementation

**Phase 7**  
Process  
Evaluation

**Phase 8**  
Impact  
evaluation

**Phase 9**  
Outcome  
evaluation

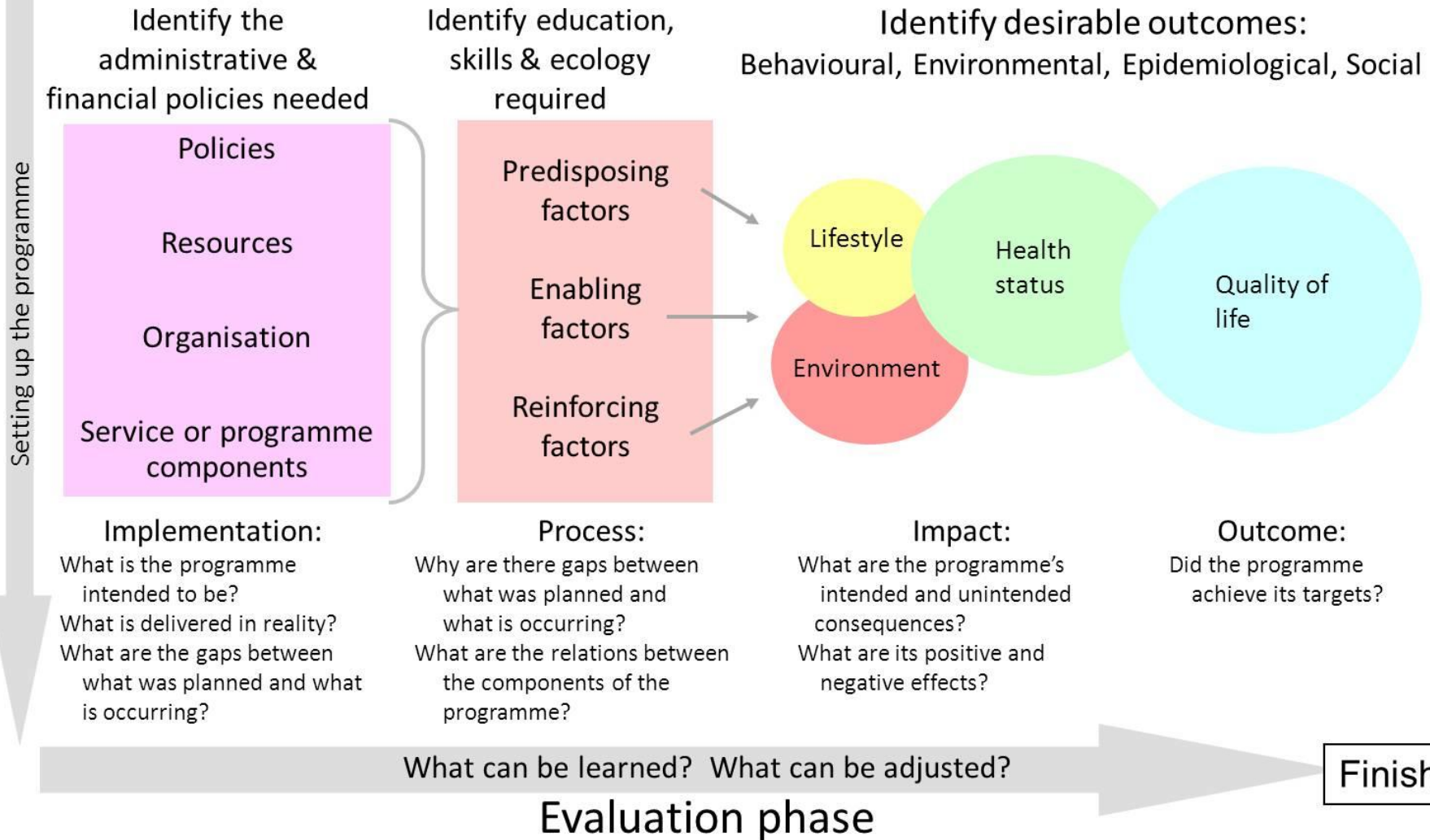
### PROCEED

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# Planning phase

What can be achieved? What needs to be changed to achieve it?

Start



Adapted from: Green L. <http://www.lgreen.net/precede.htm> (Accessed May, 2009)

[www.lgreen.net/precede.htm](http://www.lgreen.net/precede.htm)

# PHASE 1: Social Assessment, participatory planning, and solution analysis

- The SOCIAL ASSESSMENT expands the understanding of people through both objective and subjective sources of information. With the goal of the common good.
- Understanding the community (a geographic area or groups with shared characteristics, could also be a virtual community) through multiple data collection activities
  - Interviews, surveys, focus groups, observation
- The social assessment – articulates the communities needs and desires while considering the communities problem solving capacity, strengths, and resources, and the readiness to change,
- The focus is on strengths and gaps and seeking to establish partnerships with the goal of increased commitment to the program.
- HOW? Planning committees, community forums, conducting focus groups, concept mapping



# Phase 2: Epidemiological, Behavioral, and Environmental Assessments

- Identify the health priorities and their behavioral and environmental determinants.

## **Epidemiological Assessment –**

1. Identify health problems, issues or aspirations on which the program will focus .
2. Uncover behavioral and environmental factors most likely to influence identified priority health concerns
3. Translate those priorities into measurable objectives

Occasionally secondary data analysis is done using existing data sources such as vital statistics, and other data bases including National health information center and Canadian Communities Health Survey (CCHS).

# Phase 2 cont.

- The use of genetics – Can be helpful to identify high risk groups for intervention
  - Gielen et al. use the example of families with breast cancer history.
  - Other examples we can think of?

## **Behavioral Determinants**

These can be understood on 3 levels

- A. Most proximal – behaviors or lifestyles that contribute to severity of a health problem – teen smokers tobacco use; Cardiac patient's poor diet
- B. More distal determinant – behavior of others that can impact the behavior of those at risk, teen smokers parents keeping cigarettes in the house, spouse of cardiac patient buying bacon.
- C. Most distal factor – action of disarming makers that may affect the social or physical environment influencing the individual at risk, action by police in enforcing laws that restrict teen smoking; food served at a seniors center or hospital.

## Phase 2 cont..

- **Environmental Determinants**

Social and physical factors external to the individual – often beyond their control, that can be modified to support the behavior or influence the health outcome.

This stage requires strategies other than education.

Ex poor nutrition among school age children:

- Most proximal – poor dietary habits

Affected by availability of unhealthy foods in school

- Most distal – school policies around foods served/avl in schools

Older adult example?





# Theory & Phase 2

- Through the use of theory, literature, and planning groups input, an inventory of behavioral and environmental influencing factors should be made.
- Useful theories include:
  - Interpersonal theories of behavior change – emphasize interaction between individual and environment – ex Social Cognitive Theory – behavior, cognition, and other personal factors have a reciprocal relationship with the environment; behavior can be influenced by observing others and receiving reinforcement
    - Peer to peer programs
  - Organizational Change theories – useful when policies or practices of formal organizations have been identified as needing change.
  - Community mobilization can be used to change environmental conditions that influence health and health behaviors
  - Diffusion of Innovations theory – describes and predicts process by which new ideas are adopted by a community

## Phase 3: Educational and Ecological Assessment

- Once behavioral and environment factors have been selected for intervention the next step is to identify antecedent and reinforcing factors that need to be in place to initiate and sustain the change process. There are 3 specified:
  - 1 *Predisposing factors* – antecedents to a behavior that provide rationale or motivation for that behavior A persons knowledge, attitudes, beliefs, skills, self-efficacy beliefs
  - 2 *Reinforcing Factors* – factors that following a behavior provide continued reward or incentive for repetition of that behavior – social support, peer influence, family influence.
  - 3 *Enabling Factors* - antecedents to behavioral or environmental change that allow a motivation or environmental policy to be realized. (p 415) i.e. programs services and resources or development of new skills.

# Theory & Phase 3

- All 3 levels of change theories are useful at this stage-
  - Individual – most appropriate for addressing predisposing factors – how to communicate to individuals i.e. phone calls, mass media, social media?
  - Interpersonal – appropriate for reinforcing factors – indirect communication channels through friends family and methods such as train the trainer. - (Brain Fitness)
  - Community – enabling factors - environmental change - i.e. organizations delivery of services, policies, laws, and regulations
- Organizational change theories - for example with the use of walking aids a campaign may be developed in the building that emphasis the benefits and advantages to utilizing walking aids. This would also draw on SGT looking further at the social influences. The HBM would also be useful - perceived susceptibility

# Phase 4: Administrative and policy assessment and intervention alignment

- The planner will select and align the programs components, priority is the determinants of change previously identified.
    - Identify resources
    - Identify organizational barriers & facilitators
    - Identify policies that are needed for program implementation
- 2 levels of alignment between assessment of determinants and selection of interventions



# Phase 4 cont....

Macro level – organizational and environmental systems

Micro level – focus is on the individual, peer, family and others who can influence the desired change. Interventions at this level are directly aimed at predisposing, reinforcing, and enabling factors.

Many strategies can be used and should be matched to the target audience

Green and Kreuter (2005) offer recommendations for intervention matching, mapping, pooling and patching

1. Matching the ecological levels to the broad program
2. Mapping specific interventions based on theory and prior research identifying predisposing, enabling and reinforcing factors.
3. Pooling – previous work and interventions done in the area if applicable
4. Patching interventions to fill gaps and reflect evidence based best practices.

# Phase 4 & Theory

- Similar to phase 3 the focus is on community level theories
- Additional emphasis is on Organizational change theory to address processes and strategies for creating change

## Phase 5-8 Implementation and Evaluation

At this stage data collection plans should be in place for evaluation of the programs success. Specifically evaluating the process, impact, and outcome(S).

Process evaluation – evaluation of how the program was implemented according the protocol

Impact evolution assess change in predisposing, reinforcing and enabling factors as well as in behavioral and environmental factors

Outcome evaluation – determine the effect of the program on health and quality of life indicators.

Generally – measurable objectives should be written into the plan serving as milestones on which the plan is evaluated

## 2 case studies from the chapter

- The safe home project – aimed at reducing in home childhood injury among low-income, urban families
- Social and Epidemiological Assessment (Phase 1 & 2)
  - Review of literature and data on injuries, prevalence of injuries among children in local area was document with a 1 year analysis of the hospital database, input from parents was solicited, informal surveys
    - Principles of participation and relevance were used.
- Behavioral, Environment, Educational, and Ecological Assessment (Phases 2 & 3)
  - Based on literature review and advice from pediatricians, most important and changeable behavioral factors were identified as ‘childproofing’
  - Data from parents through interviews and followed the theory of planned behavior, looking at personal beliefs around childproofing, and injury prevention practices (*behavioral factor*)

# Safe home project cont.

- Environmental factors as well predisposing, reinforcing and enabling determinants were examined.
- 5% reported doing all 6 child proofing practices – but all respondents expressed positive personal beliefs and attitudes about childproofing.
- Environment factors identified included not having help from others, financial barriers, and poor housing quality.
- Barriers to parents were identified through use of the TPB
- Data showed that a lack of resources and skills interfered with parents safety practices.
- Reinforcing factor identified from parent interviews was routine injury-prevention counseling from pediatricians. This was further examined by review audiotapes collected with another study,



# Safe home project conclusions

- Predisposing factors – parents had favorable attitudes about child proofing
  - Reinforcing – mothers felt that childproofing the home was important among peers
  - Enabling Factors – access to safety supplies and skills to use them effectively.
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- Administrative and Policy Assessment (Phases 4 & 5)
    - 1. enhance pediatricians injury-prevention counseling
    - 2. develop a clinic-based safety resource center
    - 3. conduct home visits
  - Evaluation conducted on parents knowledge, beliefs, and barriers (predisposing, reinforcing, and enabling factors) with regards to safety practices and household hazards (behavioral and environmental)
  - Evaluation showed that the combination of home visits and access to appropriate supplies at a reasonable cost was the most effective.

# Application to Gerontology

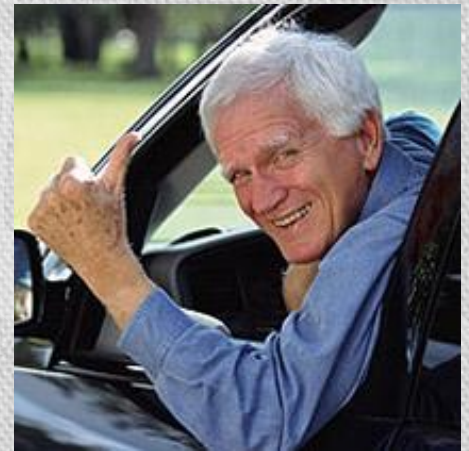
Determinants of Older Driver Safety From a Socioecological Perspective (Awadzi, K., Classen, S., Garvan, C., Komaragiri, V. (2006) *Topics in Geriatric Rehabilitation*, 22(1), 36-44.)

- Phase 1 was a review of databases provided the foundation for this study. Use of the model found that not only personal level factors to be important, but environment, and vehicle factors.

Using the model expands possible solutions to the issue.

## Other applications?

- Nutrition of older adults in retirement residences
- Fitness of older adults with diabetes



# Critiques

- The author often refers to health professionals needing to fix a problem – this seems counter intuitive to the community philosophy that is one of the cornerstones of this model.
- Costly – will this type of planning take a back seat with more cuts happening in our health care system? Does that mean that ‘engagement’ will be lost?
- Application may require a large number of human and financial resources, as well as technical detail and time.
- This may be frustrating when actions are desired
- The model does not emphasize the specifics of intervention development in detail.
- Time consuming –
- Heavily data driven