As we saw in Chapter Two of this book, longitudinal research is increasingly pointing to the efficacy of adopting broad-based, multilevel approaches to behavior change rather than concentrating on changing individual behavior in isolation. Chapter Four presents three ecological levels—interpersonal, community, and public policy—at which, optimally, change also needs to occur in order to support and reinforce change at the individual ecological level. Chapter Six discusses the importance of identifying the target group by stage of development (preadolescence; early, middle, or late adolescence), while Chapter Five shows why adolescent needs and wants need to be taken into account when developing respectful health-promoting interventions. Chapters Two and Three illustrate how behavioral change theories may be used to close the gap between the knowledge young people possess about how to lead healthy lives and actual positive changes they decide to make on their own to initiate these healthy lifestyles.

The basic elements highlighted in the first six chapters of this book provide a complete framework within which program designers may develop a series of interventions to support adolescents and youth in achieving and maintaining healthy behaviors and lifestyles. In this chapter, the Youth: Choices and Change Model is presented to enable designers to better visualize what their fully constructed program might look like. The model, developed by PAHO, provides a grid interlinking the components described above (Figure 7-1) and allows designers to build programs utilizing a step-by-step approach. The model’s key conceptual components are further defined and/or reviewed in Box 7-1.
During the design of adolescent health programs, it is important to distinguish between health behavior determinants, as described in most of the health education textbooks (Box 7-1.), and health determinants, as described by the population health approach (Health Canada 2003, Frankish et al. 1996), which aims to improve the health of the entire population and to reduce health inequities among population groups. The population health approach describes a broad range of factors and conditions that have a strong influence on our health, which are described as health determinants, and are identified as the following:

- income and social status
- social support networks
- education and literacy
- employment/working conditions

Source: Breinbauer and Maddaleno/PAHO
Box 7-1. Definition of Terms Used in the Youth: Choices and Change Model

Health behavior determinants are the conditions and circumstances that influence behaviors which, in turn, affect health. Within the framework of behavior change theories, they consist of a series of theoretical constructs that predict behavior (e.g., attitudes, perceived benefits, intentions, subjective norms). These conditions or behavior determinants can be identified at all four ecological levels: the individual (e.g., attitudes), interpersonal (e.g., role models), community (e.g., youth empowerment), and policy (e.g., public policies). Determinants may be expressed as variables, may be measured and changed, and may serve as indicators of progress towards behavior change.

Health-promoting determinants are those determinants, at different levels of intervention, which facilitate the adoption of healthy behaviors (e.g., positive attitudes towards condom use, positive role models, youth participation in HIV prevention campaigns, effective policies for condom availability). Protective factors, described by the Resiliency Theory (see Chapter Nineteen), as well as developmental assets, are health-promoting determinants.

Health-compromising determinants are those determinants which facilitate the adoption of unhealthy behaviors (e.g., negative attitudes towards condom use, role models favoring early unprotected sex, lack of social support and networks, policies restricting condom distribution). Risk factors are health-compromising determinants.

Health-promoting developmental capacities are those age-appropriate developmental capacities which facilitate the adoption of healthy behaviors (e.g., to have developed a personal conviction against early sexual relationships during preadolescence, to be able to set limits in sexuality exploration and negotiate alternative behaviors to intercourse for channeling sexual arousal during early adolescence).

Needs are the requirements, by different actors at different levels (e.g., adolescents, parents, teachers, community leaders, policymakers), to promote adolescent health and development.

Wants are the personal interests, desires, wishes, and goals of different actors (e.g., adolescents, parents, teachers, community leaders, policymakers) at different levels that motivate the adoption of various types of behaviors.

Health-promoting lifestyles refer to a cluster of behaviors that can help to preserve adolescent health, including sexual behaviors, and those related to violence; alcohol, tobacco, and drug use; and nutritional habits and physical activity.

In identifying developmental stages:
- **Preadolescent** refers to girls who are ages 9–12 and boys who are ages 10–13;
- **Early adolescent** refers to girls ages 12–14 and boys ages 13–15;
- **Middle adolescent** refers to girls ages 14–16 and boys ages 15–17;
- **Late adolescent** refers to girls ages 16–18 and boys ages 17–18;
- **Youth** refers to boys and girls ages 18-21; and
- **Young adult** refers to boys and girls ages 21-24.

- social environment
- physical environment
- personal health practices and coping skills
- healthy/unhealthy child development
- biological and genetic makeup
- availability and quality of health services
- gender
- cultural background
Within the definition of health determinants utilized by the population health approach, health behavior determinants would be one of those listed above; specifically, the “personal health practices and coping skills” determinant. This differentiation particularly applies when the concept of health behavior determinants is used to describe those determinants that affect individual behaviors at the individual level, without considering the other levels of influence. Nevertheless, experts working in the health education and health behavior fields have also incorporated more and more this broader notion of health determinants, defining health behavior as “the actions of individuals, groups, and organizations as well as their determinants, correlates, and consequences, including social change, policy development and implementation, improved coping skills, and enhanced quality of life” (Glanz, Rimer, and Lewis 2002; Parkerson et al. 1993). However, for the health behavior approach, efforts to improve environmental factors, policies, and the above-listed broader health determinants should in the end be evaluated for their effects on measurable changes in health behavior or health outcomes. Glanz and colleagues (2002) caution that a policy change that does not lead to measurable changes in behavior may be either too weak or too short-lived, or be only a limited determinant of behavior.

Putting It All Together—The Youth: Choices and Change Model

The following steps will help developers of adolescent health programs to approach program planning systematically, allowing reflection about each of the components to be included in the design of interventions and facilitating the decision-making process:

1. **Identify the target group: adolescent stage and gender.** In applying the Youth: Choices and Change Model, PAHO recommends that program designers begin by identifying the specific adolescent stage(s) and gender(s) they are going to target, given the stated needs and goals of the different actors involved. It is worthwhile noting that, historically, the needs frequently stated as being urgent are those related to changing middle and late adolescent behaviors, without due consideration being given to the value of focusing instead on building the strengths and positive behaviors of these age groups. As pointed out in Chapter Five, recent research shows that taking a positive approach by promoting skills and assets instead of preventing deficits has a better chance of engaging the interest and participation of adolescents, helping them to achieve their potential and avoid negative influences (Child Trends 2002). For these reasons, PAHO advises that program designers make special efforts to intervene early and to also target pre- and early adolescents, even when community members in these age groups might not yet show overt signs of health-compromising behaviors.

2. **Identify adolescent needs and wants.** As we will see in much greater detail in Section Three of this book, adolescent
needs and wants will vary according to
gender and the various different stages of
development. Nevertheless, an awareness
and understanding of the needs and wants
of girls and boys at different ages, within
the cultural context of the community it-
self, is crucial to the development of suc-
cessful health interventions. Since cul-
tural and social values will vary from
community to community, learning the
specific needs and wants of the local ado-
lescent population usually occurs by or-
ganizing small focus groups among the
target population.

(3) Identify level of intervention. As we saw in
Chapter Four, adolescents live in a complex
environment in which they are subject to
multiple levels of influence for health-re-
lated behaviors: individual, interpersonal,
institutional and/or organizational, com-
community, and public policy. Given that the
body of research continues to grow indicat-
ing that successful behavior change is best
achieved if multilevel inputs are provided
to support and reinforce this change syner-
gistically, PAHO recommends that inter-
ventions calling for positive change be in-
corporated at each ecological level rather
than focusing exclusively on changing in-
dividual behavior.

(4) Identify other actors’ needs and wants.
In a multilevel approach, the needs and
wants of the other actors involved in pro-
moting healthy adolescent lifestyles—
parents, other family members, care-
givers, teachers, peers, community leaders,
and others—will need to be taken into ac-
count in order to secure this group’s active
support of and participation in the inter-
ventions and programs created. Since the
members of this diverse group relate to
adolescents in different ways, each will
bring unique perspectives to the design
process, enhancing the possibility of de-
signing and implementing respectful in-
terventions that are meaningful and age-
appropriate for the recipients, thereby
stimulating greater interest and commit-
ment on the latter’s part.

(5) Identify the theories that will support the
design of the intervention. The Youth:
Choices and Change Model proposes that
at least one theory be selected at each ecologi-
cal level to guide the design of interven-
tions. Table 4-1. shows the various theo-
ries that may be applied at each level, and
Section Two of this book explores each of
the theories within its ecological context.
But before theoretical frameworks are se-
lected, ideally composed of theories cho-
sen from the different ecological levels,
program designers will need to utilize a
problem-driven psychological approach
(see Chapter Three) to answer the ques-
tions that will lead to a better understand-
ing of the specific problem at hand and
what needs to be done to achieve change.

(6) Translating theory into practice. The
selection of meaningful theories to address
a specific adolescent behavior or challenge
(e.g., adopting responsible and reasonable
drinking habits, reducing overall alcohol
drinking among adolescents) will help to
identify clusters of health-promoting and
health-compromising determinants (e.g., attitudes, subjective norms, choice of role models, coping strategies, poverty, local alcohol regulations for youth) and behaviors (e.g., adolescent drinking behaviors, parental drinking habits, school connectedness, ease of access to alcohol products) at each ecological level. The challenge is to translate those theoretical constructs into measurable variables before the intervention, so that changes may be measured after the intervention. In this way, the interventions will follow a logical design that includes assessment and evaluation, one of the key elements in the development of successful adolescent health interventions and programs (U.S. Department of Health and Human Services 2002a), as we saw in Chapter Four.

The selected theories will also help to design the interventions at each ecological level in order to decrease the amount of health-compromising determinants and behaviors and increase the amount of health-promoting determinants and behaviors after the intervention takes place. Although adopting and maintaining health-promoting behaviors among adolescents and changing health-compromising behaviors at each level is the ultimate goal, the process of achieving this might require targeting determinants of behaviors first (e.g., attitudes), which can then serve as measurable process indicators before changes in outcome indicators (final behavior) are ultimately obtained.

The Youth: Choices and Change Model also proposes targeting not only adolescent-specific determinants and behaviors (e.g., attitudes toward alcohol, resistance skills when offered alcohol) but also promoting the strengthening of developmental capacities appropriately gauged for pre- and early adolescent boys and girls through the interventions, which will, in turn, strengthen their abilities to make conscious healthy decisions (e.g., to improve mood regulation, control expression of emotions, critically analyze role models that involve excessive or irresponsible drinking habits). These developmental capacities will be more fully discussed in Section Three of this book.

* * *

Throughout the world, there is a growing number of successful adolescent health initiatives that incorporate the elements discussed so far in this book. Many of these were presented at an international conference sponsored by the World Health Organization in Stockholm, Sweden, in 2001 (Foxcroft et al. 2001). One of these is “Strengthening Families,” a highly effective alcohol and drug prevention program developed in the United States by Iowa State University and consisting of seven 2-hour sessions and four booster sessions during which parents work to improve their parenting skills and adolescents strive to achieve more effective communication with their parents (Iowa State University 1997). The program has been scientifically evaluated and shown to be
effective and is recognized by four U.S. federal agencies: the National Institute on Drug Abuse and the Departments of Education, Justice, and Health and Human Services. Youth attending the program had significantly lower rates of alcohol, tobacco, and marijuana consumption, as well as school conduct problems, compared to their control group counterparts. Furthermore, the differences between program and control youth were shown to increase over time, indicating that the skills learned and the strengthening of parent-child relationships continued to manifest their influence as these youth progressed through their adolescent years.

Perhaps the proven effectiveness of the “Strengthening Families” program lies in two key ingredients: first, that it promotes simultaneous changes at the individual, interpersonal, and community levels; and secondly, that it targets pre- and early adolescents (in this case, ages 10 to 14), which, as we have already seen, is a critical age group to be targeted by any and all adolescent health promotion initiatives. Important, also, is the fact that the program takes into account the needs of other actors—from family members and caregivers to community leaders—and that it is based on theories that facilitate the design of integrated interventions occurring across the lines of the different ecological levels.

In Section Two, we will review a variety of behavior change theories at different levels of intervention that are considered particularly relevant in the design of adolescent health promotion and prevention programs. Like the components of the theoretical framework of “Strengthening Families,” the theories presented have demonstrated their ability to achieve positive results. The participants themselves have reported that they find the interventions to be innovative and appealing, perhaps because adolescents are granted the opportunity for greater autonomy and challenged to make conscious choices that place them firmly in charge of their own growth and maturation process.