Introduction

Adolescents are commonly regarded as among the healthiest of Americans, and those least in need of health services. [1] Perhaps as a consequence, adolescent health has not been a national priority. Yet OTA's analysis, requested by numerous members of Congress,[2] suggests that perhaps one out of five of today's 31 million adolescents (245) have at least one serious health problem.[3] Even more disturbing, U.S. adolescents often face formidable barriers in trying to obtain basic health care.

Particularly at risk are those adolescents who are both poor and members of racial or ethnic minority groups, because they are most likely to be without the necessary safety nets that help many adolescents through the second decade of life. But today's white, middle-class adolescents are also at high risk of developing problems and not having access to needed health services and other sources of support. Unique income, insurance, informational, legal, physical, and social-psychological barriers all can interfere with the development of appropriate health promotion, problem prevention, treatment, and environmental support strategies for adolescents.

Today's adolescents are America's future workforce, and OTA's analysis of American adolescents' health needs suggests that changes in the Nation's approach to adolescent health would be well worth making. Three major options that OTA believes Congress[4] may want to consider are:

- improving U.S. adolescents' access to health services,
- restructuring and invigorating Federal efforts to improve adolescent health, and
- improving adolescents' environments.

Adjustments in these areas would both signal and hasten a needed sea-change in other aspects of the Nation's approach to adolescent health, in particular, the development of a more sympathetic, supportive environment for adolescents.

Photo credit: Education Week

Adolescents **are commonly regarded as the healthiest of Americans, yet OTA's analysis suggests that adolescents do have health problems and problems gaining access to services.**

OTA's analysis suggests, however, that no matter how worthwhile changes to the Nation's approach to adolescents can be, the changes will not all be easy to make. Some approaches to the prevention and treatment of the health problems of adolescents are relatively straightforward, although they may require considerable effort and increases in funding at a time when resources seem especially scarce. Unfortunately, though, other solutions may be difficult to implement. The reasons are themselves complex but primarily include shortcomings in the knowledge base; the fact that the beneficiaries of change would be adolescents; and intense ideological differences within the United States on issues of importance to adolescents. Further, the relationship between adolescents and their parents is complicated, in that at the same time the relationship should be preserved and enhanced, the health needs of some adolescents may conflict with their parents' right to exert parental authority and control.

[1] A previous OTA report, *Healthy Children: Investing in the Future*, examined several health issues related to prenatal care, infants, and young children (224).

Congressional requesters of OTA's Adolescent Health Report, with current committee chair or ranking *minority* assignments, are listed in app. A. "Method of the Study."

[3] Health problems were defined broadly in this Report (see below). Examples of serious health problems and their prevalence among U.S. adolescents are presented below and in app. B, "Burden of Health Problems Among U.S. Adolescents," in Vol. III.

[4] OTA is mandated to provide advice to the U.S. Congress; thus, the focus of this Report is on the role of the Federal Government.

Scope of the Report

This Report, requested by numerous members of Congress, reviews the physical, emotional, and behavioral health status of contemporary American adolescents, including adolescents in groups considered to be in special need: adolescents living in poverty, adolescents from racial and ethnic minority groups and Native American adolescents, and adolescents in rural areas. In addition, it identifies risk and protective factors for adolescent health problems and integrates national data in order to understand the clustering of specific adolescent problems. It also evaluates options in the organization of health services and technologies available to adolescents (including accessibility and financing), assesses options in the conduct of national health surveys to improve collection of adolescent health statistics, and identifies gaps in research on the health and behavior of adolescents.

What is adolescent health? There is no easy answer to this question, and OTA's analysis was plagued throughout by issues of problem definition (see box A). How adolescent health and adolescent health problems are defined (e.g., broadly or narrowly, in biomedical, behavioral, or subjective terms) and who defines them (e.g., legislators, health providers, adolescents) have implications for assessing the extent of adolescent health problems in the population, and whether one takes an approach that is oriented to the promotion of well-being, or the prevention or treatment of problems. The definition of adolescent health also has implications for the assignment of responsibility for designing appropriate solutions to problems.

OTA did not definitively define health for adolescents, but generally considered adolescent health in broad terms. It has long been apparent that adolescent health in particular involves much more than the absence of physical disease (93). The majority of adolescents who die, for example, die not from physical diseases but from injuries due to motor vehicle accidents, suicide, or homicide. Some of these, and other, adolescent health problems stem from involvement in risk-taking behaviors (e.g., driving under the influence of alcohol, engaging in unprotected sexual activity) to which adolescents are sometimes prone.[5] Adolescent health is also affected by family and school influences and various other social and environmental factors. Thus, a broad definition of adolescent health could include aspects of the most traditional definitions of health (i.e., the presence or absence of physical disease and disability); adolescent problem behaviors (e.g., delinquency, drug use, sex); positive components of health (e.g., social competence); health and well-being from the perspectives of adolescents themselves (e.g., perceived quality of life); and social influences on health (e.g., families, schools, communities, policies).

For a variety of reasons, *OTA focused its analysis of adolescent health on adolescents ages 10 through 18.* Definitions of adolescence vary, and many observers agree that a definition based on age alone is not sufficient because of significant individual variation in the processes of adolescent development.[6] OTA decided to focus on 10- through 18-year-olds, because by the age of 10, many individuals have begun puberty. At the age of 18, the majority of adolescents (though certainly not all) are still in high school and are more or less emotionally, financially, or otherwise dependent on their parents.[7] The fact of high school graduation or legally becoming an adult creates a whole new set of contingencies and opportunities for addressing health issues. OTA felt that attempting to address

[5] Adolescence is widely believed t. be a stage during which one is more prone to take risks than at other age levels (73). However, two recent reviews of empirical evidence on risk-taking have found mixed results regarding the degree to which adolescents take more risks than do individuals at other age levels (73, 125). Michael Males' analysis of incidence rates for behaviorally related health outcomes for the period 1950 to 1985 found, for example, higher rates of violent death (except for motor vehicle deaths), and higher rates of unwed pregnancy among adults ages 20 to 44 than among adolescents ages 15 to 19 (125). Furby and Beyth-Marom remark upon the dearth of research on adolescent risk-taking from a cognitive-developmental perspective, and also question whether societal concern is with adolescent ''risk taking per se, or with the particular activities in which [adolescents] choose to engage [e.g., sex; alcohol, tobacco, and drug use; driving under the influence]" (125); Males concludes that "youth do indeed act like their parents' and society's children' (125). Irwin offers a related perspective, suggesting that adolescents' behaviors and health outcomes can be viewed as just beginning to resemble those of their adult contemporaries (94).

[6] See ch. 2, "What Is Adolescent Health?" in Vol. II.

[7] Currently, the age of majority (the age at which individuals are considered adults) is set at age 18 in every State but Alaska, Nebraska, and Wyoming, where the age is 19. As discussed in ch. 17, ''Consent and Confidentiality in Adolescent Health Care Decisionmaking, ' in Vol. III, some minors (e.g., emancipated minors and other minors on whom States have conferred special rights) have rights that are normally reserved for adults. On the other hand, individuals who have reached the age of majority are subject to some age-related restrictions on their behavior. In all States, for example, it is illegal to purchase beverage alcohol for one's own use until age 21.

Box A—Issues of Definition in the Assessment of Adolescent Health

Although analyses by OTA and others certainly suggest a need for attention to the health of U.S. adolescents, it is important to note that what is *meant* by adolescent health is still not all that clear (93,143). Consideration of the way the health of adolescents is conceptualized is important, because such conceptions have significant consequences for:

. judgments about how healthy adolescents are;
• judgments about which adolescent health problems are most important;
. judgments about what health-related policies are justified and
. decisions about the development and support of measures of health and health services utilization that are in turn used to help judge the need for changes in services and policies.

Attempts to define adolescent health can be informed by appraisals of the developmental goals of the adolescent period as well as by notions of what life is like during adolescence. Examination of these issues leads to support for a broad definition of adolescent health. However, existing quantitative assessments of adolescent health, and even attempts to further develop definitions of adolescent health have not caught up with the conclusion that adolescent health needs to be thought of broadly (93,143). Additional issues relating to the definition of adolescent health include who defines health and health problems, the social context of the definition of health problems, difficulties in operationalizing well-being, and the potential consequences of broadening the definition of adolescent health.

What Is Adolescence?

Adolescence cart be viewed, as can all other periods of human development, in terms of the execution of an individual's ''developmental tasks"[1] as well as in terms of an individual's contemporaneous sense of well-being. Thus, an important consideration in framing a definition of adolescent health is the matter of the developmental goals of the adolescent period, socially defined. Although one difficulty in gaining the attention of policymakers for some adolescent health concerns is that adolescence is often viewed solely as a transitional period between childhood and adulthood (93), it would be almost impossible to construct a new definition of adolescent health without considering what it is an individual should be like as she or he leaves adolescence.

The elements of a healthy and successful young adult human being are, of course, open to question, but in late 20th century United States, one could hardly argue with the notion that, as individuals reach adulthood, they should optimally be beginning to be productive, contributing members of society, who meet commitments to families and friends and the responsibilities of citizenship (28). Further, even as they meet essential social obligations, life should generally be satisfying, and individuals should have the potential to continue to grow.

But as important as the goals of the developmental period called adolescence are, the adolescent period in the contemporary United States can itself encompass one-seventh of the life span or more.[2] So, an important issue to consider, in addition to considerations of health related to the transition into adulthood, is the parameters of health ***during*** adolescence.[3]

Do Existing Definitions of Health and Indicators of Health Status Correspond to an Optimal Definition of Adolescent Health?

For quite some time, the concept of health was limited to physical health (251). This view was understandable as long as the causes of death and disability were largely physical in nature (251,288). An

[1]The term ''development,'' and the notion that there are "stages" of development, each with developmental ''tasks,'' should be viewed with caution. Levels of human development have been somewhat arbitrarily freed according to chronological ages (e.g., infancy, childhood, adolescence, young adulthood). Development ''tasks" are skills, levels of achievement, and social adjustment considered important at certain ages for the successful adjustment of the individual, and for the individual to progress to the next "stage."

[2]Puberty can begin at age 10 or even somewhat earlier and, because of educational goals or other social factors, some individuals delay their entry into adult roles until their mid-twenties (62). (As noted elsewhere, however, OTA's assessment focused on the period ages 10 through 18.)

[3]As discussed elsewhere in this Report, the formerly popular notion that for adolescents to be normal is abnormal has been discredited (see, e.g., 62). Such notions led to the view that poor heal@ in particular, poor mental health, odd behavior, and subjective distress, were to be expected during adolescence.

Continued on next page

Box A—Issues of Definition in the Assessment of Adolescent Health-Continued

advance in the conceptualization of health was made when individuals' engagement in health-related individual behaviors were added to physical problems as indicators of the health status of the population (143,251). This change was made in recognition of the fact that many persistent physical health problems (e.g., heart disease, lung cancer, and the trauma resulting from "accidental" injuries) were associated, at least in part, with factors related to behaviors apparently freely chosen (251,289).[4]

In no sense, however, have widely published *measures* of health status approached the increasingly accepted World Health Organization definition that health should be defined as "complete physical, mental, and social well-being" (86). In the United States, the health status of the population is still measured primarily in terms of mortality or is inferred from the extent to which individuals seek care from physicians (289).[5,6] Many observers agree that traditional measures of health status such as overall mortality rates and utilization of physicians are inappropriate to assessing the health of adolescents. Most of the health problems experienced by adolescents do not result in death, at least not immediately (96,107),[7] and, as discussed at length in this Report, there are reasons other than the absence of health problems for adolescents not to use the mainstream health services system.[8] One of the reasons adolescents may not use the mainstream health services system is that it is oriented primarily toward the treatment of physical disease; mental, behavioral, and social problems tend to be addressed by other systems of care.[9] A broader view of health-emphasizing mental and social, as well as physical, aspects and a sense of well-being as well as the absence of problems-can be said to fit the period of adolescence much better than does a narrow focus on the absence of physical health problems.[10]

Other Issues

Other issues affecting the way adolescent health is defined include the extent of adolescent participation in defining health and health problems, broader social influences on defining adolescent problems, difficulties with operationalizing well-being, and the impact on existing systems of redefining health.

As a generally (legally) powerless group, adolescents have very little say in the way health and health problems are defined and measured, but the way that adolescent health and health problems are defined and measured greatly influences adolescents' lives. The evidence is scarce on this point but adolescents have been found to see discrepancies between issues of concern to them and issues likely to be discussed by health care providers and others who have the potential to affect adolescent health and make referrals to health care services (89,126,193). Clearly, if there is disagreement on what adolescent health and health problems are, there is likely to be disagreement on appropriate approaches to promoting health and to addressing problems.

It is further important to recognize that some things that are regarded as adolescent health problems are problems only in the context of the contemporary social environment. Possibly, for example, dropping out of

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[4]The presence of a mental health problem is also considered an aspect of health (143), although Federal overviews of the health status of the population rarely include information on mental health status measures (e.g., 289). Further, many adolescent mental disorders are defined in behavioral terms (9).

[5]Relatively recent efforts to make measures of mortality more relevant to younger populations, such as estimates of premature mortality (e.g., years of potential life lost (289)), constitute an important advance, however.

[6]Additional issues concerning the information available about adolescent health status, even using widely accepted indicators as measures, are discussed in app. C, "Issues Related to the Lack of Information About Adolescent Health and Related Services."

[7]In the longer term, life expectancy maybe shortened by use of alcohol, tobacco, and drugs, and other behaviors during adolescence.

%&MS Volume and chs. 15, "MajorIssues Pertaining to the Delivery of Primary and Comprehensive Health Services to Adolescents," 16, "Financial Access to Health Services," 17, "Consent and Confidentiality in Adolescent Health Care Decisionmaking," and 18, "Issues in the Delivery of Services to Selected Groups of Adolescents," in Vol. III.

[9]See Vol. II of this Report, "Background and the Effectiveness of Selected Prevention and Treatment Services." Even dental and nutrition services, which apply to the body, are separate from the so-called primary health care system.

[10]Although adolescents do have physical health problems, they are *relatively* free of the kinds of life-threatening physical diseases that affect the very young or very old.

high school (or not going onto college) might not be so terrible for some adolescents if jobs at living wages or other alternatives were available (330) or if academic paths were more flexible. The social environment is the product of longstanding cultural and philosophical roots in this country that are not about to be changed in a wholesale manner (25), but it is important to recognize the social environment's impact on the way adolescent health problems are defined.

A further social dilemma concerns operationalizing the concept of "complete. . well-being" (86). Although broadly acceptable definitions of complete well-being could be socially constructed, they would be difficult to devise because to a large extent complete well-being is inherently a subjective notion.

Finally, it is important to note certain potential barriers to changes in the way adolescent health is conceptualized. One is that adopting broader definitions of health could lead to either a broadening of what is considered the health care system (e.g., to include the mental health, substance abuse, social services, nutrition, recreation and fitness, and other systems of care for adolescents) or the broadening of skills of *medical* providers. Enlarging the definition of the health care system might be expected to upset current hierarchical arrangements among caregivers. On the other hand, given the range of expertise required to address all the health needs of adolescents under an expanded conceptualization of adolescent health, multiplying the number of skills required of a single type of practitioner seems unrealistic.

A second potential effect of expanding the definition of health for adolescents is related to the expanded notion of a health care system and is important because it can have cost implications. If a broader definition of health is adopted, the range of "health-related problems" amenable to possible intervention (i.e., health services) becomes larger. If art intervention is defined as a health-related service, it becomes a potential target for the commitment of public funds (e.g., under Medicaid) or private third-party reimbursement. Such a consequence is not inevitable, but it is worth considering as an explanation for why an expanded definition of adolescent health may be resisted.

Conclusions

Definitional issues in adolescent health will undoubtedly persist as the findings of OTA's report, and others related to adolescent health (e.g., 6,29,51,52,137,148,150, 152, 153), are considered by local and national policymakers, parents, researchers, and adolescents themselves. Further, many of these issues are relevant to populations other than adolescents. However, a broader definition of health is especially important for adolescents because adolescence is a critical transitional period (62,84) and because narrower definitions of health can lead to the neglect of important health issues during adolescence.[11]

New constructs and theoretical perspectives, OTA believes, should probably include consideration of the specific individual involved, the specific health concern, and the individual's social environment. In addition to traditional measures of physical health and the newer behavioral measures, a broad range of indicators of optimal functional status (emotional and social, including perceived quality of life) should be considered by researchers, health care providers, and policymakers.

A broad definition of health would therefore include aspects of the most traditional definitions (i.e., the presence or absence of physical disease and disability); consideration of adolescents' health-compromising behaviors; positive components of health (e.g., social competence, health-enhancing behaviors); and health and well-being from the perspectives of adolescents themselves (e.g., perceived quality of life). A fully realized view of adolescent health would also consider the impact of social (e.g., families, schools, communities, policies) and physical (e.g., fluoridation, automobile and highway design and construction) influences on health and would be sensitive to the developmental changes that occur during adolescence.

However desirable new constructs are, the possible consequences of expanding the definition of health for adolescents should be considered.

[11] This consequence was noted in the materials announcing the World Health Organization meetings on the health of youth (334a).

SOURCE: Office of Technology Assessment 1991.