

4646.2

**YOUTH AT RISK: DEFINITIONS, PREVALENCE,
AND APPROACHES TO SERVICE DELIVERY**

Prepared by:

Gary **Resnick**
Martha R. Burt
Lisa Newmark
Lorraine Reilly

Urban Institute
2100 M Street, N.W.
Washington, D.C. 20037

CONTRACT NO: HHS-100-92-0005
DELIVERY ORDER 2
DELIVERABLE # 4
COMPREHENSIVE SERVICE INTEGRATION
PROJECTS FOR AT-RISK YOUTH
UI PROJECT NO: 6256
DELIVERY DATE: July 16, 1992

TABLE OF CONTENTS

EXECUTIVESUMMARY	iv
INTRODUCTION	1
ADOLESCENCE	1
THE MEANING OF RISK	4
Competing Definitions of “Risk”	5
A Conceptual Framework for Defining Risk	10
PREVALENCE OF RISK ANTECEDENTS, MARKERS, BEHAVIORS AND OUTCOMES AMONG 10- TO 15-YEAR-OLD ADOLESCENTS	15
Prevalence of Risk Antecedents for Young Adolescents	16
Poverty	16
Neighborhood	20
Family Dysfunction and Lack of Parent Support/Involvement	21
Prevalence of Risk Markers Among Young Adolescents	28
Poor School Performance and Grade Retention	29
Family Breakdown	31
Prevalence of Problem Behaviors and Risk Outcomes in Young Adolescents	32
Early Sexual Behavior, Pregnancy, Parenthood, and Sexually Transmitted Disease	32
Truancy and School Dropout	37
Running Away and Homelessness	38
Use and Abuse of Tobacco, Alcohol, and Other Drugs	42
Associating with Delinquent Peers, Delinquent and Criminal Behavior	49
Adolescent Mortality and Causes of Death	55
Summary of Risk-Factor Prevalence Review	56
TRADITIONAL SERVICES FOR AT-RISK YOUTH	59
Definition of Prevention Strategies	61
Cross-Cutting Issues for Traditional Youth Services	62
Traditional, Single-Issue Prevention and Treatment Strategies	62
School Failure and Dropout	63
Adolescent Pregnancy	68
Substance Abuse	73
Delinquency..	79

Limits of Traditional Programs	83
ISSUES IN SERVICE INTEGRATION	84
History of Service Integration	87
Barriers to Service Integration	89
Lessons Learned	90
Approaches to Service Integration	91
Mission	91
Perspectives on Youth	92
Partnerships	93
Steps in Planning and Implementing Comprehensive, Integrated Services .	95
Defining Goals and Objectives	95
Identifying the Target Population	96
Identifying the Services to be Offered	97
Mechanisms for Service Delivery	99
Service Location	99
Administrative Factors	101
Staffing Issues	101
Funding Issues	102
Evaluation	103
Institutionalizing Change	105
Summary: Service Integration Issues	106
CONCLUSION	107
REFERENCES	108
INTERVIEWS	120

LIST OF EXHIBITS

EXHIBIT 1: SUMMARY OF ALTERNATIVE DEFINITIONS OF RISK 6

EXHIBIT 2: RISK ANTECEDENTS, MARKERS, BEHAVIORS, AND OUTCOMES , . 11

EXECUTIVE SUMMARY

YOUTH AT RISK: DEFINITIONS, PREVALENCE AND APPROACHES TO SERVICE DELIVERY

This paper provides an overview of the extensive literature on at-risk youth, the services that exist to meet their needs and improve their life prospects, and, efforts to migrate these services. It is the first product of a 8 month investigation that The Urban Institute is conducting for the Assistant Secretary for Planning and Evaluation, U.S. Department of Health and Human Services, to examine comprehensive service integration programs for adolescents ages 10- 15. The overall goals of this project are to:

- Document how comprehensive, integrated services are delivered to at-risk youth between the ages of 10 and 15 at five locations;
- **Identify** some **effective** methods of providing comprehensive, integrated services for this population:
- Identify barriers to providing comprehensive **services**, and means of facilitating service integration for at-risk youth:
- Examine the role of Federal, state and local government and the non-profit sector in impeding or facilitating service integration for at-risk youth;
- Examine the extent to which simple lack of services, or **insufficient** service capacity in the communities visited is implicated as a barrier, in comparison with eligibility, regulatory, jurisdictional, and other factors; and
- Identify issues for further research on the provision of comprehensive and/or integrated services for at-risk youth.

Due to the short time frame, this paper relies heavily on secondary source material and interviews with recognized youth experts. Fortunately, several excellent reports have been completed recently which **summarize** the state of knowledge in the field. We cannot claim that the following report provides an exhaustive literature review, but we think it provides a fair representation of the current **collective** wisdom about at-risk youth and service approaches.

The report is organized in the following manner. First, we explore various conceptual definitions of “at risk” that are currently in use and their implications for identifying youth who might need services. Second, we summarize research on the prevalence of specific problem behaviors or experience of risk outcomes, Then, the array of traditional services for youth are briefly described. Finally we examine comprehensive and integrated approaches to **service** delivery and some of the issues that arise when youth ages 10- 15 are the target population for these initiatives.

The Meaning of "Risk" among Young Adolescents

Adolescence is a developmental stage most frequently defined as beginning at puberty. There is less agreement about its end; some experts have suggested that the upper age limit may be as high as age 24. This report, however, focuses on youth in **early adolescence, a period spanning most of the pubertal changes and roughly corresponding to middle school or junior high school years (typically ages 10-15).** While this stage has been characterized by some as a period of conflict and stress, there is now general agreement that adolescents are not at equally high risk for problem behaviors. Levels of risk for particular adolescents appear to be mediated by a set of environmental and individual antecedents.

Recently, efforts to define levels of risk and its prevalence among adolescents have sparked interest in the policy and research arenas. They represent the culmination of work in three areas of developmental theory over the past 15 years. These include:

- **The acceptance of the ecological approach to development posited by Bronfenbrenner which emphasizes the influence of the child's social environment (family, neighborhood, peers).**
- **The recognition that evaluations of some early childhood interventions have shown reductions in some of the negative effects of poverty and disadvantage for program participants (i.e., reduction of risk):**
- **The acknowledgement that many problem behaviors of adolescents are correlated and potentially share common antecedents,**

On this last point, we conclude that the current evidence is not **sufficient to prove** a high degree of overlap among problem behaviors, but the presence of some common antecedents for many behaviors is suggestive.

Competing **definitions** of what constitutes "risk" among adolescents are rife and much of the murkiness in the field results because varying approaches alternatively focus on antecedent conditions, markers, problem behaviors, and outcomes. Those "at risk" of a problem are sometimes identified by the fact that they already have the problem--such as school dropouts. A variant strategy uses markers, such as school performance, to identify the group at risk of an outcome such as dropping out of school. Other approaches stress the importance of risky situations or environments such as dangerous neighborhoods or dysfunctional families in promoting negative outcomes.

This paper adopts a conceptual framework that integrates these approaches by proposing four components of a risk definition: risk antecedents, risk markers, problem behaviors, and outcomes. Risk antecedents are those **environmental conditions such as poverty and family dysfunction which consistently predict** subsequent negative outcomes for young adolescents. Risk markers are behaviors or conditions associated with more serious outcomes and which, based on the research literature, may be signals of impending dysfunction. We focus on two markers which are readily observable in system records. These are poor school performance and involvement with child protective services. Both appear to be critical markers

(predictors) for future problems among 10- 15 year-olds. Risk outcomes are defined as those serious, negative consequences which are most likely to follow from a combination of risk antecedents and problem behaviors, and are signaled by risk markers. These outcomes include pregnancy, too-early parenthood, poor pregnancy outcomes, STDs, homelessness, prostitution, substance abuse, school dropout, criminal behavior, depression, suicidal thoughts and behavior, death or injury, accidents, and physical and sexual abuse. These outcomes generally result from problem behaviors such as early sexual activity, truancy, running away from home, early use of substances, and associating with delinquent peers. Figure 1 presents a schematic representation of the framework's four components.

This framework takes into account the common antecedents of many youth problems and allows for an assessment of risk geared specifically to young adolescents, a group in which the early signs of dysfunction are important rather than waiting for the onset of negative or destructive consequences. Accordingly risk for young adolescents is defined as "the presence of negative antecedent conditions (risky environments) which create vulnerabilities, combined with the presence of specific negative behaviors which act as precursors or risk markers likely to lead, in time, to more serious consequences (risk outcomes)." High risk in this scheme may be defined as negative antecedent conditions and either specific markers or problem behaviors. Moderate risk may be specified as the presence of either antecedent conditions or markers, but not both. Low risk youth show neither antecedents, markers, or problem behaviors.

Prevalence of Risk among Young Adolescents

Estimates of the prevalence of at-risk youth using the above definition would ideally be based on data revealing how many youth experienced each problem behavior or risk outcome. No single source has evaluated the prevalence of the entire range of possible problem behaviors among adolescents, the covariation among problems, or the likelihood of outcomes arising from specific behaviors. Given this lack of cross-tabulated information, this paper presents data about the prevalence of each risk antecedent (poverty, neighborhood, and family dysfunction as measured by parental substance abuse and reported child abuse and neglect); risk markers (poor school performance and child protection/out of home placement), and problem behaviors and outcomes (early sexual behavior and its consequences, truancy and school dropout, running away and homelessness, substance use and abuse, delinquency, and adolescent mortality).

Traditional Services for At-Risk Youth

Traditional services have tended to function within single organizational systems, such as education, corrections, or mental health, and to treat only the behaviors or conditions relevant to their area of expertise. They often address only a single risk outcome, such as adolescent pregnancy and parenting, substance abuse, delinquency, or school failure. We refer to these as single focus programs and we explore the supports behind this system of services in Federal categorical and entitlement programs.

This section provides a brief overview of the range of programs aimed at the single problems of adolescence. Both prevention and treatment strategies are covered, although treatment programs are more common **than** prevention efforts. Programs that address school failure and drop out, adolescent pregnancy, substance abuse, and delinquency are described and school based efforts are distinguished **from** community based efforts.

Traditional programs face **limitations**. Over the years, these single focus programs have often recognized that the social and supportive services they offer do not address some of the most pressing needs of their clients. Second, they have found that it is often difficult to obtain needed services **from** other agencies because of such **difficulties** as eligibility requirements, inadequate resources, and inaccessibility or inappropriateness. Frustration with these service barriers has set the stage for programs to expand their own services: to build referral networks: or both. The former are efforts to become more comprehensive under a single roof: the latter are efforts to achieve more formal or informal integration of the service agency network **within** a community.

Issues *in Service Integration*

~~Integrated service models to deliver comprehensive services to youth and their families through collaboration, cooperation and coordination of efforts have received increased attention recently in response to the many and varied service needs of youth and the frustrations encountered by traditional single-problem approaches to service delivery.~~ Service integration (SI) refers to procedures and structures that help **several** service agencies coordinate their efforts to address the full range of service needs presented by youth and their **families** in an **efficient** and **holistic** manner. While relatively few systems actually meet **all** the elements of an ideal SI model, the **following** key **characteristics** are proposed as critical components:

- An approach that assumes youth are embedded in family, neighborhood and community environments which can also be influenced;
- A comprehensive, individualized assessment of individual and family needs conducted at or near the point of intake;
- A coordinated service plan developed to address identified needs;
- Institutionalized interagency linkages to ensure that service referrals result in actual service delivery: and
- **Followup** on service referrals to ensure services are delivered in an appropriate manner and that coordination is **functioning** effectively.

Service integration efforts are not new: the 1960s and 1970s were marked by considerable experimentation with comprehensive service delivery systems sponsored by the Federal government. By the late 1970s and through the 1980s, the **opportunity** for SI initiatives devolved largely to state and local governments and the efforts were relatively modest. Given the renewed interest in SI, it **is** important to highlight some issues that have emerged from earlier experiences. These include such

~~fundamental characteristics~~ of SI approaches as their mission, their underlying views of youth and their service needs, and the nature of the service delivery network. More concrete issues to be addressed include setting project goals and objectives: identifying the services to be offered, how and where they are to be delivered, and to whom; and program administration, staffing, funding, and evaluation.

INTRODUCTION

This paper provides an overview of the extensive literature on at-risk youth, the services that **exist** to meet their needs and improve their life prospects, and efforts to create programs integrated across service systems. Our literature review relies heavily on secondary source material and interviews with **recognized** youth experts. Fortunately, several excellent reports have been completed recently that summarize the state of knowledge in the field. This paper is not intended to provide an exhaustive literature review, but we think it presents a fair representation of the current collective wisdom about at-risk youth and service approaches.

First, we examine current **definitions** of “adolescence” and “risk.” in the latter case exploring their implications for identifying youth who might need services. Second, we **summarize** research on the prevalence of **specific** behaviors or outcomes that generally define the youth of interest, with particular focus on prevalence among **10- to’ 15-year-olds** where the data are available. **Next**, we look at traditional services for youth, which have tended to function through single-focus programs within single organizational systems such as education, corrections, or mental health. Finally, we examine the impetus for a more comprehensive and integrated approach to service delivery, and some of the issues involved in developing and providing such services for youth aged 10 to 15.

ADOLESCENCE

While the start of adolescence is most frequently identified as puberty, the end of adolescence is less clearly defined. Some experts and organizations are beginning to increase the upper age limit to 24 years (World Health Organization 1986).

Currently, American adolescents may cover the age range from 10 years to 19 years,

although females typically mature earlier than males (Tanner 1972). The end of adolescence is typically marked by milestones in cognitive and emotional development as well as socioeconomic independence (World Health Organization 1986).

There is an increasing tendency to view adolescence as comprising two relatively distinct periods: “early adolescence” and “late adolescence.” Early adolescence includes most pubertal change and roughly corresponds to the middle school or junior high school years (typically ages 10 to 15), while late adolescence includes the age range from 16 through 19 years (Santrock 1991). Although research results may not apply to adolescents of all ages many studies do not provide separate breakdowns for the two age groupings (Hamburg and Takanishi 1989). When reports do make such a distinction, it is frequently not consistent: sometimes the cut-off age between early and late adolescence is 14, sometimes it is 15.

Adolescence involves the task of forming a sense of identity accompanied by a cohesive set of personal values (Erickson 1968). During early adolescence, the young person forms a separate identity by negotiating relationships with parents and peers. This often happens at the same time that rapid physical changes are occurring. During the apex of the pubertal growth spurt, occurring among most early adolescents between the ages of 13 and 15 (Steinberg 1981), many adolescents experience increasing conflict between themselves and their parents. The appearance of such conflict during this period and its subsequent waning during late adolescence have caused many theorists to view adolescence as a time of “storm and stress” (Ross 1972). In fact, it was previously believed that identity formation was facilitated by the child breaking the parent-child bond during this period of stress (Grotevant and Cooper 1986). However, more recent evidence supports the view of adolescence as a gradual renegotiation of the parent-adolescent relationship (White, Speisman, and Costos 1983; Youniss and Smollar 1985). Adolescents are now viewed as

transforming rather than abandoning their relationship with their parents while becoming more closely connected to a peer group (**Youniss** and Ketterlinus 1987). Adolescents generally need and want adult support when they are faced with important decisions, issues, or choices (**W.T. Grant Foundation** 1988).

Widespread generalizations about the **existence** of a “generation gap” between “most” adolescents and adults have been fueled primarily by **information** about a limited number of individuals (**Adelson** 1979). Surveys have reported that there are actually few or no differences between the attitudes of adolescents and their parents on issues such as self-control, hard work, the law, long-term planning, and expectations for quality of life (**Yankelovich** 1974). An important theme **in** this paper is that young adolescents do not comprise a homogeneous group, whose members are all at equally high risk for problem behaviors. As we shall see, levels of risk appear to be mediated by a set of environmental and individual antecedents that condition the nature of the relationship between risk status and negative outcomes.

Although adolescence often involves some degree of experimentation, most adolescents experiment by trying out a variety of positive work and recreational identities before making a commitment to **vocations**, a career choice, or a given set of values (Marcia 1987). The development of a firm sense of identity during adolescence forms the groundwork for success as a fully-integrated member of society, which means being productive in work, meeting **commitments** to **family** and **friends**, and assuming the responsibilities of citizenship (Office of Technology Assessment 199 1).

Some adolescents may experiment with negative role identities involving such **risky** behaviors as gang membership, criminal and violent acts, early unprotected sexual intercourse, drug or alcohol abuse, and truancy from school. For those who do engage **in** risky behaviors, some still manage to become productive and successful adults, **while** others remain marginal members of society and become mired in welfare

dependency, low levels of employability, drug addiction, and/or criminal and violent behavior. It is obviously important to be able to **identify** adolescents at **varying** levels of risk before problems become serious.

THE MEANING OF RISK

In this section we discuss the development of the risk concept and different definitions of the term. Then we integrate the **findings** of the empirical literature into a proposed model for defining **different** levels of risk among young adolescents.

Three important trends in child development and prevention theory within the past **fifteen** years have contributed to the current interest in **definitions** of youth at risk. First, there has been acceptance and strong empirical support for “ecological theories” of human development since Bronfenbrenner published his comprehensive model for portraying the environment’s role in child and adolescent development (Bronfenbrenner 1979). New empirical evidence substantiates the influence of family processes, the peer group, social supports and community resources, neighborhood safety and quality of life, as well as the larger key social institutions affecting development such as the school, on the individual’s development (Kreppner and Lemer 1989).

Second, findings from early intervention research conducted over the past ten years have also influenced current definitions of risk. Research from the Perry Preschool Project (Berrueta-Clement et al. 1984) and the Yale Early Intervention Project (Seitz, Rosenbaum, and Apfel 1985) shows that early childhood interventions are able to reduce the negative effects of poverty and disadvantage on children’s school and social competencies, producing impacts still measurable after ten to twenty years. Broadly stated, these results suggest that the value of prevention extends well beyond the childhood years.

Finally, the last five years have seen a shift toward viewing **specific** problems of adolescence--delinquency, substance abuse, **pregnancy** or parenthood, and school failure--as having common, rather than distinct, antecedent causes (Dryfoos 1990).

These three factors--the ecological movement in **child** development, early intervention research, and the overlap between risk factors for problems of adolescence--have made people think more about assessing level of risk for future problems.

Competing Definitions of "**Risk**"

We now consider the various definitions of risk that have appeared in the **literature**. **Risk** implies probability, **not** certainty, that a youth will display problems, **implicit** in defining risk is the attempt to predict the future course of events **in** a young person's life. At the same time, a **definition** of risk must effectively identify those who are most likely to benefit from programs, services, or **interventions**. **This is** especially important when planning services during times of budgetary cutbacks, to make the most out of scarce resources.

Exhibit 1 summarizes the various definitions of risk found in the literature and discusses their advantages and disadvantages for the delivery of services to youth at risk. The differences among **definitions** are often a matter of emphasis on particular aspects of risk, rather than being completely **incompatible**.

. The first row of Exhibit 1 represents risk definitions which rely on personal characteristics and aspects of an individual's background to predict the likelihood of a future occurrence of negative behaviors and outcomes. These **definitions** focus on a single type of negative behavior--e.g., they **try** to predict substance abuse, **or** too-early-childbearing, **or** school dropout, **or** delinquent behavior, but not their co-occurrence and not "at least one of the above." This type of risk definition has long been popular,

EXHIBIT 1: SUMMARY OF ALTERNATIVE DEFINITIONS OF RISK

Definition	Issues	Advantages for Service Delivery	Disadvantages for Service Delivery
<p>Presence of Antecedents/Markers: The likelihood that an adolescent will develop one specific problem. If s/he possesses the key predictor variables.</p>	<p>Attempts only to predict youth involvement in a single outcome/negative behavior.</p>	<p>Relevant to traditional single-issue programs.</p>	<p>Will target more youth than will actually develop problems: focus on single problem may mean ignoring the likelihood that the same antecedents also may lead to other problems.</p>
<p>Presence of Negative Behaviors: Assess risk according to problem behaviors that are already exhibited.</p>	<p>May imply "risk" of continuing or expanding negative behaviors or outcomes in the future, but is not truly a definition of "risk," in that the behavior has already occurred with certainty. Tends to ignore the importance of environmental influences in its approach to treatment or prevention, which may lead to punishing 'bad' youth rather than helping to change the context facilitating problem behaviors.</p>	<p>Services are provided to those with actual negative behaviors; are not "wasted" on those not experiencing problems.</p>	<p>By the time youth identified as high risk, more intensive and expensive treatment is required than the interventions offered by preventive programs.</p>
<p>Dryfoos (1990) extends risk definition based on actual behavior, estimating number and proportion of youth exhibiting <u>one or more</u> negative behaviors, and their level of risk.</p>	<p>The estimates are "synthetic," combining figures from the empirical literature, and include a high degree of inference. The studies from which she draws data were not designed to estimate the degree of overlap in problem behaviors and research specifically measuring overlap has not been done.</p>	<p>Broadens focus beyond single problems. Could provide more precise screening to determine levels of risk regardless of which specific behaviors might appear, and allocate services accordingly. Would improve efficiency of service delivery system and reduce "service gaps."</p>	<p>Some youth not easily classified, and some may be misclassified, increasing possibility that they will not receive needed services. May not improve comprehensiveness or SI efforts, even though risk estimate uses information about several problem behaviors.</p>
<p>Living in Risky Environment: Youth are not at risk because they engage in "risky behavior," but are thought of instead as "youth in risky situations or environments" (Takanishi 1992).</p>	<p>Focuses on environmental antecedents to negative behaviors and outcomes, but may target many more children as "at risk" than ever actually participate in undesirable activities. In so doing, may not target those at greatest risk or providing varying levels of services where they are most needed. Overlooks fact that some youth in even the worst neighborhoods manage to avoid problem behaviors.</p>	<p>Does not "blame" individuals; allows services to focus on changing underlying conditions rather than just addressing symptoms. Promotes more inclusive view of adolescent problems and use of broader range of services. May generate broader approaches to help, beyond traditional "treatments."</p>	<p>May create labeling effects--treating all youth from certain neighborhoods as "bad," ignoring needs of kids in other neighborhoods and not supporting positive behaviors in neighborhoods considered high risk.</p>

as has the tendency to focus on one **negative** behavior at a time. Most of the models developed from this type of risk definition do not have strong predictive power: they have not been able to identify a set of prior conditions that lead to **specific** outcomes with a level of precision **sufficient** to support programmatic decisions. Traditional, single-issue programs have frequently used this definition as a rationale for their program focus and the lack of precision in the **definition** affects the **efficiency** of these service delivery efforts to target those youth at varying levels of **risk**.

The second row of Exhibit 1 represents definitions that assess “risk” on the basis of problem behaviors in which youth already engage. As a definition of **risk**, this approach is weak because we know with certainty that the behavior has happened. Further, by the time youth are identified by this type of **definition** as “high risk,” they are beyond the point of needing simple **prevention** interventions. Programs will have to offer more intensive treatment, often with less hope of averting **continuation** of the behaviors and their consequences in the future.

A variant and extension of the “risk is defined by **behaviors**” approach is one that attempts to estimate the joint **probability** that youth will engage in at least one negative behavior or experience at least one negative outcome. **Dryfoos** (1990) is the most recent practitioner and synthesizer of this approach. She argues that because problem behaviors share common antecedent characteristics, all of these problem behaviors of youth are probably interrelated. Therefore **different** levels of risk can be defined according to the number and seriousness of multiple problem behaviors that a youth exhibits (e.g., school failure, substance abuse, delinquency, or pregnancy). She **estimates** that 25 percent of the adolescent population aged 10 to 17 may be considered to be at “high” risk for developing one or more of these problem behaviors. Another 25 percent are estimated to be at moderate risk and the remaining 50 **percent of adolescents** are considered to be at “low” risk. Unfortunately, these estimates of

risk are flawed due to the methodological problems of the research used to create them. Generally, research does not specifically test the hypothesized overlap or co-occurrence of behaviors: since the research studies used as support were not designed to do so, results may be misinterpreted (Takanishi 1992).

The final row of Exhibit 1 represents definitions that emphasize the environment that surrounds the youth, rather than the youth's behavior per se. For these definitions, youth are at risk because they live in "risky situations or environments," not because they engage in "risky behavior" (Takanishi 1992). Living in dangerous neighborhoods, in inadequate housing, with negative role models from peers and adults, without sufficient parental support and monitoring, and with few opportunities for future employment, predisposes an adolescent to engage in those behaviors that place him/her at risk of developing serious negative consequences (Schorr and Schorr 1988; Primm-Brown 1992; National Network of Runaway and Youth Services 1991). This definition offers a compelling counterpoint to definitions of risk based on individual behavior, and suggests intervention strategies that target whole neighborhoods with massive prevention efforts. Interventions based on an environmental strategy will certainly reach many more neighborhood children than those who actually participate in negative activities. But that is the balancing act that programs face in deciding on their mix of prevention and treatment strategies. A final difficulty with the "risky environment" approach to defining risk is its potential for labeling all children in a neighborhood with a single stereotype. Officials may expect children from certain neighborhoods to misbehave or to fail, and may adjust their behavior and expectations accordingly, thereby creating the outcome they were trying to avoid. Adolescents may accept the label and participate more fully in the peer culture surrounding the display of abnormal behavior (Goffman 1961). Finally, the ecological viewpoint downplays the fact that many risk factors and problem behaviors

can be found among people of all income levels and communities and overlooks the fact that some youth from even the worst neighborhoods manage to avoid problem behaviors. Research documents the existence of factors promoting resilience in children exposed to substantial environmental risk, including: having personal characteristics such as higher intelligence, personal charm or optimism, being first-born, coming from smaller families with better birth spacing, having a supportive relationship with a caring adult (not necessarily a parent), and having access to social support outside the immediate family (Garmezy, Masten and Tellegen 1984; Mulvey, Arthur, and Reppucci 1990; Rutter 1979; Werner 1986, 1988; West 1977; West and Farrington 1973).

The different approaches to defining at-risk youth presented above are not incompatible. Youth who engage in multiple problem behaviors are more likely to come from environments that place them at greater risk. An emergent perspective focuses on “health” defined broadly to encompass mental and social as well as physical aspects (Office of Technology Assessment 1991). According to this view, environments or behaviors are “high risk” because they have serious health consequences, which include anything preventing the individual from becoming a fully functioning member of society. Factors in the youth’s family, school, community, and larger societal environment that influence his or her physical, mental and social health lead to greater or lesser degrees of risk for developing problems (Office of Technology Assessment 1991). This more complete and integrated perspective for assessing risk reflects the nature of the paradigm shift away from single-problem views of adolescence and serves as an organizing principle for our proposed model of defining risk in adolescence.

A Conceptual Framework for Defining Risk

The definition of risk requires a model that integrates the assumptions about cause and effect and the nature of the associations between environment, individual behavior, and health outcomes. We propose a conceptual framework that synthesizes the diverse literature on adolescent development, problems of adolescence, and theories of prevention. This framework takes into account the common antecedents of many adolescent problems. It allows for an assessment of risk geared **specifically** to young adolescents, which emphasizes the early signs of dysfunction rather than the onset of negative or destructive consequences.

The risk **definition** that we propose consists of four components--risk antecedents, risk markers, problem behaviors, and outcomes--and can be stated as follows:

The presence of negative antecedent conditions (risky environments) which create **vulnerabilities**, combined with the presence of specific negative behaviors, **define** a youth's level of risk for incurring more serious consequences (risk outcomes). Early indicators of risk may be found in **risk** markers--indicators available from public records that signal risk.

Exhibit 2 presents a schematic representation of the risk model, whose four components are:

- **Risk antecedents:** Those environmental forces that have a negative impact on the developing individual by producing an increased **vulnerability** to future problems in the family, school, or community. Based on our review of the literature, there appear to be three critical risk antecedents for early adolescents: poverty, neighborhood environment, and family environment.
- **Risk markers:** These are visible indicators of **behavior**, in public records. Previous research suggests a consistent relationship between these behaviors and risk antecedents, and a well-defined link with increased vulnerability and the onset of potentially negative behavior. We have selected two indicators that are consistently **identified** as markers for all problem behaviors of adolescence: poor school performance and involvement with child protective services, including out-of-home placement in the foster care system. These two have particular policy relevance because they can be observed in the records of public systems, and allow program planners to target the youth at greatest risk.

**EXHIBIT 2: RISK ANTECEDENTS,
MARKERS, BEHAVIORS. AND OUTCOMES**

ANTECEDENTS

SYSTEM MARKERS

PROBLEM BEHAVIORS

POVERTY

POOR SCHOOL PERFORMANCE

EARLY SEXUAL BEHAVIOR

NEIGHBORHOOD

TRUANCY

**CHILD PROTECTION/OUT OF
HOME PLACEMENT**

**USE OF TOBACCO. ALCOHOL,
OTHER DRUGS**

FAMILY DYSFUNCTION

**RUNNING AWAY FROM HOME.
FOSTER HOME**

**ASSOCIATING WITH DELINQUENT
PEERS**

EXHIBIT 2.2, continued
RISK ANTECEDENTS, MARKERS,
BEHAVIORS, MD OUTCOMES

OUTCOMES

Pregnancy, too-early parenthood, poor pregnancy outcomes

Homelessness

Prostitution

Abuse of or addiction to alcohol or other drugs, and associated health problems

Sexually-transmitted diseases, including chlamydia and AIDS

Dropping out of school, poor credentials for economic self-sufficiency

Commission of felonies

Low self-esteem, depression, suicidal thoughts, attempts, and suicide itself

EXHIBIT 2.2, continued
RISK ANTECEDENTS, MARKERS,
BEHAVIORS, MD OUTCOMES

OUTCOMES, continued

Physical abuse, battering

Sexual abuse, rape, incest

Death or permanent injury from guns, knives, and other violent behavior, automobile accidents, other accidents

Other morbidity/mortality outcomes (e.g., hepatitis, tuberculosis, pneumonia, AIDS complications)

- **Problem behaviors: These are defined** as activities that have the potential to hurt youth, the community, or both. Research has identified these behaviors as those most likely to occur in youth who, earlier, displayed risk markers, or who were living under risk antecedent conditions. We have chosen those behaviors that have most consistently been identified in the literature as **signalling** potentially more serious consequences for youth in the future, including: early initiation and practice of sexual behavior, truancy or absenting from school, **running** away from home (or from an out-of-home placement), early use of tobacco, alcohol, and other drugs, and associating with delinquent peers.
- **Risk outcomes: These** are clearly injurious conditions that have negative consequences for a youth's future development as a responsible, **self-sufficient** adult. The risk outcomes of primary concern include teenage pregnancy/parenthood, homelessness, involvement in prostitution, alcoholism and/or drug abuse, delinquency and criminal behavior, school dropout, AIDS, chlamydia and other sexually-transmitted diseases, physical and sexual abuse, and various morbidity and mortality conditions [hepatitis, tuberculosis, pneumonia, accidents, suicide, homicide).

At minimum, we would consider a young adolescent to be at "**high risk**" if he/she grew up under any of the antecedent risk conditions and is currently displaying *one or* more of the risk markers. "Moderate Risk" would be assigned to those youth who are either living under any of the antecedent conditions or are currently displaying one or more of the risk markers. "Low risk" would be assigned to those young adolescents who are not living in negative antecedent conditions and who are not displaying those negative behaviors which are risk markers. This definition of risk is specifically geared towards the younger age group of adolescents, from 10 to 15 years of age, because it relies on early markers of risk, which are more likely to be evident among this age group than serious negative outcomes, and which should be the focus of prevention efforts. Of course, treatment efforts should be addressed to any **10-15-year-olds** who already exhibit serious risk behaviors or experience negative outcomes.

A number of caveats about the model are required. First, the model is not strictly causal due to the state of the art in the research literature. Although elements

to the left in Exhibit 2 are generally associated **with** elements further to the right, the actual causal linkages are not well understood.’ Further, the model represents an over-simplification of the links between constructs, mainly because the research literature has tended to use relatively blunt analytic tools that fail to capture the **complexity** and **multi-dimensionality** of reality. Given further research findings using advanced modeling techniques, we will undoubtedly **find** that the causal linkages are complex and multi-determined. The model is meant to reflect the prevailing view in the literature to date suggesting a confluence of factors, including increased vulnerability, multiple causation, and the transaction between the environment and the individual (Sameroff and Fiese 1989).

PREVALENCE OF RISE ANTECEDENTS, **MARKERS**, BEHAVIORS AND OUTCOMES AMONG **10- TO 15-YEAR-OLD** ADOLESCENTS

Estimates of the prevalence of at-risk youth in the population of 10 to **15-year-**olds using the above **definition** of risk (all four elements) would ideally be based on data revealing how many youth experienced each problem **behavior** or **risk** outcome. No single source has **evaluated** the prevalence of the entire range of possible problem behaviors among adolescents, the covariation among problems, or the likelihood of outcomes arising from specific behaviors (**Office** of Technology Assessment 1991). In fact, although we have dealt separately with problem behaviors and risk outcomes, as requested by ASPE, the elements in these two categories are frequently confused or confounded in the literature. The most methodologically sound prevalence estimates come from studies of individual problem behaviors and health problems. However, few studies properly disaggregate the young adolescent (10 to 15 years old) from the older adolescent (16 to 19 years old) sub-groups. Dryfoos (1990) provides some of the best sources of data on the individual problems of adolescence, separately for early

and late adolescence. Yet, most of the studies she reports used more common age groupings of **10-14** and 15-19 years, which makes it difficult to arrive at good estimates for the **10- 15** age range specified by ASPE. The following discussion gives the prevalence of various problems among youth, with particular emphasis on those aged 10 to 15 **if available**, and for 10 to 14 year-olds in most instances.

Prevalence of Risk Antecedents for Young Adolescents

There is general agreement that at least one of **two** underlying living conditions are common to most adolescent problem behaviors: poverty and family dysfunction. Further, when neighborhoods are characterized by very high poverty rates (underclass neighborhoods), the neighborhood itself contributes to the risk that youth will experience harmful outcomes. These factors are considered antecedents because they exist **prior** to problem behaviors or negative outcomes in any given youth, and there is empirical support for their value in predicting youth problems. Many researchers have **identified** clusters of adolescent high risk behaviors which appear to stem from a complex interplay of multiple antecedent factors (**Botvin** 1985). This view is also consistent with the literature on the origins of developmental psychopathology (Sroufe and Rutter 1984), as well as the transactional model of development in which the child and the environment mutually influence developmental outcomes (Sameroff and **Fiese** 1989). Thus, the same outcomes may arise from different combinations of risk factors: one cannot predict risk without **considering** both the individual and the environment with which the individual interacts.

Poverty

The **official** government **definition** of poverty is based on cash income levels for families of different sizes. It was established in the mid- 1960s to reflect household

spending patterns prevailing at that time, and has not been modified substantially since then (National Academy of Sciences 1988). The definition of poverty has been the subject of numerous congressional hearings and reports and there are many issues related to equity, subsistence living and the effects of federal welfare assistance on family poverty (National Academy of Sciences 1988; Ruggles 1990). The Federal poverty level is determined as the minimum amount of money required for basic living needs by households of different sizes. In 1992 this level was set at \$11,280 for a family of three (U.S. House of Representatives, Committee on Ways and Means 1992).

We consider two federally-defined groups in poverty: poor and near-poor. Poor families are those whose income falls below the Federal poverty level. Near-poor families are those whose income falls between 100 and 149 percent of the poverty level (Office of Technology Assessment 1991). According to data from the March 1989 Current Population Survey (U.S. Department of Commerce, Bureau of the Census 1989), 26.7 percent of all American youth aged 10 through 18 in 1988 lived in poor or near-poor families. About 17 percent lived in poor families (defined as having an income below the Federal poverty level), and another 10 percent lived in near-poor families (U.S. Department of Commerce, Bureau of the Census 1989). Thus, in 1988 about 8.27 million youth lived in poverty, with 5.3 million living in poor families and 3.0 million living in near-poor families (U.S. Department of Commerce, Bureau of the Census 1989).

According to the March 1989 Current Population Survey, certain groups of racial and ethnic minority youth are more likely than white, non-Hispanic youth to be living in poor or near-poor families. In 1988, 17.3 percent of white youth lived in poor or near-poor families, compared with 52.1 percent of African-American youth, 49 percent of Hispanic youth, 32 percent of Asian youth and 51 percent of American Indian and Alaskan Native youth (U.S. Department of Commerce, Bureau of the

Census 1989). in addition, some parts of the country have a higher percentage of youth living **in** poor or near-poor families compared with other parts of the country. The South, comprised of states stretching **from** Delaware south along the Eastern and Gulf coastlines to Texas. as well as Arkansas, Oklahoma, Tennessee, Kentucky and West Virginia, has a higher percentage of youth living in poor or near-poor **families** compared with the West (comprised of West coast and Rocky Mountain states as well as Alaska, Arizona, New Mexico and Idaho) or North (comprised of Northeastern, North-Central and some Mid-western states). Compared with 26.4 percent of youth in the West and 22.9 of youth in the North who live in poor or near-poor families, 31.7 percent of youth in the South live in these families (Kronick 1990). Since these numbers are based on the **official definition** of poverty, they do not take into account variations in the cost of living across regions or between urban, suburban and rural areas within regions. Differences in the cost of living are **substantial** across these locales and should be considered when interpreting the actual impact of living in a poor or near-poor family. Despite the stereotype of poverty being a predominantly inner-city problem, a substantial percentage of poor families with **children** live in rural (30 percent **in** 1987) or suburban (28 percent in 1987) areas (Bane and Ellwood 1989). Even among poor African-Americans, the **income-ethnicity** group **most** likely to live **in** a ghetto poverty area (defined as 40 percent poverty or higher). only one in five actually live in such a neighborhood. Among all poor Americans, only 9 percent **live** in a ghetto poverty area (**Jargowsky** and Bane 1990).

Youth living in female-headed families are at much greater risk of being poor or near-poor than youth living with both parents or those living with their father only (Bane and Ellwood 1989). In 1988. almost two-thirds of youth aged **10 to 18 living** in mother -headed families were in families whose incomes fell below 150 percent of the poverty level, compared with only one-quarter of youth **in** father-only families and 15

percent of youth from two-parent households (U.S. Bureau of the Census 1989). The **Office** of Technology Assessment report (**Office of Technology Assessment 199 1**) concludes that poverty among female-headed families without fathers reflects the vulnerability of having only one parent, usually a mother who is a low-wage earner, as the sole source of economic support. These families are more likely to endure persistent and chronic poverty than are poor two-parent families, for whom poverty tends to be more short-lived and cyclic.

Female youth who bear children out of wedlock run the greatest risk of living in poverty for many years. In 1989, **67.2** percent of births to **15-** 19 year old girls in the United States occurred out-of-wedlock (**National** Center for Health Statistics 1991). However, this does not necessarily suggest that children who grow up in **welfare-**dependent families will become dependent upon public assistance as adults. One study, **using** 1984 Census data, reported that 42 percent of African-American females and 27 percent of white females growing up in highly welfare-dependent families did not receive any welfare between the ages of 24 and 30 (U.S. Congress, House of Representatives, Committee on Ways and Means 1990). High welfare dependency was defined as reliance on welfare for at least 25 percent of the average family income in the years when at least one child was between the ages of 10 and 17. According to this study, only 19 percent of African-American daughters and 26 percent of white daughters in highly welfare-dependent families became highly welfare-dependent themselves.

There are a variety of health and behavioral consequences for youth **living in** poor or near-poor families which increases their risk for problems. According to the 1988 National Health Interview Survey (**NHIS**), youth in families with **incomes** under \$10,000 are less likely to report their health as excellent than were youth from **nonpoor** families. Of 10- to 14-year-olds living in families with incomes of \$10,000 or

less, 35.8 percent are in excellent health compared with 64.4 percent of **10- to 14-** year-olds living in families with incomes of \$35,000 or more (U.S. Department of Health and Human Services, Centers for Disease Control 1990). Youth living in poor families are more likely to lose days from school due to illness or injury, thereby affecting their school performance. According to 1988 NHIS data, **10- to 14-year-olds** in families with incomes of \$10,000 or less lost an average of 6.7 days due to illness or injury, compared with an average of 4.2 days lost among **10-** to 14-year-olds in families with incomes of \$35,000 or more (U.S. Department of Health and Human Services, Centers for Disease Control 1990). Finally, living in poverty is associated with an increased likelihood of early sexual activity and teenage pregnancy (Moore, **Stimms** and Betsey 1986), although the reasons are not clear. Poor youth are less likely to use some form of contraception at first intercourse or to continue using contraception (Hogan, **Astone** and Ktagawa 1985; Emans, Grace, Woods et al. 1987). Youth living in poverty who become pregnant are less likely to have an abortion or to give their child up for adoption, compared with youth from less disadvantaged backgrounds (National Academy of Sciences 1989).

Neighborhood

Some research documents the effect of neighborhood on youth outcomes, in addition to the influence of their family's poverty or dysfunction. Youth living in poverty are more likely to live in neighborhoods with inadequate schools (Gibbs et al. **1988**). Some of these youth have to drop out of school because of family economic problems, academic **difficulties**, disciplinary problems or pregnancy (Gibbs et al. 1988; U.S. Department of Health and Human Services, Centers for Disease Control 1990). Further, a poor youth living in a poor inner-city area is at increased risk of being a victim of crime (Gibbs et al. 1988).

Much recent research and thinking about “the underclass” is premised on the assumption that the concentration of poverty in central cities has created a situation that is a cultural and behavioral phenomenon as well as an economic one (Jargowsky and Bane 1990: Ricketts and Sawhill 1988: Wilson 1987. “Underclass” areas are characterized by high levels of many social problems including family dysfunction, high unemployment, and high welfare receipt. Some of the social problems associated with these areas are those affecting youth--high rates of school dropout, teenage unemployment, and teenage pregnancy and out-of-wedlock childbearing. Neighborhood effects may operate through peer example, influence, and opportunity structures. Relatively high proportions of youth in these neighborhoods (and often adults as well) are involved in problem behaviors and experience negative outcomes. They may serve as role models, or as sources of pressure on youth to participate. At a minimum, more youth in these areas are exposed to the opportunity to participate in problem behaviors without having to look very far to find them.

Family Dysfunction and Lack of Parent Support/Involvement

Empirical research from an ecological model of development has consistently shown the importance of parental support and involvement as a critical mediator of child and adolescent development. The parent-child relationship provides the necessary structure for a child’s social and intellectual development, including emotional support, modeling of socially appropriate behaviors, methods for dealing with conflict, and enhancing the child’s intrinsic motivation to learn (Belsky 1981). However, parental behavior can have negative effects, such as when parents are chemically dependent, neglectful, or abusive. Parents also exert an indirect influence through their behavior within the marital relationship, their relationships with other children in the family, their extra-familial relationships (relatives and acquaintances),

and their interactions with societal institutions such as work and school (Bronfenbrenner 1979). In addition, greater attention is now accorded to the role of fathers in the family and how their roles, while different, complement the roles of mothers (Lamb 1981). Clearly, parents can serve as either positive or negative behavioral role models and transmitters of values and information,

Negative parental role models arise in families that are marked by dysfunction. However, dysfunction is a **difficult** term to **define**. What may be considered dysfunctional from an objective **point** of view (that is, when goals for individual growth are compromised), may be functional for the system because it maintains the existing state of equilibrium. For example, the family's **scapegoating** of a particular child is functional because it diverts their attention (and anxiety) away from the underlying, tension-producing problem, such as a poor marital relationship (Kaye 1984). From the perspective of family "processes," dysfunction is **defined** as the **inability** of the family to adapt to change, combined with **insufficient** levels of closeness or cohesion between family members (Olson et al. 1983). Based on a **summary** of family process literature, dysfunctional families are characterized by one or more of the following conditions: a) emotional ties between family members tend to be absent; b) family members tend to be either disconnected from each other or are over-involved with each other; c) there are predominantly indirect and unclear communication patterns among family members, and; d) the power or control hierarchies within the family often do not reside with the parents (Oliveri and Reiss 1981; Moos and Moos 1976; Epstein et al. 1982; Minuchin 1977). Family dysfunction has been linked **empirically** to adolescent problem behaviors in many studies (Patterson, as cited in Kumpfer 1989; Sroufe and Rutter 1984). Some parenting "styles" appear more likely to occur in dysfunctional families. "Authoritarian" parents are hostile, rejecting, strict and **punitive**, whereas "laissez-faire" parents are over-indulgent, permissive or **neglecting**.

Both patterns are associated with adolescents who are less competent socially, have lower levels of self-esteem, and are more likely to display **negative** behaviors (Baumrind 1991). Conversely, parents who are “authoritative” and “democratic” are both responsive to the needs of their adolescent yet also expect high levels of responsibility and mature behavior. They are caring, supportive and ‘maintain an appropriate ratio of the child’s autonomy to parental control at all ages” (Baumrind 1991). Children of these parents are more socially competent, responsible, mature and independent, compared with those who experience the less optimal parenting types.

• Population- or survey-based data are not available to provide estimates on the levels of parental involvement and support or overall family dysfunction in **families** with young adolescents. Typically, the “symptoms” of family dysfunction are often what brings a particular adolescent or family to the attention of social and community service agencies, including the juvenile authorities, courts, treatment agencies, shelters, and child protective services. Thus an operational definition of **family** dysfunction would include the above “process” elements but would emphasize the symptoms of inability to meet the physical, social, and emotional needs of the children. One method of estimating the prevalence of these problems is through data available on several indicators of dysfunction: parental substance-abuse, family violence, and adolescent maltreatment. While these estimates do not count all of those affected by the antecedent risk conditions, reliable data are available upon which to estimate those youth and families at the greatest risk.

In 1988, there were 28 million children of **alcoholics**, 25 percent of **whom**, or approximately 7 million, were under the age of 18 (Office for Substance Abuse Prevention 1989). In a 1987 Gallup poll cited in the same report, it was estimated that one in four American families have been affected by alcohol-related family

problems, not **including** families in which parents abuse other drugs. There do not appear to be firm estimates for the number of young adolescents living in families where one or both parents are substance abusers. Below, we discuss the research linking parental substance abuse with a host of problems and **difficulties** encountered by their children, including greater likelihood of using alcohol or drugs at an earlier age. The specific mechanisms underlying these links have not been explicated in the literature, but probably involve a combination of inherited biological predispositions plus environmental factors related to living with substance-abusing parents (Office of Technology Assessment 199 1).

Alcoholism and abuse of illicit drugs by an adolescent's parents or siblings have been shown to significantly increase an adolescent's vulnerability to becoming an alcohol or drug abuser (Springer et al. 1992; Thorne and **DeBlasse** 1985). Some research suggests that sons of alcoholic fathers may have up to a nine **times** greater probability of becoming alcoholics than sons of nonalcoholic fathers (Bohman, Sigvardsson and Cloninger 198 1; Cloninger, Bohman and Sigvardsson 198 1). Three potential avenues predicting greater likelihood of substance use among adolescents have been consistently posited in the literature: parental drug use, parental attitudes about drugs, and, parent-child interactions (Kandel 1980). Parents who abuse alcohol or other drugs spend less **time** with their children and spend less time positively **reinforcing** their children for good behaviors (**Kumpfer** 1989). These households are disorganized and have poorly **defined** rules or inconsistent, ineffective family management techniques (Kandel 1980), including unexplainable swings between affection and anger or rejection (Robinson 1989). In addition, there is also a greater risk for family violence in families with alcoholic parents, due to the parents' failure to deal effectively with child discipline, which "sets into motion coercive interaction sequences that are the basis for training in aggression" (Patterson 1986. cited in

Kumpfer 1989). The lack of parental supervision and training in appropriate behavior often results in poor home and school behaviors and social isolation. Under these circumstances, some children may resort to chemical substances or alcohol to dull their distress, especially if such substances are readily available as they are in **homes** where the parents are substance abusers (**Kumpfer** 1989). **Additionally**, a variety of specific psychosocial problems including anxiety, phobias, insecurity, nightmares, depression, somatic ailments, sleep disturbances, asthma, allergies, and **enuresis** occur at higher rates among children in families affected by chemical abuse [Springer et al. 1992). It has been hypothesized that the prevalence of these problems may be one explanation for the finding that children in substance-abusing **families** have lower IQ scores and deficient school performance (**Woodside** 1988). In general, the family conditions which serve as antecedent risk factors for young adolescents include lack of closeness, lack of maternal involvement in the activities of children, lack of or inconsistent parental discipline, and low parent educational aspirations for the children (Springer et al. 1992: **Dryfoos** 1990).

Family violence includes violence between the parents, between parents and children, and violence between siblings. Violent families are differentiated from non-violent families primarily by the way in which they handle the 5 to 10 percent of parent-child interactions that are **conflictual** and negative. Reid (1986) reports that **non-violent** families are able to terminate these types of interactions quickly, but **violent** families are unable to do so, which leads to an escalation of the conflict. Straus and Gelles (1986) asked adults in two national probability **samples whether** different types of violent behavior occurred among family members as they were growing up. Their results indicate that all forms of parental violence against children **aged 3 to 17** years remained relatively stable from 1975 to 1985 at 6.2 per 1,000, with a prevalence rate for child physical abuse of 2 to 4 percent of the population ages 17

years or under. The 1979 and 1986 National Incidence Studies of **Child** Abuse and Neglect, conducted by **Westat** for the National Center on **Child** Abuse and **Neglect**, analyzed **child** maltreatment cases known to **community** agencies by various **age** groupings. In 1979, there were 11 cases per 1,000 children 9 to 11 years old, 12 cases per 1,000 children 12 to 14 years old, and 14 cases per 1,000 **children** 15 to 17 years old (National Center on Child Abuse and **Neglect** 1980). In 1986, the rates of **child** maltreatment among these age groups increased to 15 cases per 1,000 children 9 to 11 years old, 23 cases per 1,000, children 12 to 14 years old, and 28 cases per 1,000 children 15 to 17 years old (**National** Center on Child Abuse and Neglect 1988).

The apparent increase in the reported rates of **child** maltreatment in these two National Incidence Studies may be due to differences in the **definition** of maltreatment used by the study. In the 1979 survey, maltreatment was defined as “demonstrable harm due to maltreatment,” whereas, in 1986 the **definition** of maltreatment included instances where “a child’s health or safety is seriously endangered.” These **definitions** were designed to provide the most accurate **estimates** of reported **child** maltreatment cases collecting data on incidents of maltreatment from Child Protective Services (CPS) agency workers and from “sentinels” in **public** agencies, such as schools, hospitals, and social service agencies. In fact, the first National Incidence Study found that **two-thirds** of **all** cases had not been reported to a CPS agency.

The 1986 National Incidence Study **also** reported **differences** in the proportion of **child** maltreatment cases which involved psychological versus physical abuse (National Center for Child Abuse and Neglect 1986). Psychological abuse includes behaviors that consistently undermine a person’s sense of self-esteem, competence, **attractiveness**, self-worth, or physical safety. Examples **include** constantly **telling** a child he/she is no good, can’t do anything right, is too **stupid** to **live**, will **never** amount to anything, is very **ugly**, deserves to have the **___** kicked out of him/her, the

parent wishes the child had never been born, routinely calling the child bad names, and denigrating anything the child does or **says**. Psychological abuse was more common among adolescents ages 12 and over than among children under **12** years. This form of abuse accounted for 32 percent of **child** maltreatment cases **12** years of age or older compared with 25 percent of cases under 12 years of **age**. **Physical** abuse, on the other hand, was more common among children 11 years of age and under than among adolescents 12 years and older, accounting for 52 percent of reported cases under 12 years, compared with 42 percent of cases among adolescents 12 years of age or older. There are also some gender **differences** in adolescent maltreatment rates, with females more **likely** to be abused as adolescents whereas males were more **likely** to suffer abuse as **children** (National Center for **Child** Abuse and Neglect 1986).

Dysfunctional **family** processes are strongly predictive of adolescent maltreatment in many studies. In general, families at high risk for adolescent maltreatment are reported to show poor cohesion, family disorganization, and a lack of parental involvement and support (Garbarino. Schellenbach. Sebes et al. 1986: Baumrind 199 1). In the 1979 National Incidence Study low socio-economic status was significantly related to child maltreatment, but these social class effects did not predict adolescent maltreatment (National Center for Child Abuse and Neglect 1980).

The dynamics of maltreatment may be complex. According to **Baumrind's** classification of parenting types, defined earlier, maltreated adolescents come from families characterized by either authoritarian or overindulgent patterns. In authoritarian families, incidents of abuse typically arise from a adolescent testing or **acting** out behavior which is met with overwhelming and punitive force (**Pelcovitz, Kaplan and Samit** 1984). But adolescent maltreatment is also more likely to **occur** in over-indulgent, permissive families. Pre-adolescents in these families typically are

over-indulged, are rarely given limits, and few demands for maturity are made upon them. When these **children** reach adolescence and seek social attachments outside the family, or when they act impulsively in important social situations, the overindulgent parents tend to react with excessive force (Pelcovitz, Kaplan and **Samit** 1984).

In **summary**, the research literature suggests that a **family** environment characterized by inconsistent or authoritarian discipline, disorganization, dysfunctional parental behavior (including substance abuse and violence), and lack of parental involvement and support in the adolescents **life** creates a risky environment for adolescents. Young adolescents living in these families are more likely to display risk markers and later negative consequences than are other youth.

Prevalence of Risk Markers Among Young Adolescents

“Risk markers” for young adolescents are early signs that the youth may engage in problem behaviors or experience negative outcomes. These markers generally tend to arise from the antecedent conditions already **identified**: economic disadvantage, poverty, and/or family dysfunction. There is general agreement that a young adolescent who displays poor school performance or is retained in grade is more likely to **exhibit** later problem behavior. In fact, **Dryfoos** (1990) argues that poor school performance (including functioning well below grade level, whether a grade has been repeated or not) is the single most important **marker** for **identifying** those likely to be at high risk. A second marker in early adolescence for high risk status is whether the adolescent is involved with child protective services or out-of-home placement as a result of abuse or neglect. The latter could occur **either** as a result of the adolescents behavior or as a result of family breakdown and crisis, **usually** consisting of **child** maltreatment, parental criminal conviction, or family dissolution. This second marker

represents part of a “risky environment.” Out-of-home placement may be considered a consequence of the antecedent conditions of family dysfunction and lack of parental involvement/support, and the research literature suggests that it is a good predictor of future negative outcomes.

Poor School Performance and **Grade** Retention

For young adolescents, being retained in grade is the single most important predictor of school dropout, after controlling for ability (Feldman, **Stiffman** and Jung 1987). In a review of the literature, Berla, Henderson and Kerewsky (1989) estimate that by age 15, 25 percent of all students have been held back once or more. By age 11 years, 44 percent of African-American males, 26 percent of African-American females, 38 percent of Hispanic males and 32 percent of Hispanic females have repeated one grade (Berla, Henderson and **Kerewsky** 1989). According to 1986 Census data, among **10- to 13-year-olds** (grades 5 to 8) 31 percent of males and 23 percent of females are one year below their modal grade (U.S. Bureau of the Census 1988). For **14- to 17-year-olds** (grades 9 to 12) 31 percent of males and 21 percent of females are one year behind. However, those who are two or more years behind their modal grades (grade 5 for **10-year-olds** up to grade 10 for 15-year-olds) are considered at the highest risk of dropping out. Census data for 1986 reveal that for adolescents aged 10 to 15 years, 28 percent of whites, 57 percent of African-Americans and 63 percent of Hispanics are two or more years behind their grade level (U.S. Bureau of the Census 1988). Thus, not only are many **10- to 15-year-olds** at risk for **dropping** out (approximately 25-30 percent in the general population), but males are more likely to be retained in grade than females and, for most age and sex groups, the probability of being **two** or more grades behind is at least **twice** as **high** among **minority** children as among white children (U.S. Bureau of the Census 1988). **Dryfoos** (1990) estimates

that 4.5 million 10- to 14-year-olds are behind **grade, most by one year, but she estimates** that **.7 million** of these adolescents are behind by two or more years and thus, at highest risk for dropping out.

Although grade retention is one operational **definition** of poor school performance, it is also important to consider low school achievement. According to the 1990 National Assessment of Educational Progress, which compared reading ability of students from 1971 to 1988, students In general were better readers in the 1980s than they were in the **1970s**, but, the mean reading profile of African-American and Hispanic **17-year-olds** was only slightly better than the reading **profile** of white **13-year-olds**. Nevertheless, having a **high** school diploma, even **with a** poor achievement record in school, **significantly** improves labor market participation (Young **1983**), so the bottom line when it comes to poor school performance may be whether the outcomes result in dropping out of school.

A number of important correlates of poor school performance may make the difference between staying in or dropping out of school for young, at-risk adolescents. In a review of the consequences of school failure or poor school performance, the **Office** of Technology Assessment (199 1) concluded that just as adolescent health problems can affect school adaptation, some indicators of school achievement have been found to affect adolescents* health, well-being, and “ultimately, their long-term economic productivity” (p. **II-62**). The adolescent health outcomes most affected by school failure include substance abuse, delinquency, and pregnancy and childbearing. Since poor and minority students reveal higher rates of poor reading ability, grade retention, and dropout, these adolescents appear to be at greatest risk for the adverse consequences of school failure.

A variety of other demographic, **individual**, family. and community factors identified in literature reviews also predict school failure and dropout. According to

Dryfoos (1990), children who are at highest risk are those who live in disadvantaged families in impoverished neighborhoods and communities, who get little support and encouragement from parents or their families, and who belong to a peer group whose members are also at risk for dropping out and serve as negative models. At the same **time**, the schools in these communities are under considerable stress, do not have **sufficient** resources to assist these children. and have **relatively** low expectations of success for these students.

Family Breakdown

When family **dysfunction** reaches the point of child maltreatment or neglect or when the adolescent is considered uncontrollable or engages in criminal behavior, the child welfare (or the criminal justice) system usually intervenes. The child welfare agency arranges placement for the adolescent in an alternative family or group home environment. This placement can be temporary while efforts are made to reunite **the** adolescent with the parents: it can also be a more permanent arrangement when reunification of the family is not possible. Foster care, which involves some form of community-based care provided by surrogate families under professional supervision by **public** entities, is usually the placement of choice, particularly for temporary placement **until** the adolescent can be returned to his or her family. Two-thirds of all children under 16 years of age who are in out-of-home placement are placed in families and the rest are sent to institutions (including group homes, detention centers, mental hospitals, and special schools), often because no suitable family home can be found, In 1985. 270.000 children were in foster care, of which 45 percent were between the ages of 13 and 18 years: disproportionate numbers were non-white and Hispanic (William T. Grant Foundation 1988). The average length of stay in foster care for all children and adolescents was 17 months, according to 1984 data reported

by the William T. Grant Foundation report (1988), and children who remain in care longer than 18 months seldom return to their parents.

Foster care or alternative custody placement of an adolescent is usually a result of environmental issues, including family dysfunction and lack of parental support/involvement. It is also a precursor or marker for more serious consequences, such as homelessness, delinquency, or substance abuse. A 1990 study reported that the more foster care placements an adolescent had experienced, the more **difficulties** he or she encountered in later life (Family Impact Seminar 1990). A **significant** number of adolescents in foster care placements are abused physically or **sexually** by the foster parents (**Fanshel, Finch and Grundy 1990**), and there is a high likelihood that the adolescent will run away from foster care. The **William T. Grant Foundation** (1988) reports data indicating that older adolescents averaged four different placements and at least one runaway episode while in foster care.

Prevalence of Problem Behaviors and Risk Outcomes in Young Adolescents

Early *Sexual Behavior*, Pregnancy, Parenthood and Sexually Transmitted Disease

As Dryfoos (1990) **points** out, once an adolescent engages in sexual intercourse, he/she could be considered “at risk” of unintended pregnancies or births, especially when contraception is not consistently used. In 1988, one in three adolescent males (ages 15- 19) and one in ten adolescent females reported having had Intercourse before the age of 15. The rates were substantially higher among **African-American** teens. Approximately two-thirds of African-American adolescent males and one-sixth of African-American adolescent females were sexually experienced by their 15th birthday (National Research Council 1990; Sonenstein, **Pleck** and Ku 1991). The earlier sexual activity begins. the greater the risk of unplanned pregnancy because most sexually

active adolescents do not consistently use **contraception**. In 1988, just over half of teenage females (56 percent) reported using effective contraception (condoms or **pills**) at first intercourse and 44 percent used nothing or an ineffective method such as withdrawal (Forrest and Singh 1990). Among the males, 62 percent used effective **contraception** at first intercourse, and 38 percent used nothing or an ineffective method. The younger the youth, the less likely he or she is to use contraception at first Intercourse. Among males, close to half of those initiating intercourse before age 15 used effective contraception **compared** to over two-thirds of those initiating **sexual** intercourse between the ages of 15 and 17 (Sonenstein, **Pleck** and Ku 1989).

Other work indicates that the earlier the age of first intercourse, the longer the delay in going to a clinic to obtain contraception. For girls under the age of 13, the time elapsed before seeking a contraceptive method was an average of 40 months, compared to a **6-month** delay among **18- and 19-year-olds** (**Zabin** and Clark 1981). Thus, the chain of events for those young adolescents at highest risk starts with precocious intercourse, followed by **nonuse** of protection at first intercourse and long delays before obtaining medical advice regarding contraceptive methods. It ends too often in an unplanned pregnancy.

. For adolescents under 15 years of age, in 1985, the pregnancy rate was 16.6 per 1,000 compared to a rate of 109.8 per 1,000 for those ages 15 to 19 years. Thus, for the population of **10- 15** year-olds, the scope of the problem is considerably smaller than for older adolescents. However, the consequences are probably more serious for younger adolescents, who are even less equipped to make pregnancy resolution and **parenting** decisions than their older counterparts. Moreover, pregnancies during early adolescence may signal sexual abuse. Recent data from the 1987 follow-up of the National Survey of Children indicate that between one-half and two-thirds of

respondents reporting sexual intercourse before the age of 15 had experienced nonvoluntary intercourse (Moore, Nord and Peterson 1989).

For adolescents of **all** ages, close to one in four (**23** percent) of **sexually** active teens experience a pregnancy during any **12-month** period (**Dryfoos** 1990). Birth rates among females ages 10 to 14 remained relatively stable from 1970 to the mid **1980s**, at approximately 1.2 births per 1,000 females. Since 1986, however, birth rates have been rising among women of **all** child-bearing ages. Reflecting this general trend, the birth rate among **10-14** year-olds has grown slightly to 1.4 per 1,000 in 1989. It is **still substantially** lower than the birth rate among 15-17 year-olds, which stood at 36.5 in 1989. There is a large disparity in birth rates for African-American and white adolescents ages 10 to 14: for whites the rate is .7 births per 1,000 in 1989 compared with 5.0 births per 1,000 for African-Americans. For **15- 17** year-olds, the birth rate for African-American adolescents (80.0 per 1,000) is nearly three times the rate for whites (28.3 per 1,000). Almost **all** the births (92 percent) to females under 15 years old In 1989 were **nonmarital** births (National Center for Health **Statistics** 1991).

The differences between the pregnancy rates and the birth rates for adolescents may be primarily explained by the use of induced abortion. Although the abortion rate for U.S. females aged 15 to 19 years increased dramatically from 1970 to 1979, it has since leveled off at 44 abortions per 1,000 females. For females under 15 years of age, the abortion rate has increased from a rate of 5.6 abortions per 1,000 females in 1973 to a rate of 9.2 abortions per 1,000 females in 1985.

There are a number of antecedent variables that predict increased **likelihood** of early sexual activity (Dryfoos 1990). Males who are African-American, **living** in low-income families, with parents who are not supportive and do not monitor their child's activities, are more **likely** to initiate sex at an early age. In addition, **children** who are not involved in school activities, who have low expectations for school achievement,

and who are influenced by friends in similar situations are also more prone to engage in early sexual activity. Early sexual activity is **also** usually preceded by other **high-risk** behavior, including truancy and substance abuse (**Dryfoos** 1990). Factors predicting **nonuse of contraception** include: Hispanic background, impulsiveness and lack of internal locus of control, involvement in casual sex rather than a committed relationship, low prospects for the future, low educational expectations, low grades, parents who have low educational achievement, and parents who cannot communicate **effectively** with their teenager. Finally, young adolescents who are typically low school achievers, belong to a peer group that accepts parenthood, and are from poor, female-headed families in which parents do not monitor their activities are more likely to become teen parents.

Dryfoos (1990) estimates that 1.9 million adolescents between 10 to 14 years of age are at risk due to their early sexual activity, including 1.5 million males and 0.4 million females. Half of these are at greater risk because they will not use contraception. Approximately 300,000 adolescent females aged 10 to 14 years of age are likely to become pregnant: of these, one-third will become parents.

Both risky sexual behaviors and environmental factors can increase the likelihood that adolescents will be exposed to **sexually** transmitted diseases and AIDS. Further, even excellent contraceptive practice, if it involves the most effective methods and does not supplement these with condoms, does not help prevent sexual transmission of disease. In 1989, the incidence of gonorrhea in adolescents aged 10 to 14 was 69.7 cases per 100,000: this represents a 63 percent jump over a two-year period in the rates among young adolescents. For females aged 10 to 14, the rate in 1989 was over three times that of males. The syphilis rates for this age group are equally alarming: for 10- to 14-year-olds. the 1987 syphilis prevalence rate of 1.4 cases per 100,000 population was the highest reported in over 30 years, and

represents a **75-percent** increase from 1977 (although in 1989, the rate was down slightly to 1.27 per 100,000) (Office of Technology Assessment 1991).

One of the more serious consequences for adolescents who develop an **STD** (particularly those with syphilis) is the increased likelihood of their becoming HIV-infected (Office of Technology Assessment 1991). In 1990, AIDS was the sixth leading cause of death among **15- to 24-year-olds**, although cases of AIDS among adolescents aged 13 to 19 represented under 1 percent of all AIDS cases. Since the average incubation period between HIV infection and the development of AIDS may be as long as **8- 12 years**, many adolescents who become infected during their teenage years may not show signs or symptoms until early adulthood (D'Angelo, Getson, Luban and Gayle.1991).

The prevalence of HIV infection may give a more accurate indication of the potential AIDS problem within the youth population than does the count of reported AIDS cases, due to the long incubation period for AIDS. Various estimates of the extent of HIV infection among adolescents are now available, although many do not provide separate estimates for younger and older adolescents. For military recruits aged **17- 19 years**, the rate of HIV Infection (seroprevalence) was relatively low (**.35** per 1,000 for males and **.32** per 1,000 for females). Among adolescent military recruits in Washington DC the infection rate was the highest in the country at 5.3 per 1,000 (D'Angelo et al. 1991: Office of Technology Assessment 1991). Data from Job Corps entrants, who are economically disadvantaged **16- to 21-year-olds**, show a seroprevalence rate of 3.6 per 1,000, ten times higher than among military applicants the same age (St. Louis et al. 1991). Males run a higher risk than females except among the youngest age group, **16- to 17-year-olds**, among whom females had higher seroprevalence than males. The authors concluded that the rate of HIV infection among disadvantaged youth entering the Job Corps program is "remarkably high . . .

for a population so young and not **specifically** selected because of behavioral risk factors” (St. Louis et al. 199 1). Further, the high rate of HIV infection among younger females suggests that heterosexual transmission of HIV may be responsible rather than intravenous drug use (which is higher in males). Finally, a recent study of all adolescents aged 13 to 19 years who were admitted to an ambulatory care medical clinic in Washington, DC between 1987 and 1989 reported an overall seroprevalence rate of 3.7 per 1,000, with the highest prevalence in females (4.7 per 1,000) and adolescents 15 years of age and older (4.9 per 1,000). In this study the seroprevalence rate for youth under 15 years was 1.7 per 1,000 (D’Angelo et al. 199 1).

Truancy and School Dropout

Little adequate prevalence data exist to indicate the numbers of truant youth, **either** in total or by age. Further, younger adolescents **may** not be adequately represented in truancy and dropout statistics if they are runaways, homeless, or if they have been suspended from school. Here we report figures on dropout rates, and note that most of the antecedents of poor school performance discussed earlier in this paper are also relevant **in** predicting truancy and dropping out of school, as does the marker of poor school performance itself.

In 1990, 74.4 percent of the class of 1987 ninth-graders graduated from high school (U.S. Department of Education 199 1). In October of the same year, 12.1 percent of 16- to 24-year-olds reported themselves to be dropouts, and the dropout rates for African-Americans, Hispanics and Native Americans were higher than the aggregate rates for the U.S. population as a whole (U.S. Department of Education 1991). According to the 1986 High School and Beyond Survey, the dropout rate among students from households in the lowest socioeconomic quartile reached **22** percent compared with a rate of 7 percent for those from the highest socioeconomic

quartile (Barrow and Kolstad 1987). In 1990, the dropout rate among 14- and 15-year-olds was only .8 percent for males and 1.0 percent for females, according to Current Population Survey data (U.S. Department of Education 1991). Clearly, 10- to 15-year-olds may be at risk for school dropout. But the prevalence of risk in this population is not fully reflected in the dropout rate since school attendance is compulsory until age 16. This does not mean that younger adolescents do not virtually drop out of school through repeated truancy, suspension or expulsion, or other behaviors, but that schools will still carry them as **officially** enrolled until their 16th birthday.

Dryfoos (1990) argues that many expected outcomes of school **failure** may also function as antecedents or markers. For example, delinquent behavior, including **truancy** and minor offenses during early adolescence, typically occurs prior to actual school dropout or failure. But once youth leave school they are more likely to commit serious offenses compared with those who remain enrolled.

Running *Away and Homelessness*

One of the major problems with estimating the prevalence of runaway or homeless youth is in defining the terms. Some adolescents become homeless with their families while others become homeless on their own (Office of Technology Assessment 1991). Homeless adolescents living with their families become homeless because of situations that affect their family as a whole, such as unemployment, **job-related injury** or illness, eviction from housing, criminal victimization, or disaster (Office of Technology Assessment 1991). Data on the actual numbers of homeless adolescents ages 10 to 15 who are living with their families are not available and most of what is known about these youth come from surveys of families in shelters (Office of Technology Assessment 1991). A 1989 U.S. General Accounting Office report

estimates that 12 percent of homeless families include an adolescent between 13 and 16 years of age and another 36 percent of homeless **families** have a **child** between the ages of 6 and 12 years (U.S. Congress, General Accounting **Office** 1989). Another study found that 10 percent of one sample of children in homeless families were between the ages of **12** and 16 years (Bassuk and Rosenberg 1988) while a second study reported that 26.6 percent of another sample of families **living in homeless** shelters had children between the ages of 11 and 17 years (Miller and **Lin** 1988).

Data collected by state officials responsible for educational services to homeless children and youth show that about three-quarters of school-aged homeless children and adolescents attend school and 47 percent of these are **in** grades 7 through 12 (U.S. Department of Education 1990). However, some estimates place the proportion of homeless school-aged children and adolescents not attending school at approximately 40 percent (**National** Coalition for the Homeless 1987). The difference probably stems from the virtual exclusion of “street kids” and unaccompanied minors from the Department of Education counts. By the **time** homeless children reach a shelter, they may already have experienced problems in school such as repeating a grade (Bassuk and **Rubin** 1987; Bassuk, **Rubin** and **Lauriat** 1986), or having lower scores on standardized tests of expressive vocabulary and word decoding, compared with children 6 to 12 years of age living in households (Parker, Rescorla, **Finkelstein** et al. 1991). In general, the research on homeless youth who live with **their families in** shelters is extremely limited; little is known about the short or long-term consequences of this situation for these adolescents.

The remainder of this discussion concentrates on data about adolescents who are homeless and living on their own (unaccompanied **minors**). **Youth become** homeless on their own as a consequence of running away from dysfunctional and abusive families (Shane 1989; **Finkelhor**, Hotelling and Sedlak 1990), being deserted

or kicked out of the home by their parents (Adams, Gullota and Clancy 1985), or when ‘their parent or guardian becomes homeless and the youth cannot accompany the family to a shelter or welfare hotel (Office of Technology Assessment 1991). The National Network of Runaway and Youth Services differentiates among “runaways,” who are away from home at least overnight without parental or guardian permission, “homeless youth,” who have no parental, substitute foster, or institutional home and who may have left with the parent’s knowledge, and “street kids”--long-term runaways or homeless youths who have been able to live “on the streets,” usually through illegal activities (National Network of Runaway and Youth Services 1991). There are also youth termed “throwaways” or “pushouts” who have been told to leave the parental household or who have been abandoned or deserted by their parent or guardian. Many youth who are homeless and living on their own have run away from a foster care or institutional placement, implying earlier family breakdown. Some studies have estimated that anywhere from 10 to 50 percent of runaways are actually throwaways (Adams, Gulotta and Clancy 1985). The distinction is important because throwaways are more likely to have been the victims of physical violence prior to their departure from the home and are twice as likely to have long spells of absence (Finkelhor, Hotaling and Sedlak 1990).

Estimates about the number of children who run away, are thrown away or pushed out, or are homeless during any one year in the United States vary widely depending upon the particular definitions. Two general population surveys conducted in the mid-1970s and the “National Incidence Studies of Missing, Abducted, Runaway and Throwaway Children” (NISMART) study (Finkelhor, Hotaling and Sedlak 1990) report an annual rate of running away in the range of 17 per 1,000 children aged 10 to 17 years. About half of runaway youth also spent time in the foster care system and nearly 12 percent of all homeless youths left foster care or a group home

immediately before seeking public shelter (Rotheram-Borus, Koopman and Ehrhardt 1991). Estimates of annual prevalence of homeless youths aged 11 to 18 have increased from 519,500 in 1975 to 1.5 million in 1988 (Rotheram-Borus, Koopman and Ehrhardt 1991). The Department of Health and Human Services placed the yearly estimate of runaway and homeless adolescents aged 10 to 17 years at “more than one million” (U.S. Department of Health and Human Services 1989). However, these estimates are dated, since they rely on the 1976 National Statistical Survey of Runaway Youth which was mandated by Congress in the **original** Runaway Youth Act (**PL 93- 145**).

A recent review by Rotheram-Borus, Koopman and Ehrhardt (1991) provides some estimates of antecedents to youth homelessness, based on empirical studies of homeless samples in particular cities. Little is **known** about homeless youth on a national basis, since no studies to date have solved the methodological problems involved in obtaining such data. Homeless youth in special surveys are disproportionately African-American or Hispanic, from lower socioeconomic backgrounds, and from single-parent families. **Twenty-one** percent of homeless youths have new stepparents, 62 percent moved at least once in the three months before becoming homeless, and 43 percent entered a new school. On the street, they are quite likely to be victims of robbery and of physical assault, including rape or **sexual** assault. Among those attending a medical clinic, 19 percent have an undiagnosed medical problem, the most common being hepatitis and pneumonia. Approximately half are not enrolled in school and about half of those in school have learning or conduct problems. In New York City, 21 percent of homeless adolescent males are jailed in the three months before seeking shelter and as many as 56 percent in Los Angeles spent time in detention facilities prior to entering a shelter. Rates of

depression for homeless youth range from 26 percent to 84 percent and are significantly higher than clinical samples of **adolescents** who are not runaways.

Homeless youth who live on their own are more likely to engage in sexual risk behaviors than are nonhomeless adolescents, which dramatically increases the risk of HIV infection among this group (Rotheram-Borus, Koopman and Ehrhardt 199 1). Almost 50 percent of homeless adolescent males having had more than 10 sexual partners in their lifetimes compared with less than 7 percent of adolescent males nationally. In addition, between 50 percent and 71 percent of street youths have a **sexually** transmitted disease: pregnancy and motherhood are significantly higher among homeless girls: and the average age at **first** intercourse is about 12.5 for homeless youth, about two years earlier than for other adolescents. Homeless youths are also five times more likely to meet the criteria for a diagnosis of **drug** abuse than are nonhomeless adolescents.

Adolescents who are homeless and living on their own run the highest risk for becoming infected with an STD or with **HIV** (Rotheram-Borus, Koopman and Ehrhardt 199 1; **Office** of Technology Assessment 199 1). Once they reach the serious outcome of homelessness and living on their own, they often resort to prostitution to get money for survival or to sustain their drug habit. They may also trade sex for a place to stay or other protection, or for drugs. Both multiple sexual partners and drug abuse greatly increase the risk of HIV transmission, with needle use being only a secondary source of **HIV** infection for a small subgroup of at-risk youth (**Office** of Technology Assessment 199 1).

Use and Abuse of Tobacco, Alcohol and Other Drugs

In her review of the literature, Dryfoos (1990) cites the following factors as being most often related to greater risk for substance abuse: early initiation (ages 10

to 12); school problems including poor performance: low grades and truancy: lack of parental support and guidance: associating with drug-using peers: being easily swayed by peer opinion: and having an independent, rebellious, or nonconformist personality.

Many more youth have occasionally used tobacco, alcohol, and other drugs than have abused them. **Dryfoos** (1990) defines substance abuse as substance use behaviors that will have damaging consequences over **time**, prevent normal growth and development, and limit an individual's potential for achieving responsible adulthood (**Dryfoos** 1990). Accordingly, Dryfoos **defines** high risk of substance abuse as frequent **and** heavy drug or alcohol use. **Use** would be considered a problem behavior in our model, with use at younger ages being a potentially important flag for future problems. **Heavy use** is the closest most data sets for youth get to the concept of **abuse**, which we classify as a risk outcome.

National data for youth on lifetime use ("ever used") come from three sources: the 1987 National Adolescent Student Health Survey (NASHS--American School Health Association et al. 1989);¹ 1985-1991 NIDA National Household Surveys on Drug Abuse (NHSDA--U.S. Department of Health and Human Services 1991); and 1980-1991 High School Senior Surveys (**HSSS**) which in 1991 also surveyed 8th and 10th graders. These data sources indicate that:

- About 40 percent (**NHSDA**) to 50 percent (NASHS) of **12-14-year-olds** have ever used cigarettes.
- About 77 percent of 8th graders (**13-14**) have ever used alcohol (NASHS).

¹ Conducted by the American School Health Association, the Association for the Advancement of Health Education, and the Society for Public Health Education, Inc., working in conjunction with the National Institute on **Drug Abuse (NIDA)**, the Alcohol, Drug Abuse and Mental Health Administration (**ADAMHA**), the Centers for Disease Control (**CDC**), and the **Office** of Disease Prevention and Health Promotion/Office of Substance Abuse **Prevention (OSAP)**.

- Between 2 percent (NHSDA-**1991**) and 15 percent (NASHS) of **12-14-** year-olds have tried marijuana.
- **Current** use (past **30** days) of alcohol by **8th** graders ranged from **25** percent (HSSS- **1991**) to **51** percent (**NASHS-** 1987). The NHSDA- 1991 data indicate about 20 percent current use for **12-13-year-olds**. In the NASHS, 7 percent of 8th graders reported heavy use--5 or more drinks at one time within the past 30 days.
- Current use of **marijuana** among **12-13-year-olds** was down from 8 percent in 1982 to 2 percent in **1991 in the NHSDA**
- Current use of all illicit drugs among **12-17-year-olds** was down from 15 percent in 1985 to 7 percent in 1991 in the NHSDA
- The trend in use of illicit drugs among adolescents is downward since the **mid-**1980s in both the multi-year surveys.
- Percentages are higher for older teens, and when **12-17-year-olds** are grouped together.
- Percentages are lower in the NHSDA than in the other two surveys. This may be due to methodological differences (the NHSDA asks questions of teenagers in their own homes, where they might not be as forthcoming as in the school settings where they self-administer the HSSS and the NASHS).
- Survey results may also differ because each **survey** covers a different age cohort, misses different segments of the population (e.g., youth not in school), or has a sample **size** too small to break out age or ethnic groupings.

Evidence of drug use among the youngest adolescents, especially those under 12 years of age, comes from other sources. According to retrospective reports of high school seniors from the class of 1986, one in ten had taken a **drink** by sixth grade (10-11-year old) and by eighth grade, one-third had used alcohol (**Dryfoos** 1990). According to the 1987 Weekly Reader National Survey of Drugs and Drinking, 34 percent of sixth graders experienced peer pressure to use marijuana and 51 percent of sixth graders experienced peer pressure to drink beer, wine or liquor (**Office for Substance Abuse Prevention** 1989). Eighth graders' heavy alcohol use (7 percent), reported on the 1987 National Adolescent Health Survey, was mentioned earlier.

As noted by **all** studies, use of these substances does not necessarily mean abuse. Furthermore, with the decline in the acceptability of substance use and actual decreases in the prevalence of substance use among adolescents, the remaining users may represent a population who are either already addicted or addiction-prone (U.S. Department of Health and Human Services 1992).

According to the 1987 National Adolescent Student Health Survey (American School Health Association et al. 1989), 23.7 percent of eighth graders and 36.6 percent of tenth graders consumed five or more alcoholic drinks **consecutively** on a least one occasion during the two week period prior to the **survey** administration. African-American students were least likely to number among these heavy **drinkers**, **with** only 15.1 percent of **African-American** eighth graders and 26.9 percent of African-American tenth graders reporting heavy alcohol use in the survey. Hispanics, particularly males, are somewhat more likely to drink **heavily** according to the above survey criteria, with 35.9 percent of male Hispanics in the eighth grade and 46.8 percent of male Hispanics in the tenth grade reporting consumption of five or more drinks over the two week period, compared with 23.5 percent for all eighth grade males and 40 percent for all tenth grade males. In addition, tenth grade females are less likely to report heavy drinking, compared with tenth grade males (33 percent of females versus 40 percent of males), despite almost identical percentages of eighth grade males and females who reported heavy drinking (23.5 percent and 23.9 percent respectively).

According to the 1990 Youth Risk Behavior Survey, conducted as part of the Youth Risk Behavior Surveillance System, 27.7 percent of ninth graders (approximately 14 years old) and 35.7 percent of tenth graders (**approximately 15 years** old) reported heavy drinking--5 or more drinks consecutively at least **once** **during the 30 days** preceding the survey (Centers for Disease Control 1991). **In this**

survey of students in grades 9 through 12, more males overall were considered heavy drinkers than females (43.5 percent of males compared with 30.4 percent of females), paralleling the behavior of the adult population.

Another measure of substance abuse is the combined use of alcohol and illicit drugs. Adolescents who use alcohol and drugs in combination tend to use greater quantities of each (Frank et al. 1985). According to the 1987 National Adolescent Student Health Survey, **12.1** percent of eighth graders and 18.5 percent of tenth graders reported using alcohol in combination with other drugs in the month prior to the survey administration (past month use). Among eighth graders, similar numbers of males and females reported combined alcohol and drug (**polydrug**) use (12.5 percent of eighth grade males compared with 11.8 percent of eighth grade females). However, more tenth-grade males reported polydrug use compared with tenth grade females (21 percent of tenth grade males compared with 15.8 percent of tenth grade females).

In terms of ethnic differences, eighth grade Hispanics, particularly Hispanic females, were more likely to report polydrug use compared with other eighth grade students (**17.4** percent of polydrug-using eighth graders were Hispanic females, compared with 14.5 percent for Hispanic males and 12.1 percent of polydrug use overall in the eighth grade). Eighth grade African-American students, particularly males, were less likely to be polydrug users (8.5 percent were African-American males and 11.1 percent were African-American females, compared with 11.3 percent white males and 12.6 percent white females). In general, the highest prevalence of combined alcohol and drug use was found for whites and Hispanics. Finally, 7.2 percent of all eighth graders and 14.5 percent of tenth graders reported having had **five** or more drinks on three or more occasions in the two weeks prior to the survey administration.

A youth's age at first use of alcohol is **often** used as a marker for later alcohol abuse as well as for later use of other drugs (Welte and Barnes 1985). According to the 1990 Youth Risk Behavior Survey, 33.6 percent of all students sampled from grades 9 through 12 had first consumed alcohol before age 12 (Centers for Disease Control 1991).

Intravenous drug use is a particularly high-risk behavior, given the consequences of becoming addicted and/or HIV-infected. According to data collected by the Centers for Disease Control, there is considerable variability by location (city **and/or** state) in the percentage of U.S. adolescents who have **ever** used drugs intravenously (Centers for Disease Control 1988). In 1988 **in** the District of Columbia, 6.3 percent of adolescents **13- to 18-years-old** reported ever having used drugs intravenously, with more males than females indicating intravenous drug use (8.7 percent of males **in** Washington, DC compared **with** 4.7 of females). However, in San Francisco, only 3.7 percent of all **13- to 18-year-olds** reported intravenous drug use, with more males than females (5.1 percent of males compared with 2.4 percent of females, in San Francisco). Among **13- and 14-year-olds** in the two cities, the percentage reporting intravenous drug use in Washington, DC could not be ascertained because there were so few individuals in this subgroup. In San Francisco, 1.4 percent of adolescents **13- and 14-years** old reported intravenous drug use.

Comparisons between two states--California and Michigan--using the same CDC database also reveal substantial variability. In **California**, 4.1 percent of all **13- to 18-year-olds** reported any lifetime intravenous use of drugs, compared with 2.8 percent in Michigan. In both states more males than females used drugs intravenously, but the difference between genders was more pronounced in California, where 5.7 percent of males and 2.6 percent of females reported intravenous drug use,

compared with 3.4 percent of males and 2.1 percent of females in Michigan. Interestingly, although California had a higher overall rate of intravenous drug use among its adolescent population, Michigan reported a higher rate among its **13- and 14-year** old group (3.2 percent of Michigan compared with 2.8 percent of California **13- and 14-year-olds**). Finally, the rates of intravenous drug use among **15- and 16-** year-olds are similar to those of the younger-aged adolescents in Michigan at **3.2** percent, while, in California, the rate for the older adolescents was 3.9 percent, compared with 2.8 percent for **13- and 14-year-olds** in California. However, these figures should be interpreted with caution due to the high overall variability and the small sizes of the youngest adolescent sub-samples in the two states.

Dxyfoos estimates the extent of heavy or **daily** substance use by extrapolating from the experience of high school seniors, using the ratio of current use to heavy use from the 1985 High School Seniors Survey. For estimates of heavy use, no data are available for **10-** and **11-** year-olds, with the exception that 1 percent were heavy users of alcohol. Among the **12- to 14-year-olds**, Dryfoos (1990) estimated that 5 percent were heavy users of cigarettes, 6 percent were heavy users of alcohol, and 1 percent each were heavy users of marijuana or cocaine. Among **15-** to **17-** year-olds, 4 percent were heavy users of cigarettes, 12 percent were heavy users of alcohol, 4 percent were heavy users of marijuana and 3 percent were heavy users of cocaine. Based on these data, Dryfoos (1990) estimates that there are 6.5 million **10-** to **11-** year-olds and 10.2 million **12-** to **14-** year-olds who are at risk for consequences of any substance abuse (cigarettes, alcohol, marijuana and cocaine). Further, although it can take many years for an adult to become an alcoholic, it can take as little as 6 to 18 months of heavy drinking for an adolescent to become an alcoholic (Office for Substance Abuse prevention 1989), so the actual risks of heavy alcohol use for an adolescent may be more immediate. It should be noted that these estimates are based on relatively old

data (1985), and do not take into account the decline in overall prevalence of substance use since that time. Further, since Dryfoos relied on the High School Senior survey, the estimates are probably biased downwards for older adolescents because the study only included respondents still in high school during their senior year. All **surveys are also** plagued by problems associated with self-reporting. Methodological **difficulties** in using these survey data extrapolate to the population estimates. Dryfoos' (1990) estimates should be used with caution.

In general, the data just reviewed reveal a number of **interesting** patterns. Contrary to popular belief, African-American teens were less likely than adolescents from any other racial or ethnic groups to report the use of an illicit drug, regardless of whether the measure was lifetime, annual or past month (the same **is** true for alcohol use). **Hispanic** adolescents, particularly females, were more likely to use **illicit** substances, particularly alcohol. Further, the data from several national studies converge to indicate that teenage use of all drugs and some **specific** drugs (e.g., cocaine) has been declining since the early 1980s. Nevertheless, an important fraction of the youth **population** already abuse alcohol and drugs. For heavy alcohol abuse, this may be as high as 25 percent.

Associating with Delinquent Peers, Delinquent and Criminal Behavior

Delinquency has been **defined** in a variety of ways and the definition chosen will often determine which youth are studied. Some definitions rely on criminal justice system involvement such as arrest and adjudication: other definitions emphasize behavioral acts such as stealing, assault, or murder, whether or not the youth is ever caught, arrested, or serves **time**. In general, delinquent acts are either criminal offenses or status offenses. Criminal offenses are those acts committed by

minors that would be considered violations of criminal law if committed by an adult, such as murder, rape, assault, robbery, theft, burglary, or **vandalism** (Office of Technology Assessment 1991). Status offenses are acts committed by **minors** that would not be offenses if committed by an adult, for example, running away from home, truancy, alcohol use (Office of Technology Assessment 1991). Thus, status offenses are defined as delinquent acts not because of the behavior per se but because of the perpetrator's age.

Estimates of delinquent behavior and "delinquent" youth come from a variety of sources, including rates of offenses and arrests provided through the Uniform Crime Reports, self-reported delinquency and criminal behavior from the National Youth Survey, and **victimization** rates from the National Crime Survey. Several data sources are required to pinpoint delinquency because each source has important limitations; no single source provides an adequate measure of delinquency among adolescents (Elliott, Dunford and Huizinga 1987; **Huizinga** and Elliott 1986).

· According to Uniform Crime Report data, 2.9 percent of **10-** to 14-year-olds and 10.9 percent of **15-** to 17-year-olds were arrested in 1986 for an offense (Flanagan and Jamieson 1988). About one-third of the juvenile arrests were for criminal offenses and two-thirds of the arrests were for less serious "status" offenses. When they were charged with serious offenses, adolescents under age 15 were more likely to be charged with property crimes such as arson, burglary, and larceny-theft: these accounted for 11 percent of all serious charges for this age group. Older adolescents were more likely to be charged with rape, motor vehicle theft, and assault (Flanagan and Jamieson 1988). According to these 1986 Uniform Crime Report data, which summarize all arrests reported by law enforcement agencies, males are disproportionately represented in almost all offense categories. In fact, 78 percent of all **juveniles** arrested were males (Flanagan and Jamieson 1988). The **only exception**

is that females are more likely to be arrested as runaways (56 percent), a status offense.

There is some evidence that the aggregate arrest rates for serious violent offenses and for Serious property offenses committed by U.S. adolescents have declined since the mid- 1970s. However, these trends vary by the type of offense, so that without an analysis of specific offenses we may miss some potentially important trends. Despite the leveling off of all arrests among adolescents under 18 years of age, the arrest rates for murder, nonnegligent manslaughter, and aggravated assault have increased among adolescents 13 to 18 years old (U.S. Department of Justice 1988). Similarly, although arrest rates for some property offenses (robbery and burglary) and minor offenses (eg. narcotic drug law/drug abuse violations) have declined, arrest rates for simple assault and weapon use have increased (U.S. Department of Justice 1988).

Adolescents who carry weapons are at greater risk for becoming involved in a more serious offense when a violent altercation occurs. In fact, firearm-related homicides accounted for more than 65 percent of these fatalities and are probably one explanation for the increase in murder and nonnegligent manslaughter (Cook 199 I). Access to other weapons, such as knives and clubs, could also place the adolescent involved in a violent altercation at greater risk for being charged with a more serious offense, such as aggravated assault. The 1990 national school-based Youth Risk Behavior Survey reported that nearly 20 percent of all students in grades 9 through 12 reported they had carried a weapon at least once during the 30 days preceding the survey (Centers for Disease Control 199 lb). The incidence of weapon-carrying was approximately four times higher for male than for female students (116 weapon-carrying incidents per 100 students among males compared with 27 incidents per 100 students for females). Analyses by ethnicity reveal the highest incidence for Hispanic

males (162 incidents per 100 students). followed by **African-American (154 incidents per 100)** and white (100 incidents per 100) male students. However, the **majority** of weapon-carrying incidents were confined to a relatively small group. Only 8.7 percent of all students accounted for 70.9 percent of weapon-carrying incidents (Centers for Disease Control 199 lb). The majority of weapons involved were knives or razors (55.2 percent of **all** weapons), followed by clubs (24.0 percent). and firearms (20.8 percent). Most students who reported carrying firearms carried handguns, and, among **African-American** male students who carried a weapon, firearms were the most frequently carried weapon (54.2 percent of all weapons carried by this group). For white and Hispanic male students, knives (54.7, percent of all weapons carried by this group) and razors (46.9 percent of all weapons carried) were the most frequently carried weapons.

Limitations of Uniform Crime Reports data include the possible underreporting of arrests for minor offenses (Menard 1987). law enforcement agencies' bias toward the detection and arrest of adolescent offenders from certain minority groups, such as African-American male adolescents (McDermott and Hindelang 1981), changes in the definitions of offenses, and changes in bureaucratic policies which affect the coding of certain offenses (**Chamblin** and Kennedy 1991). These problems make it **difficult** to conduct analyses across time (**Office of Technology Assessment 199 1**).

Arrest rates may provide some rough measure of trends in delinquency, but it is important to know not just the number of offenses but the number of adolescents who commit delinquent acts, the frequency with which such acts are committed, and the types and seriousness of the offenses. Recent data on the number of U.S. adolescents engaging in delinquent acts are not available (**Office of Technology Assessment 199 1**). Older data from the 1976 to 1980 National Youth Survey indicate that a large majority of U.S. adolescents commit **minor** offenses at least once and that

a **small minority** of adolescents also commit serious offenses at least once (Elliott, Ageton, Huizinga et al. 1983). In the National Youth Survey, 21 percent of youth in the sample reported having committed at least one serious offense in 1976 (Elliott et al. 1983). A review published in 1981 reported that a “substantial minority” of the adolescent male population have been or will be convicted (Farrington and West 1981). Rabkin (1987) estimates that one-fourth of all urban males in the United States are arrested at least once by the time they are 18 years old, Another review estimated that between 25 and 35 percent of urban males will be arrested for a serious crime in their lifetimes, and that 15 percent will be arrested by age 18 (Blumstein, Cohen, Roth et al. 1986). As Dryfoos (1990) concluded, “the available statistics are striking in revealing that the concentration of crime exists among a very small proportion of the juvenile population.” Many studies have found that only a small subset of adolescent offenders commit multiple serious offenses (Blumstein et al. 1986; Elliott, Huizinga and Morse 1986; Farrington 1983; Wolfgang, Figlio and Sellin 1982; Wolfgang and Tracy 1982). The Office of Technology Assessment (1991) estimated that, on average, 40 percent of adolescents who have been exposed to risk factors do not become offenders, as measured by arrest before age 18.

The **minority** of adolescent offenders who commit many serious offenses are the adolescents most likely to continue criminal behavior as adults. Compared to nonchronic offenders, chronic juvenile offenders (those with multiple arrests and at least one incarceration other than juvenile detention) were more likely to have begun delinquent behaviors at an earlier age, to have committed them later, and to **commit** a **variety** of offenses, rather than specializing in a single type of offense (Blumstein et al. 1986; Farrington 1983; Farrington and West 1989). Adolescents involved in **serious** offenses usually **commit** relatively few serious offenses and many minor offenses and

are therefore more likely to be arrested for the minor offense (Elliott, **Dunford** and **Huizinga** 1987).

There are a host of factors associated with the greater risk of delinquency. However, it should be noted that a small number of adolescents become delinquent without any identifiable risk factors in their background, which testifies to the **lack** of adequate understanding of delinquency (Rutter and **Giller** 1984). For the present study of risk among **10- to 15-year-olds** it is important to focus on those risk factors which occur earlier and which are most likely to predispose youth to later delinquency, rather than concentrating on youth who already have criminal records, since fewer in this age group have actually committed serious offenses. Antecedent factors associated with the predisposition or risk of delinquent behavior include: demographic characteristics (age, gender, race, socioeconomic status), neighborhood and community (neighborhood quality of life, antisocial peer culture, criminal subculture, participation in community **organizations**, residential **stability**), **family** (family violence, lack of parental supervision, monitoring and support, large family size, poor marital relations, single parent family structure, familial criminal behavior), and individual characteristics (early antisocial behavior, **attention** deficit hyperactivity disorder, learning disabilities, low intelligence, poor school performance, association with delinquent peers, drug or alcohol abuse).

In its summary of the literature, the **Office** of Technology Assessment (199 1) concluded that few risk factors for delinquency act independently and that many of the **risk** factors interrelate **in** ways that are still not well understood. However, the report provides a number of common “constellations” of factors: 1) family variables **with** a direct effect, as in the case of parenting practices, or an indirect effect, such as poor marital relations or family size, can interfere with the ability of parents to properly supervise or be involved with their child: 2) a child who has Attention Deficit

Hyperactivity Disorder and is impulsive and difficult to control may be “matched” with a parent who does not have adequate personal and social resources and supports to deal with this child: 3) child maltreatment may be both a cause and an effect and is a symptom of a dysfunctional family in which violence is legitimized: 4) neighborhood factors have an indirect effect and operate in conjunction with family and peer factors. Finally, some resilient children in high risk **situations** will not become juvenile offenders (**Office** of Technology Assessment 1991). Factors that contribute to “**resiliency**” among children exposed to risk factors were described earlier in this paper, and include a good relationship with at least one adult and a supportive school environment.

Adolescent *Mortality and Causes of Death*

Premature death is a **final** extreme outcome of many problem behaviors of **youth**. Many of the antecedents and problem behaviors we have discussed increase the probability that a young person will die before reaching the age of 20. A host of factors predict accidental injuries, including demographic characteristics (age, gender, race and **ethnicity** and social class), risk-taking behavior (alcohol or drug abuse, failure to use safety belts, and failure to use bicycle or motorcycle helmets), and stressful life events (suspension **from** school, failing a grade level, **difficulty** getting a summer job, breaking up with a boyfriend or girlfriend, and the death of a grandparent).

Injury death rates for youth aged 10 to 14 decreased from 23.6 deaths per 100,000 in 1950 to 16.3 per 100,000 in 1987. while rates for older adolescents ages 15 to 19 actually increased over the same period (**Office** of Technology Assessment 1991). Death due to accidental injury leveled off for all youth between **1970** and the **mid-1980s**. For 10- to 14-year-olds, the shift occurred later, between 1986 and 1987.

For young adolescents, the leading cause of death is injuries, including **injuries** from accidents, suicide and homicide attempts, accounting for 79 percent of **all injury related** deaths in 1987 (Office of Technology Assessment 199 1).

According to the **Office** of Technology Assessment (199 1), the single leading cause of accidental injury deaths for 10- to 14-year-olds was vehicle-related accidents, typically with the youth as a passenger. Other causes of accidental injury deaths for this age group include drownings and fires.

Dryfoos (1990) reported suicide and homicide rates for youth 12 to 17 **using** data from the National Center for Health Statistics. In the years from 1980 to 1986, rates increased in each of four groups (African-American and white adolescents in age groups 12-14 and **15-17**), with the largest increases reported among African-American **12- to 14-year-olds** (from .9 per 100,000 in 1980 to 2.3 per 100,000 in 1986).

Overall, 7 percent of deaths in the **12- to 14-year-old** group were due to suicide in 1986 and 6 percent were due to homicides. However, African-American **male** teens are 5 to 6 times more likely to die from homicide than white male teens, and **African-American** female teens have 2 to 3 times the rates of white female teens. **African-American** teens aged 12 to 14 had a homicide rate of 6.8 per 100,000 among males and 2.6 per 100,000 for **females** (Dryfoos 1990). The suicide rate among American Indian adolescents, which was 6.9 per 100,000 population in 1986, was four times higher than the 1.6 suicides per 100,000 for **all** other races among the **10- to 14-year-old** population reported for the same year (Office of Technology Assessment 1991).

Summary of Risk-Factor Prevalence Review

Based on the foregoing literature review, our definition of “at-risk youth” uses a conceptual framework of risk containing four components: risk antecedents, risk markers, problem behaviors, and risk outcomes. **Risk** outcomes and the negative

consequences it is hoped that youth will avoid. They include pregnancy, too-early parenthood and poor pregnancy outcomes: homelessness; **prostitution**; abuse of and addition to alcohol and/or drugs; sexually transmitted diseases including **chlamydia** and AIDS: school dropout: criminal behavior; low self-esteem, depression, suicidal **thoughts** and behavior: death or permanent injury from weapons, other violence, and accidents: physical and sexual abuse, and other morbid conditions. Problem behaviors such as early sexual activity, truancy, running away from home, early use of tobacco, alcohol and other drugs, and associating with delinquent peers are very strong predictors of risk outcomes because the outcomes very often follow from engaging in the behaviors. Most youth programs try to prevent youth **from** engaging in problem behaviors, in addition to trying to prevent the risk outcomes.

Problem behaviors and outcomes are more likely to occur among youth with more or more severe antecedents and/or showing risk markers earlier. These factors are the signs that programs use to judge a youths risk level and need for program services. **Risk** antecedents are those environmental conditions, such as poverty and family dysfunction or lack of parent involvement/support, which consistently predict subsequent negative outcomes for youth. **Risk** markers are behaviors or conditions associated with risk outcomes and which, based on the research literature, may be signals of impending dysfunction. Poor school performance as well as involvement with child protective services appear to be critical markers for future problems among 10- to 15-year-olds, particularly if they occur in combination **with** the antecedent **risk** conditions. Many 10- to 15-year-olds have not yet shown risk outcomes but would be considered at high risk for such outcomes if they have the antecedents and display the **risk** markers. The proposed conceptual framework thus allows for a definition of risk geared specifically towards early detection and **prevention**.

Research **has** shown that many problem behaviors share similar antecedents, **in** particular those we have selected for our conceptual framework. **Dryfoos** (1990) points to six common characteristics that predict **high** risk of the four main problem behaviors of adolescence--substance abuse, delinquency, school dropout, and pregnancy or parenthood. The adolescent at greatest risk is one who: **1) initiates the** behavior early: **2) has low expectations** for education and school grades: **3) is** antisocial, acting out, or truant: **4) has low resistance to peer influences and** associates with friends who participate in the same risky behaviors: **5) has poor** support and monitoring from parents and is unable to communicate **with** parents; and, **6) lives in an urban poverty area.**

. Despite the apparent overlap in antecedents and markers, it is difficult to develop a composite estimate of the degree to which adolescents run a high, moderate, or low risk for engaging in problem **behaviors** or experiencing risk outcomes. At the population level, perhaps the simplest approach is to base a rough estimate on readily available and reliable national data such as the poverty rate, which puts the proportion of youth at risk at about **21** percent (21 percent of children live in poor households). Minority status is associated with higher risk because it is associated with poverty (45 percent of African-American **children** and 38 percent of Hispanic children), especially poverty in neighborhoods with very high poverty concentrations (21 percent of poor children for both African-Americans and Hispanics, compared with 2 percent of white **children--Jargowsky and Bane 1990).**

The simple population estimate based on poverty or neighborhood is very rough. and will include many more youth in the risk pool than **will** ever go on to **experience** risk outcomes. The more precision one desires in an estimate of risk. the more impossible the task becomes, both because antecedents and markers are never **perfect** predictors and the quality of the data gets **significantly** worse (Or **nonexistent**)

the variables more closely connected to problem behaviors or risk outcomes. The **Office** of Technology Assessment (1991) concluded that while Dryfoos' figures are the best reported, the research base **is** not adequate to make reliable risk estimates. The best that can be said **is** that youth who currently display one or both of the risk markers are at the highest risk.

TRADITIONAL SERVICES FOR AT-RISK YOUTH

• Traditional **services** for at-risk youth often address only a single risk marker or outcome, such as adolescent pregnancy and parenting, substance abuse, delinquency, or school failure. The nature of these programs and services, including an account of the Federal role in initiating and maintaining responsibility for their current delivery mechanisms, would require a separate treatise which the reader will not find here. **This** section is intended only as a brief overview of the range of such programs, to establish the context in which we will consider the need for and potential contribution of services integration efforts for young adolescents.

Several key parameters determine the current state of **service** provision for at-risk youth. Many "**traditional**" programs rely on Federal funding sources for at least part of their support. However, most federal health-related spending for services to adolescents are entitlements rather than discretionary programs (**Office** of Technology Assessment 1991). In fact, Federal spending for adolescents under Medicaid dwarfs spending for adolescents by the National Institutes of Health, the Centers for Disease Control, the Alcohol, Drug Abuse and Mental Health Administration, and other DHHS **agencies** combined (**Office** of Technology Assessment 1991). Additionally, the bulk of discretionary funding is in the form of block grants to states: no federal mandate **requires** these block grants to support youth services, and states often do not allocate

dollars for youth-targeted programs. Of other discretionary spending, most programs address **specific** categories of youth problems, typically school problems, adolescent sexuality, drug use, and to some extent, delinquency (Office of Technology Assessment 1991). It is very common for local government funding and private foundation funding to follow the federal model and focus on remedies for specific problems rather than addressing the overall problems of at-risk youth.

There are exceptions to the “categorical” straitjacket, of course, in the form of organizations that have always had youth development as their focus (e.g., Big Brothers/Sisters, Girls, Inc., Boys/Girls Clubs, numerous settlement houses). Many youth-serving organizations organized to promote youth development and functioning operate at the neighborhood level. Their youth development focus is an important, general, prevention-oriented approach for young people that is gaining increasing recognition (Quinn 1992).

The nature of Federal support limits the current system of youth-oriented service delivery (to be discussed in a later section), but also controls the structures of the existing service system for adolescents. As a result of the service delivery system features, most programs for adolescents focus on treatment rather than prevention. Federal programs are mostly categorical--to receive services youth must meet eligibility guidelines, which usually require evidence of serious disturbance or dysfunction. However, as we have argued earlier in this paper, for 10- to 16-year-olds it is more appropriate to define high risk by a combination of risk antecedents and markers, rather than expecting problem behaviors or risk outcomes. **This implies** that prevention rather than treatment services should be the primary means of **servicing** this population (Dryfoos 1990), and we look at traditional programs with an eye on **their** ability to offer appropriate **services** to the younger age group that **is** the focus of this **paper**.

In the following discussion we present the range of traditional services aimed at single problems of adolescence, including both prevention and treatment strategies. Our emphasis is on highlighting the weaknesses and constraints of the present system, particularly its failure to provide for a comprehensive and coordinated approach to the many problems for at-risk early adolescents.

Definition of Prevention Strategies

One of the key distinctions between prevention and treatment is that prevention efforts target the processes that lead to dysfunctional states, rather than the states themselves (Lorion, Price and Eaton 1989). Conversely, treatment services are intended to cure or ameliorate the effects of a problem or condition once it has occurred (Office of Technology Assessment 1991). The generally accepted view of prevention as comprising a triad of efforts--primary, secondary and tertiary--is derived from the public health arena and was proposed by Caplan (1964, cited in Lorion, Price and Eaton 1989). Primary prevention is defined as efforts which reduce the incidence of new cases in the population and avoid the onset of a problem. This occurs by eliminating the "pathogenic sequence" (the processes leading to onset) or by enhancing the individual's ability to fight the pathogen by improving his or her adaptation (the classic inoculation effect). Secondary prevention is not aimed at reducing incidence (the number of new cases in the population) but rather at reducing prevalence, that is, the total number of cases in the population. Secondary prevention efforts involve screening the target population to detect those most likely to continue the dysfunction or pathogen and then intervening early to reduce the likelihood that these high risk cases will continue to display the disorder (Lorion, Price and Eaton 1989). Finally, tertiary prevention efforts seek to minimize the long-term and secondary consequences of a disorder among those already "diagnosed" as having the

particular problem state. While the line between tertiary prevention and treatment **is** necessarily blurred, under the rubric of prevention theory, the tertiary prevention concept posits that it is possible to avoid the long-term consequences by intervening before the disorder becomes chronic.

Cross-Cutting Issues for Traditional Youth Services

Although each single-issue program confronts its own set of issues, Dryfoos (1990) has **identified** a number of elements common to successful programs regardless of the problem area they address. These include intensive individualized attention, community-wide multi-agency collaborative approaches, early **identification** and intervention, locus in schools, administration of school programs by agencies outside of schools, location of programs outside of schools, and arrangements for training. Social skills training components appear to be most **effective** in changing behavior of at-risk youth. It is important to engage the peers and families of participating youth in interventions and to link programs to the world of work.

Traditional, Single-Issue Prevention and Treatment Strategies

In **this** section, we present the range of prevention and treatment services currently in place to alleviate the problems which place adolescents at high risk for negative outcomes. This section **is** organized around specific risk outcomes of adolescence, primarily because the nature of the existing service system is structured in **this** way. As we shall see, this may not be the most effective or efficient method for serving at-risk youth, particularly the younger adolescents (**10- to 15-year-olds**).

School Failure and Dropout

Prevention programs aimed at this issue generally focus on preventing school failure for younger adolescents and **preventing** dropout among older adolescents. Generally, programs which aim to prevent school failure deal with improving the quality of education in order to improve the achievement of all students. Dropout prevention programs include school-based as well as community-based interventions. School-based interventions include special curricula, structural reorganizations of schools, special services and counseling interventions, alternative schools, and **multi-**component programs. Community-based programs involve school-community and school-business partnerships to motivate students for higher achievement and to keep children in school longer.

Most preventive programs strive to provide **individualized** attention, yet few have the resources to provide supportive services. Several programs include family components, and research supports the importance of parental involvement in improving student achievement scores, school attendance, motivation, and in assisting young adolescent to resist peer pressure (**Mazur and Thureau 1990**). While dropout prevention programs try to bolster parental involvement in the educational experiences of 10- to 15-year-olds, few programs address the associated problem behaviors. In addition, little evidence exists to show that traditional dropout prevention programs are effective. Dryfoos (1990) emphasizes the need for more **collaboration** among educational **institutions**, families, and social and health services.

In a review of all school failure and dropout prevention programs, Dryfoos (1990) listed the key elements of successful programs, including: a) variety and flexibility in approaches: b) early intervention: c) **identification** and continued monitoring of high-risk students from K through grade **12**: d) **small** size of school and classes: e) individualized attention and **instruction**: f) program autonomy and clear

lines of responsibility for program planning and implementation: **g**) committed teachers who have high expectations for their students and are sensitive to cultural diversity: **h**) strong vocational components to strengthen the link between **learning** and working: **i**) intensive, sustained counseling for high-risk students, **including** counseling, social and health services on-site: **j**) positive, safe school climate with a “family” atmosphere; **k**) integration between community and school in planning of programs. However, Dryfoos (1990) **also** notes that no consensus exists on the benefits of several preventive interventions intended to reduce school failure and dropout. These interventions include: alternative schools, supplemental programs authorized by Chapter 1 of Title I of the Elementary and Secondary Education Act of 1965. extending the school day or school year, **financial** incentives for school completion, and school choice.

School-Based Interventions. There are some important school-based prevention programs which begin during early childhood and which have documented effects on later school achievement and success. Dryfoos (1990) **summarizes** the success of early childhood and family interventions such as the Carolina **Abecedarian** Project, the Brookline Early Education Project (BEEP), and the Missouri Parents as Teachers program. In all of these efforts, early intervention to provide cognitive and social stimulation for the infant and preschooler is coupled with intensive **home-**visiting or center-based programs for parents to improve parenting skills. In fact, there are a host of programs under the rubric of “family support and education programs” (Weiss and Jacobs 1988) which appear to offer some early preventive effects by improving the child’s cognitive and social skills so that early school success is assured.

Curriculum-based programs include any interventions which improve teaching techniques, use “laboratory” teachers to conduct diagnostic testing, spend individual

time with **low-achieving** students, or develop or adopt more appropriate or challenging **instructional** materials (Dryfoos 1990). Activities supported by Chapter 1 are curriculum-based interventions which vary greatly by school and school district, Most involve some type of remedial attention to low-achieving students. The 1986 evaluation of Chapter 1 activities found that after a year of **remediation**, the gap between advantaged and disadvantaged students was reduced. However, Chapter 1 students' scores were still below the median, and further remediation did not help. Finally, some curriculum-based programs are experimenting with a computer-based, individualized instruction approach to teach basic skills.

There are also school-based interventions that involve a **reorganization** of the institutional structure, for example, the Comer Process or system, as well as the Success for All demonstration in Baltimore. the Region 7 Middle School in Detroit, and the Transition Project. Some of these interventions are able to use Chapter 1 resources if the proportion of Chapter 1-eligible students in the school is high enough (usually around 75 percent) to bypass the usual student-by-student Chapter 1 approach. These interventions attempt organization-wide changes, drastically affecting how decisions are made for the school, curriculum content, and the way teaching is done, The changes are intended to make the school a more productive environment for poor minority children and other at-risk students. The evidence so far is that many of them succeed in reinvigorating the school environment, increasing the participation and enthusiasm of teachers, parents, and children, and improving student performance (Schorr and Schorr 1988).

Another approach is the provision of special school-based services and counseling. Examples include the well-established Primary Mental Health Project (first in Rochester, NY. and now in hundreds of schools), the Absentee **Prevention** Program (Beaver County, PA), the Detroit program titled "Twelve-Together," and

versions of a Student Assistance Model (SAM) practiced in Connecticut and Pennsylvania. In general, these special services' attempt to identify children with problems adjusting to school or high absenteeism in primary or middle school grades. They provide participants with a combination of individualized attention, support and group counseling. The programs are school-based, and use combinations of psychological services, tutoring, parental involvement, teaming (social services, guidance, nursing, academic, administration), peer counselors, group counseling/rap sessions, and academic enrichment. They are generally coordinated by the school guidance counselor or school psychologist.

Finally, many school districts provide alternative programs for high school students who do not fit into the mainstream (Dryfoos 1990). Examples of these schools include the Peninsula Academies and the Reuther Alternative High School (REAL). Peninsula Academies are "schools within a school" in two Redwood City, CA high schools. They offer specialized and enriched vocational **education in high-**employability topics such as computers to 10th-12th graders at high risk of dropout. Participants are more likely to graduate, and with higher academic performance, than a comparison group. REAL is an alternative high school in Kenosha, WI. for high-risk youth. Its academic offerings are supplemented by community work with associated academic training (e.g., in day care centers), and group counseling. In one review of eight alternative schools for high-risk youth in New York City, Foley and Crull (1984) found that students were performing better academically than they had in their previous schools, and their attendance and completion of academic credits has also improved during the entire four semester period of the study.

Dryfoos (1990) also identifies a number of innovative school-based programs that may be considered initial efforts at comprehensive service integration since they

are system-wide and involve multiple program components, such **as the** Pueblo, CO District 60 system. These are discussed in the section which follows,

Community-Based Programs. Many community-based programs designed to prevent school failure and dropout involve community-wide efforts and partnerships between the school and various community institutions and organizations, including business (the Adopt-A-Student project in Atlanta). The best known of these projects is the STEP program, **titled** Summer Training and Employment Program, initiated by a nonprofit community organization **in five** communities in collaboration with the school systems. This project involves intensive **remediation, life-skills** training **which** emphasizes responsible social and sexual behavior, and half-time summer job placement. Another example of a school-community partnership currently in place is Eugene **Lang's** "I Have A Dream" project, which provides participants with subsidies for college study if they graduate from **high** school. It also provides individualized attention from the founder, support from a full-time social worker, services from Harlem's Youth Action Program, and volunteer mentors. Most of the original participants (from a sixth-grade class in the East Harlem school which Lang **himself** attended) graduated from high school. In addition, Lang's example has drawn other private entrepreneurs and at least one state government (New York) into similar **projects** in at least 22 cities around the country.

Federal Support for Programs and Services.⁷ The primary Federal vehicle for assisting schools in meeting the **educational** needs of disadvantaged **children** and **youth** has been grant programs authorized by Chapter 1 and **administered** by the Office of the Assistant Secretary for Elementary and Secondary Education at the **U.S.** Department of Education. Additionally, this Federal **office** also provides for the

⁷ This and **similar** sections on Federal programs in the **discussion** of other single-focus problems are meant only to identify the federal programs relevant to the particular youth problem under discussion, and not to relate the full history, scope, or impact of the Federal efforts.

education of homeless children and youth under the Stewart B. **McKinney** Homeless Assistance Act, Indian education programs authorized by the Indian Education Act of 1988, training for **elementary** and secondary school teachers in math and science through the Dwight D. Eisenhower Mathematics and Science Education Act, the Hawkins-Stafford Amendments of 1988, and drug abuse education and prevention coordination in States and communities as authorized by the Drug-Free Schools and Communities Act of 1986 (**Office** of Technology Assessment 199 1).

A number of Federal policy initiatives target older adolescents who did not complete their high school education. The U.S. Department of Labor, Employment and **Training** Administration, funds employability, employment and training programs for disadvantaged older adolescents (generally 16 and older) through the Job Training and Partnership Act (**JTPA**). DOL also implements the National Community and **Service** Act of 1990. which is designed to enhance **opportunities** for national and community service. Under Title II of this Act, adolescents who have already dropped out of school are the target group for special grants such as Serve America. These programs encourage their participation in voluntary and community-based organizations or domestic building projects that will develop community facilities at the same time that adolescents' improve their job skills. Another section of this legislation gives priority to tutoring services to educationally disadvantaged students receiving services under chapter 1.

Adolescent Pregnancy

As Dryfoos (1990) notes, "it would a gross overstatement to imply that there is a consensus in the United States about what to do about adolescent pregnancy." Programs aimed at preventing adolescent pregnancy provide a range of services to young adolescents. Those in school settings use classroom curricula and **school-**

based clinics: those in community settings use peer mentoring projects, family planning clinics, and youth agencies. Most experts agree that family involvement in prevention programs for 10- to 15-year-olds is extremely important. Within this age group, a youth's values and beliefs are largely defined by the attitudes and behaviors they learn at home. Parental involvement components of pregnancy prevention programs encourage parent-child communication about sex-related issues. One study reported that fifteen of twenty-four abstinence programs evaluated included parents in the intervention (White and White 1991). Although one study found that increased parent-child communication about sexuality issues may not lead to a reduction in sexual activity or unintended pregnancy (Jorgensen 1991), most programs report the increase in intergenerational communication as a program benefit.

A number of general concepts appear to guide the most successful of these prevention efforts, including: a) early intervention, no later than the middle school years: b) a package of services that includes both capacity-building and life-option components: c) public commitment by local officials and community leaders to the prevention goal: d) the inclusion of males: e) services that maintain the youth's confidentiality and privacy: f) better outreach, improved access to contraception and effective follow-up of contraceptive users: g) improved access to pregnancy testing, counseling and abortion services: h) involvement of parents wherever possible (not only in family life education approaches, but also in social skills training approaches): i) locating prevention efforts in the schools: j) implementing new curricula that include attention to social skills and life planning (which in turn requires better teacher training): k) involvement of outside community organizations in partnership with the schools, l) availability of crisis intervention and referral mechanisms; and finally m) an array of comprehensive services for high risk youth, including alternative schools, preparation for employment, job placement and case management. Below, we

summarize **Dryfoos'** review of prevention programs for adolescent pregnancy and parenthood.

School-Based Interventions. Sex education alone does not influence behavior and does not change the rate of adolescent sexual activity or contraceptive use. We discuss three types of school-based interventions: life-skills and other curriculum enhancements: counseling approaches, and school-based clinics, The most successful program models are curriculum-based. They involve **life-skills** training to learn problem solving and assertiveness skills, plus **life-planning** approaches which emphasize vocational guidance and training adolescents to make more rational decisions in school, social, and family settings, An example of such a **curriculum-based** approach is the Life Skills and Opportunities model (**LSO**). LSO is part of the comprehensive school remediation Summer Training and Education Program (STEP): Public/Private Ventures implements it in regular classrooms with the cooperation of the school. The LSO component is geared specifically to a low-income, minority population and focuses on the world of work and issues of sexual and reproductive development, feelings and behaviors. According to Dryfoos (1990). evaluation results of the LSO curriculum show gains in knowledge of contraception and a greater likelihood that participants will use **contraception. Differences** remained by the time of a follow-up survey, but had eroded. Finally, there are other curriculum-based programs, including the "Saying No" program, which helps young adolescents resist peer pressure and postpone sexual activity through participation in ten group sessions. Preliminary results of "Saying No." which was developed at Emory University, suggest that fewer participants had initiated sex by the end of the school year than non-participants.

Other school-based interventions are not curriculum-oriented but emphasize the provision of special services and counseling, including teen outreach and

enrichment programs for high-risk youth. These programs are multi-component and usually include classroom sessions, small group programs consisting of workshops and field trips, and individual counseling and referral. Examples that appear to help youth improve school performance and avoid unwanted pregnancies include the Fifth Ward Enrichment Program in Houston, the Teen Outreach Project in St. Louis, and the Teen Choice program in New York City.

Another form of school-based intervention gaining popularity is school-based health clinics, of which there are now close to 200 around the country. School-based health clinics offer comprehensive health-care services to adolescents, including contraceptive counseling and family planning. One study reported a significant delay in the initiation of sexual intercourse among participants in a health clinic based in a predominantly black, inner-city Baltimore community (Zabin, Hirsch, Smith, Streett, and Hardy 1986). Experts cite the specialized training of health care providers as a major factor in the success of school-based health clinics (Jorgensen 1991; Seltz, Apfel, and Rosenbaum 1991). According to Jorgensen (1991), the school-based clinics model represents the most effective model of pregnancy prevention services for adolescents. Factors that contribute to the clinics' success include: a) accessibility, availability, and confidentiality; b) exclusive focus on adolescents; c) combining contacts in classrooms with contacts at the clinic; d) primary-care focus in the clinics; e) linkage of staff to the school and the community; f) one person consistently present who is known to the adolescents and is approachable (Dryfoos 1990).

Community-Based Programs. Many adolescent pregnancy and pregnancy prevention programs are located in the community rather than in the schools. Such programs may be operated by family planning clinics, health departments, hospitals, youth-serving agencies, or freestanding organizations created expressly for the purpose. Some of these programs, such as the Project Redirection sites (originally in

Boston, Harlem, Phoenix, and Riverside, CA; subsequently in seven additional locations] and the many programs supported by the **Office** of Adolescent Pregnancy Programs-DHHS, are examples of comprehensive SI, which we discuss below. In addition services available on-site, which vary considerably across programs, the primary program sites maintain cooperative arrangements with other local agencies and services to provide multi-component/ multi-agency programs.

Some communities have mounted community-wide “saturation” efforts designed to reduce teenage pregnancy. One such effort in a rural South Carolina Community (School/Community Program for Sexual Risk Reduction among Teens), another in East Central Georgia and neighboring areas of South Carolina, and a third in Dallas (IMPACT 88) used combinations of massive public education campaigns, curriculum changes and corresponding teacher training, teen “hotlines” to distribute information and ask questions, peer counselors and volunteer mentors, and several other techniques. All three communities witnessed reductions in teen pregnancy and/or birth rates while **similar** statistics in **parallel** communities rose during the same period.

Federal Support for Programs and Services. There are, of course, many services for pregnant and parenting teens that do not focus on prevention. Adoption and abortion services provide pregnant adolescents with alternatives to parenthood. Health services provide prenatal care and other maternity services to improve pregnancy outcomes for teens who are often at high risk of bearing premature or low birthweight babies. Services such as education, job-training, social support, parenting skills, housing, child care, or **transportation** are offered to try to reduce the negative social and economic consequences that frequently accompany early **childbearing** (Office of Technology Assessment 199 1).

The Adolescent Family **Life** Program under Title XX of the Public Health Service Act is the Federal program that most directly addresses these service options. Other Federal programs available to ameliorate the long-term consequences of adolescent pregnancy and childbearing include Medicaid, Aid to Families with Dependent Children (AFDC), the Maternal and Child Health Block Grant Program under (Title V of the Social Security Act), the Child Support Enforcement Program (**established** under Title **IV-D** of the Social Security Act), and food and nutritional assistance programs such as the Special Supplemental Food **Program** for Women, Infants and Children (**WIC**) and the Food Stamp Program, job training opportunities under JTPA, child care and other services under the Social Services Block Grant, services under the Family Support Act of 1988, and various housing programs administered by the Department of Housing and Urban Development.

Substance Abuse

The literature on substance abuse prevention is ‘extensive, diverse, uneven, and difficult to summarize’ (Dryfoos 1990). Few studies consider all types of substance abuse, including cigarette smoking, alcohol abuse, and abuse of other drugs. There is also substantial disagreement among researchers about whether prevention programs should try to promote abstinence or responsible behavior and decision-making, and whether the prevention efforts should be directed solely at substance use behavior and decisions or should also include attention to ameliorating the effects of risk antecedents such as family dysfunction or neighborhood influences (Dryfoos 1990). Finally, some prevention approaches rely on enforcing restrictive **laws** to reduce use, rather than on programs that try to change the risk factors in the lives of potential users.

According to Dryfoos, the elements of successful substance abuse prevention programs include: a) an approach that views substance abuse in a broad social and environmental context; b) comprehensive, community-wide prevention efforts directed at all major institutions; c) multiple interventions; **d)** schools (particularly middle schools) as the central agency for locating prevention programs; e) a long-term approach starting with young children and age-appropriate components; **f)** teacher training; **g)** full-time substance abuse coordinator; **h)** social skills training, including coping and resistance models; **i)** peer-led programs; and **j)** individualized attention and intensive counseling. Some unresolved issues in this field include the effectiveness of mass-marketed, packaged curricula; targeting programs only at high risk students; and the current lack of programs dealing **with** the “new drugs” such as crack.

School-Based Programs. Substance abuse prevention programs are implemented in schools primarily through curricula and school-based clinics. One author describes school-based programs as the “workhorse” of adolescent substance abuse prevention because schools provide the greatest access to youth in a natural setting (Logan 199 1). Substance abuse curricula provide information on the adverse health consequences associated **with** substance use, as well as training in life skills or **social** problem-solving. Peer counselors and parental involvement are often used to supplement the curriculum to provide support and to help at-risk young adolescents to resist peer pressure. Examples of curricula focused on substance abuse prevention are: the Life Skills Training Program (**LST**--a curriculum used in many locations), Interpersonal Skills Training (originated in Washington, now used in a number of places), the Alcohol Misuse Prevention Study (AMPS--a curriculum that teaches **youth** **how to drink, not not to drink**). the Drug Abuse Resistance Education (DARE--begun **in LOS Angeles** and widely replicated), and the Growing **Healthy** program developed by

the American Lung Association and promoted by the National Center for Health Education.

School-based supportive services and counseling programs usually include individual and group counseling, involvement of parents and work with community groups, referral to community treatment programs, and training of neighborhood and community leaders to be sensitive to student problems. The best known example of this type of program is the Student Assistance Program (SAP) used in a variety of school districts during the past decade.

A number of school-based clinics also have substance abuse prevention as a primary goal. These health clinics are typically located in the school and place a high priority on teaching healthy life-styles and reducing risk-taking behavior. The Adolescent Resources Corporation (ARC in Kansas City) is an example. Another school-based approach borrowed from the delinquency prevention field involves school teams. The teams include five or more members (including parents, school staff, students and community residents) who are trained by professionals to coordinate a number of activities in schools. In one model, the ninth-grade curriculum focuses on the social and legal ramifications of alcohol use and the school team plans activities such as Prom Week pledges, parties, and concerts to promote abstinence and heighten community awareness of substance abuse (Dxyfoos 1990).

Community-Based Programs. Some experts believe that school-based prevention programs may teach a child to resist peer pressure. but they are unable to address the effects of personality and environment on a youth's decisions to use cigarettes, alcohol or other drugs. These experts recommend comprehensive prevention programs that focus on the family unit (Lee and Goddard 1989). In such programs, family life educators assist families in identifying strengths and ways they can improve their weak points. The theory is that strengthening the family, the unit

in which children **first** learn social and coping skills, will help youth learn to resist environmental and peer pressures to use alcohol and drugs.

The best-known community-based program for substance abuse prevention listed by **Dryfoos** (1990) is “The Door” in New York City. This is a private, nonprofit multi-component youth center which addresses the multiple problems of high-risk youth through a range of services. Another community-based prevention project which involves over 100 schools in Kansas City and Indianapolis, called the **Midwestern Prevention Project (MPP)**, addresses resistance and competence skills as well as environmental support strategies that involve youth, families, and communities. Again, this type of program is probably closer to the comprehensive, service integration model of innovative services and displays the range of such programs addressed to a specific adolescent problem. Another well-known community-based program is the Cambridge and Somerville Program for Alcoholic Rehabilitation (**CASPAR**), which provides age-appropriate school curricula for grades K through 12, alcohol education courses for teachers, school- and community-based alcohol education workshops for youth, training workshops for peer leaders, training and consultation with local youth agencies, and **community** education activities.

Dryfoos (1990) noted that “the history of substance abuse prevention is replete with failed models.” According to her review, the programs which appear least likely to succeed include those that focus narrowly on only one avenue of change. Avenues that have, by themselves, failed to produce results include information or cognitive approaches, attitude change, self-esteem enhancement or affective methods, scare tactics, and “Just Say No to Drugs” media campaigns.

Some more extensive community-based prevention programs have shown recent promise, however. Community-wide drug abuse prevention programs in Kansas City and Indianapolis which use a multi-pronged approach through schools,

parents, media, and community groups show that participants **achieved** “reductions of at least 25 percent in cigarette smoking, 20 percent **in drinking** and **30 percent in marijuana use**” compared to non-program participants (HHS News 1990). A more guarded outlook is presented by evaluation results from eight projects using various approaches (some of the interventions were as short as seven sessions or **13 weeks of participation**). Lorton and Ross (1992) summarize the evaluations, supported by DHHS’ **Office** of Substance Abuse Prevention (OSAP), as “promising,” but none of the programs had enough history or rigorous enough’ evaluation designs to observe changes in participants’ use of alcohol or other drugs. Finally, Quinn (1992) presents positive results of three evaluations of multi-site substance abuse **prevention** programs sponsored by neighborhood youth organizations (Girls, Inc., Boys/Girls Clubs, Big Brothers/Big Sisters). All three provide youth and their families with an ongoing location where they can participate in activities they enjoy. All three **evaluations** showed **significant** preventive effects for participants and sometimes also for the neighborhoods (less drug activity, fewer shootings, etc.) (The Boys/Girls Club project/evaluation is also one of the OSAP projects.)

Treatment Programs and Federal Support. There is no one system to treat psychoactive substance abuse problems among U.S. adolescents (**Office** of Technology Assessment 199 1). Low-income adolescents usually must rely on local public services, which vary widely across different states depending on the funds available for inpatient and outpatient services, policies regarding private health insurance plan coverage for substance abuse, and the use of Medicaid funds to **support substance abuse** treatment (**Office** of Technology Assessment 1991). In addition to the **school-**based programs discussed above, some of which deal with addiction itself rather than the precursors of addiction. many adolescents connect to substance abuse treatment through juvenile justice agencies. For example, a “diversion” plan requires an

adolescent in **the juvenile** justice system for criminal or status offenses to **participate** in a substance abuse treatment program as an alternative to the adjudication process. One example of such a program is the Treatment Alternative to Street **Crime**. Evaluations of diversion programs indicate that mandated treatment can be effective as long as the adolescent is able to retain some degree of decision-making within the treatment program (**Office of Technology Assessment** 199 1). Finally, other adolescents are referred to treatment for substance abuse problems by their primary care physicians or by the mental health treatment system.

. DHHS has the largest role of any Federal agency in substance abuse prevention and treatment for adolescents, principally through **ADAMHA** (Alcohol, Drug Abuse and Mental Health Administration) which is part of the Public Health Service (**PHS**). Other PHS agencies such as the Centers for Disease Control, the Indian Health Service, the Health Resources and Services Administration, and the **Office** of Disease Prevention and Health Promotion, and the Administration for Children and Families are also involved. In 1986, the Anti-Drug Abuse Act required the U.S. Department of Education to become involved in drug abuse prevention by providing leadership, dissemination of information, and technical and **financial** assistance to states (**Office of Technology Assessment** 199 1). Also in 1986, the Drug-Free Schools and Communities Act authorized the Department of Education to coordinate drug abuse education and prevention activities in states and communities In addition, **ACTION**, **the** Federal agency that coordinates volunteer activities, has taken an increasing role in the drug war through the Drug Alliance grant program. This program **provides** grants of up to \$40,000 for projects that use unpaid volunteers to **provide** positive peer activities for youth, including serving as mentors for high-risk youth. Finally, the U.S. Department of Housing and Urban Development, through the **Youth Sports Programs** in public housing developments provide grants for encouraging recreational

programs as alternatives to substance-abuse activities. The U.S. Department of Labor, through its Job Corps and Youth Opportunity Unlimited (YOU) programs also addresses issues of adolescent drug use.

Delinquency

There are few examples of traditional delinquency prevention programs, primarily because issues of adolescent crime are most often addressed in dropout prevention or violence **prevention** programs. Further, research to date **suggests** that efforts to prevent delinquency among adolescents have been largely unsuccessful, and one expert recommended that **traditional** delinquency prevention efforts be abandoned. Dryfoos (1990) summarized the literature on programs that do not work and listed among these preventive casework, group counseling, pharmacological interventions, work experience, vocational education, probation **officers**, the use of traditional street corner workers, social area or neighborhood projects, and “scaring straight” efforts. There appeared to be some consensus around what programs are likely to be effective, including: a) broad-based goals which go beyond delinquency prevention: b) multiple components: c) early interventions, prior to adolescence: d) involvement of schools: e) direct efforts at institutional rather than individual change: f) individual intensive attention and personalized planning: g) good quality control over treatment integrity: h) long-term follow-up and continuity of service.

One set of promising preventive strategies for reducing the risk for delinquency consists of early childhood intervention programs such as the **Perry** Preschool Project and the Syracuse Family Development program. These programs enhance child cognitive development to improve educational achievement and also work with the parents to **improve** parenting skills to alleviate family dysfunction, a major predictor of delinquency. Another set of prevention programs, geared more **specifically** to young

adolescents, family-focused interventions such as the Oregon Social **Learning Center** model (Dryfoos 1990). The intent of these programs is to improve **parenting abilities** through behavioral training techniques and modeling procedures, in order to break the “coercive cycle.” This cycle involves a pattern of child non-compliance and inadequate parenting, leading in turn to more destructive child behavior. **These** parent management programs teach parents how to deal consistently **with** their children, how to change negative interaction patterns, and how to administer rewards and punishments.

School-Based Programs. Programs offered through school curricula involve improving the child or young adolescent’s problem-solving or social skills through a combination of didactic and behavior modification approaches. Examples of these programs include Michelson’s Behavioral Social Skills Training (**BSST**). Other curriculum-based programs involve training in moral reasoning or didactic educational campaigns designed to build students’ conceptual and practical understanding of the law and legal processes, such as the Law-Related Education (**LRE**) program.

Another class of school-based preventive programs focus on making changes to structural and institutional aspects of the school through teacher training in classroom management, cooperative student-staff learning arrangements, the school team approach, alternative schools, and special services and counseling programs. Classroom management--programs involve **instructional** strategies, such as proactive classroom management, interactive teaching and cooperative learning, that aim to promote greater bonding of the student to the school, increased achievement, and antisocial behavior (Dryfoos 1990). Cooperative learning arrangements involve greater participatory decision-making between staff, parents, and student groups, and student team teaching in which heterogeneous students are placed together to work

cooperatively on academic assignments. The school team approach involves teams **consisting** of parents, students, school **staff**, and **community** residents who are trained to deal with problem behaviors in the school by acting as a group and developing joint action plans. Finally, as discussed earlier, alternative schools involve innovative institutional change, such as “schools within a school” or reorganizing of schools in high-crime areas to promote learning, bonding, and prosocial behaviors. Some interventions in these alternative schools include peer counseling, leadership training, parent involvement, social skills lab classes, token economies, vocational education, and school climate improvement.

School-based special services and counseling types of programs typically involve early screening and detection of high **risk** children and the use of “trainers,” who meet individually or in small groups with these students. Sessions deal with ways of reducing antisocial behavior and solving interpersonal problems without resorting to violence. Other violence prevention programs for at-risk youth include school-based curriculum and community-based programs. School-based curriculum programs focus on stress management and coping skills, Youth are encouraged to resist pressures to join gangs and engage in violent **activities**. Some programs use **role-playing** for students to act out their feelings when confronted with **difficult** or stressful circumstances. Unfortunately, the gang represents the only organized peer group for many minority youth (Ostos 199 1). Gang prevention programs, a subgroup of violence **prevention** programs, work with youth and their families **in** the schools and **in** the community to educate them about **constructive** alternatives to gang membership.

Community-Based Programs. Some school-based programs enlist the expertise of community agencies to develop curriculum programs and to train teachers to present the materials in the classroom. Community theater groups perform skits that

•

teach youth to resist the pressure to join gangs. A program of the Boston Department of Health and Hospitals--the Health Promotion **Program** for Urban Youth--promotes the use of a violence prevention curriculum not only in the classroom, but **in the** community at large Prothrow-Sith **1991**). Public housing projects, boys and girls clubs,, and neighborhood health clubs use the violence prevention materials. Project staff recently began training health care providers about dealing with adolescents who engage in violence.

Dryfoos describes a number of other community-based program models, including targeted outreach, the use of juvenile court volunteers, and collaboration between agencies such as child and family service agencies and runaway and homeless youth shelters. Employment-oriented programs such as the Conservation Corps provide work experience, educational **remediation**, and the **opportunity** to live away from home with other young adults in a structured environment.

Neighborhood-based organizations have developed delinquency prevention demonstration projects that involve strengthening the bonds between family, school, peers, and the community through increased supervision of youth, liaison with community organizations, and the development of specific projects for families and youth. Examples of projects include mediation with schools and law enforcement agencies. youth councils, and community service opportunities. Other **neighborhood-**based interventions work with the local gangs to reduce violence. Finally, adolescent **diversion** projects provide an alternative to incarceration for youth who have already committed delinquent acts but have not yet been formally adjudicated. One **example** of **this** approach is the Adolescent Diversion Project developed at Michigan State University. The ADP provides empowerment skills to **high-risk youth** and their **families** that help them to change the behaviors that create problems for them. **Positive** evaluation results (lower recidivism than a control group) were attributed to

the extensive involvement of the juvenile justice system, including police stations and courts: long-term community commitment; placement of the youth within their own environment: and careful monitoring by staff.

Limits of Traditional Programs

Over the years, traditional single-focus programs have **encountered a number of** limits. First, they have often recognized that the social and supportive services they offer do not address some of the most pressing needs of their clients. Second, they have found that when they identify a need they cannot meet with their own resources, they sometimes have trouble getting other agencies in the community to help **their** clients. The problem may be eligibility--the client is not poor enough, or not **officially** part of the target population of the agency with the resources, or not the right age, or does not have the right address. Or the problem may be availability--there are only so many day care slots, housing vouchers, and so on, and they are all taken. Or the problem may be accessibility or appropriateness--the **services** are not hospitable to youth, or cannot be reached by public transportation, or are not open at the right hours or on the right days.

Frustration with these barriers to serving their clients set the stage for programs to try to expand their own services to cover the most important gaps: to begin negotiations with referral agencies to try to smooth the process of getting **services** to clients across agencies: or both. The former are program efforts to become **more** comprehensive under a single roof; the latter are efforts to achieve more formal or informal integration of the service agency network within a **community**. The remainder of this paper addresses issues posed by services integration efforts.

ISSUES IN SERVICE INTEGRATION

Integrated service models to deliver comprehensive services to youth and their families through collaboration, cooperation, and coordination of efforts have received increased attention recently in response to the many and varied service needs of youth, and the frustrations encountered by traditional single-problem approaches to service delivery. Calls for services integration (**SI**) have come from various sources, using varying terminology and different meanings for the same terms. Below we define the meaning of the terms we use here for the sake of clarity and not to imply the endorsement of one approach or viewpoint over another.

Attempts to serve at-risk youth have encountered all of the same service system issues that plague current efforts in the United States to serve any target population in a way that meets all of their needs. These issues include:

- **Comprehensiveness**--the existence in the community service system, or in the intake agency itself, of the full range of services needed to address the needs of the target population.
- **Service Levels**--enough of the appropriate services to assure that everyone in all the probable target populations in the community could use the service **if** necessary.
- **Service Integration**--the ability of the agency through which a member of the target population enters the system to assure that its clients receive the services they need, regardless of which community agency offers the services, because the intake agency has developed the necessary relationships to assure access with other service agencies.

It is theoretically possible to have a comprehensive system that is not integrated, as when a single agency (usually private) has the resources to provide everything its clients need. It is also possible to have an integrated system that is not comprehensive, as when an agency serving at-risk youth and their families only negotiates arrangements with those services it has found to meet the most common needs of its clients, such as income maintenance, child care, recreation, and

education services. It may not, however, have similar well-established arrangements with agencies with which it does not interact so routinely.

Finally, it is possible for a given community to have the entire array of service types, and to have regularized interagency arrangements for assuring that clients can access the services, and **still** not have enough of some services to serve all the people who need them. This last circumstance probably characterizes most communities, and is a limiting condition for the possible impact of any SI effort. But a systematic SI effort can make the need for more services so apparent that legislatures and other **funders** may respond by supporting service expansions where need has been documented and a structure is in place to assure that the additional services will be well used.

When we began this investigation we used ***service integration (SI)*** to refer to procedures and structures that help several service agencies coordinate their efforts to address the full range of service needs presented by youth and families in an **efficient** and holistic manner. While relatively few existing systems actually meet all the elements of an ideal SI model, we can propose several key characteristics that should be present in such an SI system for at-risk youth. These include:

- **An approach to helping at-risk youth that sees each youth for himself or herself, and also sees the youth as part of a family, a neighborhood, and a community** that may in turn be influenced to reduce the risk that a youth will participate in problem behaviors or experience risk outcomes.
- **A comprehensive, individualized assessment** at or near the point of intake. that is conducted for each youth and family, to identify the full range of his or her individual and family **service** needs.
- **A coordinated service plan** that, based on the needs identified, is developed to ensure that all needs are addressed in an **efficient** fashion by the program(s) best suited for the task.
- **Institutionalized interagency linkages** that ensure that service referrals result in actual service delivery. This may entail an interagency case management function, co-location of services at a single site, and/or sharing of other resources among programs.

- Follow up on service referrals,, to ensure that services are delivered in an appropriate manner and that the program coordination structures are functioning effectively.

In reality, relatively few programs meet these formal criteria for SI. However, a considerably larger number of programs meet the **spirit** of the assessment, **service** plan and follow-up criteria through intimate and regular connections **with** young clients and their families. They also meet the interagency linkage criterion through informal but effective arrangements with other **service** agencies, which they have developed over the years of working to meet their clients' needs. **Their** "failure" is more likely to be with documentation than with performance in getting services to clients. After visiting a number of programs, we want to propose another aspect of service integration: the ability of a program to fill the gaps in service **identified** through the joint efforts of community agencies. The resulting program may be the agency to which everyone else refers youth because the referring agencies cannot meet all the needs of these clients. The program has developed components cooperatively with the referring agencies to meet these identified needs. The formal interagency arrangements are for referral into the program rather than for referral out from the program. Once the youth reaches the program, it may be that not much by way of multi-agency service use occurs -- but it does not need to.

We **think** programs of this type deserve to be called an SI program or even better an SI community: the program is the glue that holds the system together. Some of the programs described in Volume I of this report are of this type.

Services to benefit children and their families have traditionally been placed into one of four service systems: educational services, health services, social services, and the juvenile justice system.

History of Service Integration

Interest in and efforts at youth-centered service integration in both school and community settings have ebbed and flowed over the years, with varying degrees of commitment and success (Tyack 1992). Most public programs aimed at enhancing conditions for youth and families over the last half-century have been focused on **only** one or a few problems from the perspective of a single service system such as welfare or criminal justice. These traditional programs often dealt only with the youth, rather than addressing multiple needs of their families and their neighborhoods (Ginzberg et al. 1988).

The 1960s saw a marked reawakening of interest in and experimentation with both comprehensive and integrated service delivery systems. The Federal government invested a good deal in human services programs **as** part of the 1960s 'War on Poverty.' A very important aspect for SI of the programs from this era is that they were designed to be developed from the bottom up to meet the needs of specific communities. Funding structures deliberately bypassed state government agencies, which were seen as unable to respond to local community needs. National programs such as Neighborhood Service Centers, family planning agencies, and Head Start had a decidedly community orientation. Some were able to evolve into comprehensive programs, and some incorporated some type of SI structure. Although these programs did not eliminate poverty, many did succeed in pioneering a **community-**based approach to services, flexibility in meeting local needs, and attention to the larger context of client problems in family, neighborhood and community.

The 1970s saw a more modest approach to such efforts (Edelman and Radin 1991; Kusserow 1991). Service integration efforts of the 1970s focused more on coordination of categorical programs 'at the Federal level and funding of smaller demonstration projects at the community level than on large-scale system reform. By

the late 1970s and through the 1980s. the opportunity for SI initiatives devolved largely to state and local governments. Block granting of Federal social services funding in 1975 (Title XX) and of 30 additional categorical programs in 1981 eliminated many program rules and technically gave states greater **flexibility** to provide services out of a larger pool of resources than any categorical program had previously enjoyed. However, the concurrent funding cuts in the 1981 restructuring severely curtailed state efforts to innovate. Simply maintaining service levels was hard enough.

The recent renewed interest in SI is attributable to several factors. There has been a renewed appreciation of how ineffective it can be to deliver services in a fragmented, problem-oriented fashion. In **addition**, some integrated approaches to service delivery have shown positive results and served as models for this type of approach (Berreuta-Clement et al. 1984). Advances in research on adolescent development and ecological and family systems theories (e.g., Bronfenbrenner **1979**) **have** also helped **revitalize** interest in service delivery systems that respond to both **youth** and environment using a more integrated, holistic approach. So has the concerted effort to address the complex problem of long-term welfare dependency, culminating in the Family Support Act of 1988 (**FSA**). **The** FSA recognizes the need to address a wide **variety** of issues a family may face in trying to achieve **self-sufficiency**, and directs states to develop systems to meet many family needs. Many of the family needs recognized by the FSA are the same ones that **youth-serving** agencies try to help families handle. Finally, spartan fiscal conditions on the state and Federal levels have created an impetus to service integration (**Corriea** 1992).

Barriers to Service Integration

SI efforts face many barriers, including professional training and orientation, administrative procedures, eligibility rules, and the categorical nature of **funding**. **Service** agency staff are typically trained in rather narrow, specialized traditions such as mental health or criminal justice services, and may not feel comfortable dealing with other issues or working within an interagency framework.

Administrative and bureaucratic procedures often obstruct SI efforts, agencies may insist on following their own intake and case processing procedures, and **confidentiality** requirements may limit their ability to share information about clients with an **SI** team. Categorical funding from government agencies, foundations, or other institutions also perpetuates single-issue programs. As long as legislatures and funders structure programs to address specific issue areas, single-issue programs will continue to provide **services** and have **difficulty** making their services available to populations not specified by their mandate.

Another barrier is that categorical programs usually focus on *problems*, and tend to support short-term efforts. Programs that try to solve problems quickly and then close the case are not likely to meet the needs of youth: first, they are not geared toward preventive interventions; second, they often have little staying power.

Access to services due to the fragmented nature of single-issue service delivery was identified by the Office of Technology Assessment (1991) as a critical problem for adolescents. Adolescents most likely to have access problems are those who: lack any or adequate health insurance; are unaware of services or feel intimidated by public agencies; need parental consent to receive services but are in potential conflict with their parents; are homeless or incarcerated in juvenile **justice** facilities; live in rural areas without services; are members of a minority group. In **addition** to confronting access barriers, youth cannot always get appropriate treatment **services**. Even if

adolescents do gain access, the services may not be suited to their developmental level and their level of real-world experience.

The barriers to SI discussed so far pertain to government agencies. But most youth are not likely to approach government agencies on their own. Their entry to the service system will probably be through nonprofit community or youth development agencies, and neighborhood programs. Pittman and Cahill (1992) report that youth tend to seek services and maintain a relationship with a service organization when it has a distinctly youth focus, many other young clients/users/members, a “membership” orientation (youth can stay with the program for a long time), staff who enjoy working with youth, and many attractive activities (rather than a strictly problem/service focus). Therefore SI efforts may need to *start* where the youth go, and work with those agencies to help them gain access to the more formal systems for their clients when the need arises.

Lessons Learned

Kusserow (1991) summarizes the lessons for the future learned from the past twenty years of SI efforts:

- Given the enormity of the barriers they face, SI efforts that call for major institutional reform should be initiated selectively, if at all.
- An SI strategy likely to generate more near-term success should focus on well-defined target groups and pursue reform primarily **within** categorical program areas.
- Even a target-group, categorical-program approach, however, is likely to require some degree of central authority and flexible funding to generate and sustain more integrated service delivery.
- A funding source granting an organization some authority and flexible funding for promoting SI should hold it accountable for defining and measuring expected outcomes.
- The cultivation and maintenance of networks of individuals engaged in SI efforts are vital to the success of these efforts.

Approaches to Service Integration

Given the renewed interest in SI, it is important to highlight some issues that have emerged from earlier experiences with SI efforts. These include as their mission, their underlying views of youth and their service needs, and the nature of the service delivery network.

Mission

One reason it is **difficult** to describe SI approaches is that different advocates and different programs bring different missions to SI. Unless we know what a program is trying to accomplish with SI, it is hard to know what success should look like.

Some see SI as enhancing a service mission by delivering more services or more appropriate services or more complete services, or by delivering services faster and with less hassle for the client. **Some** SI proponents may have agency-oriented goals, such as saving money by using integrated application procedures or reducing the time that case managers spend negotiating separate delivery systems. But another mission--one apparently shared by the best youth-serving agencies (**Pittman and Cahill 1992**)--**is** attracting youth to self-enhancing activities.

Rather than simply working to avoid risk, self-enhancing activities **often** involve older youth and family members, and give youth opportunities to solve their own problems by helping themselves, their family, and their community. **Pittman and Cahill** warn that this mission, which they consider paramount, usually gets lost in discussions that concentrate exclusively on service breadth and depth--which services? how many services? to whom? required or voluntary? required for everyone

or only some? on-site or **off**? These questions, they say, “suggest that instrumental changes in the way services are delivered will result in improved outcomes for youth ... the questions limit discussion to a technical dimension instead of including a focus on mission and outcomes . . . the result is often an adding on or adjustment of current services” rather than engaging the whole community in goal-setting and program design. SI efforts may emerge as part of a program designed this way, but the measures of program success would certainly not be “services delivered” or “money saved.”

Perspectives on Youth

Perhaps most basic is the fundamental perspective one holds on youth and their need for services. A holistic approach values children and youth as people to be supported and nourished so they may become effective future workers, parents, and community members (Quinn 1992). This perspective underlies the use of comprehensive, individualized assessments of **service** needs and service planning, and the sense of respect for youth also encourages empowerment efforts by focusing on strengths, potential for exerting leadership, and potential for making contributions beneficial to others (Pittman and Cahill 1992).

For preventive or ameliorative efforts to work well, they must address the causes underlying children’s need for services. Family dysfunction and the neighborhood contest are two of the principle antecedents of problem behaviors and **risk** outcomes for youth. Programs desiring to make a real difference for children should directly involve parents, other family members, older peers or role models. and the youth’s neighborhood friends and peer group in activities designed to reduce **risk** and promote healthy development (Pittman and Cahill 1992: Schorr and Schorr 1988).

Partnerships

A fundamental feature of SI is its emphasis on cooperation or partnerships among a wide variety of key agents or “players” (Dryfoos 1990; Hechinger 1992). Youth, their families, and other key individuals and organizations in the community can be instrumental in identifying service needs, in planning and implementing **service** programs to address them, and in proposing a program structure that **will** be most appealing and accessible to its target population. This is a first step **in** empowering youth and families.

All levels of public and private local service agencies must be involved to some degree, from top management to line workers. Other community groups such as 4-H Clubs and churches provide technical assistance or volunteers, and occasionally help out with funding (Ledwith 1990). Richman, Wynn, and Costello (1991) describe an integrated service system for children based on collaborative arrangements among “primary” services (community organizations such as sports teams, parks, and museums) and “specialized” services (the more formalized health, education, and social service agencies) to address the needs of all the children in a community,

Private foundations and **philanthropic** organizations can assist **service** integration efforts by giving financial support, technical assistance, or volunteer staff. For example, the Chicago Community Trust provides a steering committee and up to \$30 million over **this** decade to support the “Children, Youth, and Families Initiative” - aimed at creating a comprehensive, integrated, community-based service system to help Chicago families and their **children**. In addition, businesses can provide funding, management assistance, summer jobs, volunteers, and political support; the media can assist with public education and awareness efforts (Dryfoos 1992; Ledwith 1990).

The central executive arm of local, state, and Federal governments can also help in a number of ways. Local leaders can assist by nurturing community and

political support for **SI**, directing key agencies to cooperate, and developing local solutions to local problems. State governments can contribute by funding planning and implementation efforts, supplying technical and management assistance, helping to design and establish a management information system, and aiding the development of a common language, set of regulations, and administrative procedures for use by various service agencies (Melaville and Blank 1991; **Quinn** 1992).

The Federal government has undertaken a variety of initiatives to support youth services integration. The Office of the Assistant Secretary for Planning and Evaluation (ASPE) in the Department of Health and Human Services (**DHHS**) has recently established the National Resource Center for Community-Based Service Integration to provide technical assistance, **serve** as a clearinghouse, and help establish interagency linkages. ASPE is also collaborating with the **Office** of Educational Research and Improvement in the Department of Education to produce a guidebook on developing school-linked comprehensive services.

In addition to providing support in this manner, ASPE also provides funding to plan and implement a number of comprehensive service integration efforts across the nation. The Council of Governors' Policy Advisors' Second Academy on Families and Children at Risk is a seven-state service integration planning and implementation effort co-funded with DHHS' Administration for Children and Families and the Ford Foundation. Other more localized ASPE-sponsored programs include school-based service programs in Florida and California; community-based services in Georgia; and funds to support Joint interagency planning in **Ohio**.

In addition, the Presidential Empowerment Task Force's Service Integration Work Group will identify successful SI models and methods to improve interagency communication and coordination at **the** Federal level. The Task Force has also

concerned itself with restructuring statutory and regulatory requirements to Improve service access, coordination, and quality (Gerry and Certo 1992).

Steps in Planning and Implementing Comprehensive, Integrated Services

Below we present some of the major issues and alternative implementation strategies that should be considered when implementing SI.

Defining Goals and Objectives

As the first concrete step in the planning process, the partners involved should work toward agreement on a common set of goals and objectives (Center for the Future of Children 1992). To the extent possible, long-term commitment to the integration effort should be built in **from** the planning stage. One effective method for encouraging long-term commitment is through an independent interagency advisory group with a revolving chair, to help minimize turf battles and forge a common purpose for the variety of service integration partners. Another method involves diversion of a portion of each partner's funds to support the integration effort, so each partner has an important stake in assuring success of the integrated approach.

The program's goals should be based on a local community needs assessment and an assessment of services already available, whether formal or informal. If the full range of stakeholders is included in the planning process, knowledge of service needs and adequacy of existing services should be in the room. Efforts should be made to solicit input and build support from as many of the partners as possible. Outside consultants can also be brought in to share their expertise (Corrlea 1992).

Identifying the Target Population

Who should the newly integrated services be designed to help? Unless the target population is clear, it will not be obvious what services and other activities should be incorporated into the effort. Whether services should be offered to all youth and families in the community, or only to those considered at highest risk, is an important policy question for local partners to address (Levy and Shepardson 1992). Once a youth or family enters a program involved in SI, agencies should have **sufficient** knowledge of services available, interagency cooperation, and flexibility to ensure that all of their service needs are identified and addressed. Some authorities maintain that services should be concentrated on those who are most at risk; others argue that this approach would stigmatize program participants, and that all children could benefit from enrichment efforts (Dryfoos 1990).

There is no definitive profile of youth or families who need SI. However, families involved in alcohol or drug treatment may be prime candidates for activities and services to improve their support for their children. Families involved with child welfare due to reports of abuse or neglect clearly need help in supportive parenting. Equally important is **identifying** families who have none of these problems but who struggle to raise their children with little money and few resources in neighborhoods that pose a constant threat to their children's future.

The office of Technology Assessment (1991) concluded that adolescents who are not currently being served by the myriad of prevention and treatment programs are those "with, or at risk of multiple problems, who almost inevitably face gaps among service systems" (p. I-30). Adolescents most likely to encounter service gaps are those with substance abuse and mental health problems, adolescents adjudicated as delinquent but who probably have multiple health problems, homeless adolescents,

and adolescents failing or misbehaving in school who are also likely to become pregnant, delinquent, and/or drop out of school.

If a program targets **10- to 15-year-olds** and their families, a different array of activities and services are likely to be needed than if an older adolescent population were the target. For the younger group, prevention activities involving recreation, community service, self-esteem and competence building, compensatory educational efforts and similar activities will be primary, with treatment services on reserve and accessible if needed. Older youth may need a stronger mix of treatment services to help them stop participating in problem behaviors. as well as the supportive developmental services offered to younger teens.

Identifying the Services to be Offered

A comprehensive approach involves a child- and family-centered orientation approach in which the range of each family's service needs are identified and services are planned and delivered to address their unique situation. This contrasts with a problem-centered approach, in which an agency addresses only the **specific** problems it is prepared to handle itself. A comprehensive approach requires considerable variety in the breadth and depth of services available and flexibility in service delivery. It is always important to remember, however, that "comprehensive" and "integrated" are not identical. The point of developing a service structure is not to assemble the largest number of services, but to help youth and their families. Successful youth service programs are marked by their common emphasis on client empowerment rather than on narrowly defined "services" from public agencies (Pittman and Cahill 1992). **SI** comes into the mix only in Pittman and Cahill's final program characteristic--community "clout." the ability to get clients the services they need that come from other agencies in the community.

The type of services to be offered, including outreach, public education, primary and/or secondary prevention, **intervention**, and advocacy, needs to be decided on the basis of local needs and resources. With young adolescents, primary and secondary prevention is likely to be a major focus.

The breadth of services is another issue. In one view, a minimum of two specific types of services in each of the three broad categories of education, health, and social services should be offered for the program to be considered truly comprehensive (Morrill and Gerry 1990). Others argue that basic life skills such as critical thinking, problem-solving, and decision-making, social skills such as **constructive** assertiveness, and the use of social support systems should be the program's focus (**Hechinger** 1992).

The intensity of **services** should also be considered. The **service** programs should be flexible enough to respond to clients who may require more frequent services or services that address the relevant issues in more detail.

For the target population of young adolescents, there is also some question about the best way to provide comprehensive services. The more a program emphasizes prevention, the more it may focus on developing self-esteem and positive life skills, resisting peer pressure to participate in risky behaviors, and fostering a belief that youth can have a positive and productive future as an adult. Programs may promote these goals through emotionally supportive role-modeling from mentors or big brothers/sisters. **A** comprehensive program in this context would assure that the mentor has access to someone in a case management role when it becomes apparent that a youth needs a particular **type** of help. In contrast, a program that involves heavy up-front assessment and case management may be more appropriate for the small proportion of **10- to 15-year-olds** who need massive early intervention.

Mechanisms for Service Delivery

The way in which services are coordinated **is** important. Clients may have service agency contact with whom they maintain an ongoing, supportive relationship. When this contact person functions more as a mentor, counselor, or group worker than as a case manager, this individual needs access to someone who can arrange needed services follow and up on referrals.

Case management--a key issue--is essentially a method of placing responsibility for service planning, coordination of service delivery, and follow up on an individual or interagency team. The case manager or team works with youth and their families to determine service needs, provide interagency linkages, and monitor service delivery and outcomes (Melaville and Blank 199 1). Effective case management requires relatively smaller caseloads as the needs of clients increase. Intensity of services offered should be determined at least in part by the youth and family's ability and motivation to work with the system. The procedures established should be flexible enough to respond to each youth and family's unique circumstances.

Set-vice Location

Integrated services can be delivered through school-based or school-linked sites, In community sites such as churches or community centers, through mobile arrangements, and/or by home visits (Mathtech, unpublished manuscript). We are unlikely to find a universally applicable program model. In all likelihood the location of an SI effort will depend on which agency or organization has an interested, committed, and dynamic person willing to take the lead in developing and running the program. Another important factor is the site's acceptance within the community. Occasionally a local agency may get involved in SI because some funding source has

invited its participation. Such invitations are most likely to be accepted when there is local leadership to carry the program.

Services are typically based in either school or community sites. School-based programs have the potential to reach large numbers of youth, and have a **well-**established organizational structure and niche in the community, but may not be as **accessible** to families or to youth and families who are alienated from the educational system, such as high risk dropout youth. They may also further stress an overburdened educational system (**Chaskin and Richman 1992**). **may** be restricted as to which services they can provide (e.g.. family planning services), and may be constrained by rigid organizational rules. Community-based programs may avoid these problems but face issues of access for youth and families and high-crime and gang-infested neighborhoods.

When the school-based program under consideration is an adolescent health clinic a number of special barriers arise. These include lack of trained personnel, and community resistance to the role these clinics may play in **sex** education and in contraceptive counseling and distribution (**Office of Technology Assessment 199 1**).

Debates also occur about the appropriate balance of services between on-site and off-site locations. Some programs aspire to on-site “one-stop-shopping,” while others function as a link between clients and a very broad spectrum of services--none of which is offered on **site**. The debate about service concentration usually involves the **relative** benefits of ease of access versus learning to negotiate the systems oneself. Most programs fall somewhere between these two extremes. A **community** just beginning to develop SI should consider this issue.

Administrative Factors

To be a credible model of service integration, the agencies involved should have institutionalized linkages that establish the mechanisms for sharing resources. These mechanisms may include co-locating in a single facility, sharing staff **financial** resources and/or **information**, and agreeing to provide services to referred people.

An agency that provides needs assessments, service referrals, and referral follow ups must be able to give referral agencies the information it has about a client's needs. Many agencies have confidentiality policies that prohibit the disclosure of client information between service agencies, and sometimes even within different divisions of a single agency. For SI to work, agencies must **find** ways to adjust these **confidentiality** policies and still protect **sensitive** information about clients. Gaining the informed consent of clients to share information with agency personnel who will be providing the referral service is one approach that has worked in some places. But even this may require formal legal or rule changes.

Staffing Issues

It is important that staff be recruited and trained **very** carefully, whether they are paid or unpaid (Primm Brown 1992). Staff should be selected on the basis of their ability to establish trusting, respectful relationships with youth and families, their ability to span professional boundaries and specializations to address clients' needs, and their ability to work with **the** system, whatever their type or level of professional training (Sonenstein et al. 1991).

Diversity issues must also be considered in **staffing** programs (Cornea 1992). If at all possible, staff should reflect the racial, ethnic, age, and gender make-up of the program's clientele. At an absolute minimum staff should have a demonstrated

sensitivity to issues of racial, ethnic, and gender diversity, preferably through earlier work experience with populations similar to those expected to use the program,

Staff support for the **integration** model and willingness to adopt new roles are crucial at **all** levels. Strong positive leadership is usually critical; **neutrality** is not good enough to shepherd a new program to successful implementation.

Staff at all levels should be trained to work effectively within an integrated model. Training should be sensitive to the concerns of staff experienced in **non-**integrated service settings-concerns such as “turf” issues, professional orientations and jargons, and issues **staff** may feel unprepared to deal with.

Funding Issues

Categorical funding streams established by Federal and state authorities are a major impediment to SI. Procedures for documenting the use of categorical funds are often prohibitively burdensome for small programs **trying** to provide many different **services**. Different program rules and reporting requirements may demand a level of administrative support that many programs simply cannot provide, and which the categorical funds do not support. Whatever the **type** of funding, insufficient resources induce competitiveness between service programs and undermine collaborative efforts (Farrow and Joe 1992).

. For SI to work best, funding should be flexible. Federal and state funding sources should be redesigned to blend together funds from multiple sources that **historically** have rigid categorical boundaries, to provide adequate and coherent funding for **service** programs that address **multiple** areas of need (Kirst 1991). However, this is unlikely to happen. Even where system change has been a primary component of **demonstrations** with significant funding to support it, as in the Robert Wood Johnson **Foundation** programs for the severely mentally ill or the Annie E.

Casey Foundation New Futures dropout **prevention** projects, only modest system change has been achieved at best. Since SI efforts do not invest anything approaching the level of resources in producing system change that characterized these demonstrations, it is unrealistic to expect much in this regard from SI efforts.

Private funding is also available but not usually in sufficient amounts to serve as single-source funding for an entire integration effort. While some service integration efforts have successfully combined public and private funds to support widely respected service programs (e.g., New Beginnings in San Diego), such success is not always the case. The need to match funds from various sources that may be concerned with different issues may sometimes result in scatter-shot, funding-driven programming, as well **as an** excessive administrative and development burden (Melaville and Blank 1991).

One promising approach to increasing SI among already functioning programs is using limited new funding to support core integration functions. This effort could be matched by diverting some existing funds to support additional integration **efforts** and using other existing funds to support regular service delivery. Kentucky's Family Resource and Youth Service Centers, to be implemented in approximately 1,200 schools across the state by 1995, is currently using such a **financing** plan. Its future funding base will be partly determined by the results of this approach.

Evaluation

There is a lack of valid and reliable evaluation results that test the effectiveness of programs and **identify** those program components that appear to contribute to program success. Experts cite a lack of funding as a major barrier to evaluation efforts, since most categorical programs consider service delivery the only eligible expenditure. Most serious evaluations are funded either by Federal government

programs or by foundations, and often involve special demonstration efforts rather than “normal” programs operating in a variety of environments.

Experience has shown that programs that look good as demonstrations are often are diluted upon **replication**. This phenomenon suggests that evaluation results are used to justify program dissemination or replication, but are not reviewed in enough detail to assure that critical aspects of programs actually appear in replication. **Dryfoos** (1990) concludes that evaluation results are rarely used to make decisions about continued program structure or funding, **especially** for programs that are mass-marketed and packaged for schools and teachers.

. In order for evaluation to be satisfying for the program and influential in shaping its future, evaluators must have extensive early collaboration with program personnel so the measures used are meaningful and cooperation with the evaluation is high.

Impact information should be tied to youth and family outcomes rather than simply services delivered. **Outcomes** should be realistically **identified** for established programs, and outcome information should come from a variety of sources, including program clients. Where possible, the most effective program characteristics or service delivery methods should be identified, to aid in further program refinement and assessment of program replicability (**Morrill** and Gerry 1990).

Information on cost effectiveness is crucially needed (**Morrill** and Gerry 1990). Data establishing how much money integrated services can save **from** participating and other agencies’ budgets, and when programs can expect to realize the cost savings, would be very useful in developing and evaluating funding requests.

Institutionalizing Change

A long-term SI issue is whether any changes created by SI in the component agencies' functioning and interrelationships become institutionalized and take on a life of their own. Kusserow (1991), summarizing twenty years of SI activities, notes that "SI efforts have been instrumental in making human services more accessible to clients and more responsive to their needs. Over the long term, however, SI efforts appear to have had little **institutional** impact on a highly fragmented human services system," His list of major barriers to system change echoes issues discussed earlier in this chapter.

- The size and complexity of the human services system:
- Professionalization, specialization, and bureaucratization:
- Limited influence of integrators:
- Weak constituency for services integration:
- Funding limitations: and
- **Insufficient** knowledge.

It is very important that service integration efforts rest on more than seed funding and strong personalities or leadership. Such factors are likely to be transitory. A program depending on these factors is likely to collapse when the funding expires and the individuals depart. Pooling at least a portion of each agency's core funding to support integration activities is a systemic change that can be crucial in assuring the survival of the integrated service network. This practice may assure adequate resources to continue the integrated approach after start-up funding expires. It may also solidify the commitment of participating agencies by their very tangible stake in the SI structure (Melaville and Blank 1991).

Where post-demonstration funding is inadequate to sustain the integrated approach, the availability of evaluation data documenting the innovative processes and beneficial outcomes resulting from the use of an integrated approach can be instrumental in securing **continuation** funding (Melaville and Blank 1991).

Policymakers and (potential) funders can make better-informed decisions on how to allocate limited resources when information is available to document implementation procedures, service costs, and cost-savings. Even more desirable is information showing the impact of the integrated approach on program participants, component agencies, and the social service system.

Summary: Service Integration Issues

In this chapter we have examined common **definitions** of youth at risk, and developed a framework for thinking about the many disparate indicators and signs of risk. We organized our review of how many youth are involved in different risky **situations** according to our framework, looking first at prevalence of risk antecedents, then at system markers for risk, and finally at problem behaviors and risk outcomes.

Following the review of prevalence information, we examined the most common approaches to helping youth at risk. These traditional programs are usually found **within** a single societal institution and frequently address a **single** problem. We then described some of the problems encountered by traditional single-focus programs that stem from the fact that their clients or users often had problems outside the focus of program expertise. The existence of these additional problems or issues often interfered with the program's ability to help the youth address the problem for which he or she had come to the program.

The **difficulties** encountered by traditional programs in accessing services outside their purview, or their unwillingness to do so, has led to the current focus on comprehensive services and on **service** integration. We then discussed the goals of programs that try to provide comprehensive services or service integration, and the system resistances and barriers they often face.

CONCLUSION

In this paper we have examined **common** definitions of youth at risk, and developed a framework for thinking about the many disparate indicators and signs of risk (Figure 1). We organized our review of how many youth are involved in different risky situations according to our framework, looking first at prevalence of risk antecedents, next at system markers for risk, and **finally** at problem behaviors and risk outcomes.

Following the review of prevalence information, we examined the most common approaches to helping youth at risk. These traditional programs usually are found within a single societal institution (e.g., the school system, the criminal justice system), and frequently address a single problem focus (e.g., teen pregnancy, or substance abuse). We then described some of the problems encountered by traditional single-focus programs that stem from the fact that their clients or users often had problems outside the focus of program expertise. The existence of these additional problems or issues, which were sometimes huge (e.g., the family had lost its housing), often interfered with the programs' **ability** to help the youth address the problem for which he or she had come to **the** program. The **difficulties** encountered by traditional programs in accessing services outside their purview, or their unwillingness to try to do so, has led to the current focus on comprehensive services. and on service integration (interagency collaboration).

We discussed the goals of programs that try to provide comprehensive services or service integration. and the system resistances and barriers they often face. The next papers in this project will describe evaluation issues relevant to programs for young adolescents, and our plans for' information to be sought during site visits to illuminate as many as possible of the issues raised by these papers.

REFERENCES

- Adams, G.R. **Gulotta**, T., and **Clancy**, M.A (1985). 'Homeless adolescents: A descriptive study of similarities and differences between runaways and throwaways. Adolescence, 79, 715-724.
- Adelson, J. (1979. January). Adolescence and the generalization gap. Psychology Today, pp. 33-37.
- American School Health Association, Association for the Advancement of Health Education, and Society for Public Health Education, Inc. (1989). The National Adolescent Student Health Survey: A Report on the Health of America's Youth. Oakland, CA: Third Party Publishing.
- Bachman**, J.G., Johnston, L.D., and **O'Malley**, P.M. (1990). "Explaining the Recent Decline in Cocaine Use Among Young Adults: Further **Evidence** that Perceived Risks and Disapproval Lead to Reduced Drug Use." Journal of Health and Social Behavior 31:173-184.
- Bane, M.J., and Ellwood, D. (1989). "One Fifth of the Nation's Children: Why are they **poor**?" Science, 245: 1047- 1053.
- Barrow, **S.M.**, and Kolstad, A. (1987). "Who Drops Out of High School: Findings from High School and Beyond." contract report prepared for the Center for Education Statistics, Office of Educational Research and Improvement. Washington, D.C.: U.S. Department of Education.
- Bassuk, E., and Rosenberg, L. (1988). "Why Does Family Homelessness Occur: A Case-Control Study." American Journal of Public Health, 78:783-788.
- Bassuk, E., and **Rubin**, L. (1987). "Homeless Children: A Neglected Population." American Journal of Orthopsychiatry, 57:279-286.
- Bassuk, E., **Rubin**, L., and **Lauriat**, A (1986). "Characteristics of Sheltered Homeless Families." American Journal of Public Health, 76: 1097-1101.
- Baumrind, D. (199 1). Parenting styles and adolescent development. In J. **Brooks-Gunn**, R Lemer and AC. Petersen (eds). The Encyclopedia on Adolescence. New York, NY: Garland Press.
- Behrman, R (Ed.) (Spring, 1992). The Future of Children: School Linked Services. Los Altos, CA: David and Lucille Packard Foundation, Center for the Future of Children, 2 (1).
- Belsky, J. (198 1). Early human experience: A family perspective. Developmental Psvcholoav, 17 (1), 3-23.
- Berla, N., Henderson, A.T., and Kerewsky, W. (1989). The Middle School Years: A Parents' Handbook. Columbia, MD: National Committee for Citizens in Education.
- Berreuta-Clement, J., Schweinhard, L., Bamett, W., Epstein, A., and Weikert, D. (1984). Changed Lives: The Effects of the Perry Preschool Program on Youths Through Age 19. Monographs of the High/Scope Educational Research Foundation, No. 8. Ypsilanti, MI: High/Scope Press.

- Blumstein, A. Cohen, J., Roth, J.A. et al. (eds.), **Criminal Careers and Career Criminal**, Vol I
Washington DC: National Academy Press, 1986).
- Bohman, N., Sigvardsson, S., and Cloninger, R. (1981). "Maternal Inheritance of Alcohol Abuse: Cross-Fostering Analysis of Adopted women." Archives of General Psychiatry, **38:965-969**.
- Bronfenbrenner, U. (1979). The Ecology of Human Development: Experiments by Nature and Design. Cambridge, MA: Harvard University Press.
- Center for the Future of Children. (1992). Analysis. In R Behrman (Ed.), The Future of Children: School-linked Services, **2** (1). 6-18.
- Chamblin, M. and Kennedy, M. (1991). "The Impact of the Wilson Administration on Economic Crime Rates." Journal of Quantitative Criminology, **7(4)**, 357-372.
- Chaskin, R.J., and Richman, H.A (1992). Concerns About **School-linked** Services: Institution-based Versus Community-based Models. In R Behrman (Ed.), The Future of Children: School-linked Services, **2** (1), 107-117.
- Cloninger, C.R. Bohman, M., and Sigvardsson, S. (1981). "Inheritance of Alcohol Abuse: Cross-Fostering Analysis of Adopted Men." Archives of General Psychiatry, **38:861-868**.
- Cook, P.J. (1991). "The Technology of Personal Violence." In M. Tonry (Ed.), Crime and Justice: An Annual Review of Research. 14th Edition. Chicago: Chicago University Press.
- D'Angelo, L. J., Getson, P. R., Luban, N.L.C., and Gayle, H. D. (1991). Human immunodeficiency virus infection in urban adolescents: Can we predict who is at risk? Pediatrics, **88** (5), 982-986.
- Dryfoos, J.G. (1990). Adolescents At Risk. New York: Oxford University Press.
- Edelman, P., and Radt, B. (1991). Serving Children and Families Effectively: How the Past Can Help Chart the Future. Washington, DC: Education and Human Services Consortium.
- Edelman, P.B. and Radt, BA. (1991). Serving Children and Families Effectively: How the Past Can Help Chart the Future. Washington, DC: Education and Human Services Consortium.
- Elliott, D.S., Ageton, S.S., Huizinga, D., et al. (1983). "The Prevalence and Incidence of Delinquent Behavior: 1976-1980. National Youth Survey Report No. 26. Boulder, CO: Behavioral Research Institute.
- Elliott, D.S., Dunford, F.W., and Huizinga, D. (1987). "The Identification and Prediction of Career Offenders Utilizing Self Reported And Official Data." In J.D. Burchard and S.N. Burchard (Eds.), Primary Prevention of Psychopathology, Vol. 10--Prevention of Delinquent Behavior. Beverly Hills, CA: Sage.
- Elliot, D.S., Huizinga, D., and Morse, B. (1986). "Self-Reported Violent Offending: A Descriptive Analysis of Juvenile Violent Offending and Their Offending Careers." Journal of Interpersonal Violence, **1(4):472-514**.
- Emans, S.J., Grace, E., Woods, E.R., et al. (1968). "Adolescents Compliance With the Use of

Oral Contraceptives." Journal of the American Medical Association, **257:3377-3381**.

Erikson, E.H. (1968). Identity: Youth and Crisis. New York: Norton.

Family Impact Seminar. (1990). "Keeping Troubled Families Together: Promising Programs and Statewide Reform." Panel discussion by E. Cole, K. Nelson, B. Purcell, F. **Farrow**, and T. Ooms, Seminar on Family-Centered Social Policy: The Emerging Agenda, American Association for Marriage and Family Therapy, Washington, D.C., June 8. 1990.

Fanshel, D., **Finchs, S.J.**, and Gmndy. J.F. (1990). Foster Chldren in Life Course Perspective. New York, NY: Columbia University Press.

Farrington, D.P. (1983). "Offending From 10 to 25 Years of Age." In **K.T. Dusen** and SA Mednick (Eds.), Prospective Studies of Crime and Delinauency. Boston, MA: **Kluwer-Nijhoff**.

Farrington, D.P., and West, D.J. (1981). "The Cambridge Study in **Delinquent** Development." In **S.A. Mednick** and A.E. Baert (Eds.), Prospective Longitudinal Research: An Empirical Basis for the Primary Prevention of Psychosocial Disorders. Oxford, England: Oxford University Press.

Farrington, D.P., and West, D.J. (1989). "The Cambridge Study in Delinquent Development: A Long-Term Follow-up of 411 London Males." In G. Kaiser and H.J. Kemer (Eds.), Criminality: Personality, Behavior, Life History. Heidelberg, Germany: Springer-Verlag.

Farrow, F., and Joe, T. (1992). Financing school-linked service efforts. In R Behrman (Ed.), The Future of Children: School-linked Services, **2 (1)**, 56-67.

Frank, B., Lipton, D., **Mared, R.**, Schmeidler, J, Barnes, G.M., and Welte. J.W. (1985). A Double Danger: Relationships Between Alcohol Use and Substance Use among Secondaxv School Students in New York State. Albany, NY: New York State Divisions of Substance Abuse Services and Alcoholism and Alcohol Abuse.

Feldman, RA. **Stiffman, A.R.**, and Jung, K.G. (1987). Children at Risk: In the Web of Parental Mental Illness. New Brunswick, NJ: Rutgers University Press.

Felsman, J.D. and **Vallant, G.** (1987). "Resilient Children as Adults: A **40-Year** Study." Advances, **4(4)**, 45-61.

Finkelhor, D., Hotaling, G., and Sedlak, A. (1990). Missing, Abducted, Runaway, and Thrownaway Children in America. First Report: Numbers and Characteristics. Conducted for the US. Department of Justice, Office of Juvenile Justice and Delinquency Prevention by the University of New Hampshire and **Westat, Inc.** (Cooperative Agreement #87-MC-CX-K069).

Flanagan, T. and Jamieson, K. (Eds.) (1988). Sourcebook of Criminal Justice Statistics--1987. Washington, DC: U.S. Department of Justice, Bureau of Justice Statistics (USGPO).

Foley, E. and Crull, P. (1984) Educating the At-Risk Adolescent. Report of the Public Education Association, Washington, DC.

Forrest, J.D., and **Singh, S.** (September/October, 1990). The sexual and reproductive behavior of American women, 1982-1988. Family Planning Perspectives, **22 (5)**, 206-214.

- Garbarino, J., Schellenbach, C., Seves, J., et al. (Eds.). (1986). Troubled Youth, Troubled Families. New York, NY: **Aldine** Publishing Co.**
- Garnezy, N., Masten, AS. and Tellegen, A. (1984). "The Study of Stress and Competence in Children: A Building Block for Developmental Psychopathology." Child Development, 55, 97-111.**
- Gardner, S.L. (1992). Key issues in developing school-linked, integrated services. In R Behrman (Ed.), The Future of Children: School-linked Services, 2 (1). 85-94.
- Geny, M.H. and Certo, N.J. (1992). Current activity at the federal level and the need for **service** integration. In R Behrman (Ed.), The Future of Children: School-linked Services, 2 (1), 118-126.
- Gibbs; J.T., Brunswick, AF., Conner, M.E., et al. (1988). Young, Black, and Male in America: An Endangered Species. Dover, **MA:** Auburn House Publishing Co.
- Ginzberg, E., Berliner, H.S., and Ostow, M. (1988). Young People at Risk: Is Prevention Possible? London: **Westview** Press.**
- Goffman, E. (1961). Asylums. New York: Doubleday.
- Grotevant, H.D. and Cooper, C.R (1986). Patterns of interaction in family relationships and the development of identity exploration in adolescence. Special Issue: Family development. Child Development, 56 (2). 415-428.
- Hamburg, DA and Takanishi, R (1989). Preparing for life: The critical transition of adolescence. American Psychologist, 44, 825-827.
- Hechinger, F.M. (1992). Fateful Choices: Healthy Youth for the 21st Century. New York: Carnegie Corporation.
- Hogan, D.P., **Astone, N.M.,** and Kitagawa, E.M. (1985). "The Impact of Social Status, Family Structure, and Neighborhood on the Fertility of Black Adolescents." Famflv Planning Perspectives, 17: 165- 169.
- Huizinga, D., and Elliott, D.S. (1986). "Reassuring the Reliability and Validity of Self-Report Measures." Journal of Quantitative Criminology, 2(4):293-327.
- Jargowsky, P. and Bane, M.J. (1990). "Neighborhood Poverty: Basic Questions." Cambridge, MA: J.F. Kennedy School of Government, Harvard University. Paper H-90-3.**
- Jorgensen, S.R (1991). Project Taking Charge: An evaluation of an adolescent pregnancy prevention program. Famflv Relations, 40, 373-380.
- Kandel, D.B.. (1980). "Developmental Stages in Adolescent Drug Involvement." In D.J. Lettieri, M. Sayers, and H.W. Pearson (Eds.). Theories on Drug Abuse. National Institute on Drug Abuse, Alcohol, Drug Abuse and Mental Health Administration, Public Health Service, U.S. Department of Health and Human Services. Research Monograph 30. DHHS Pub. No. 80-967. Washington, DC: U.S. Government Printing Office.**
- Kirst, M.W. (1991). "Financing School-Linked **Services.**" Palo Alto: **CA:** Stanford University, unpublished manuscript.**

- Kreppner, K., & Lerner, R.M. (Eds.) (1989). Family Svstems and Life Span Development. Hillsdale, NJ: Erlbaum.
- Kronick, R (1990). Calculations based on U.S. Department of Commerce, Bureau of the Census, March 1989 Current Population Survey public use files. Unpublished manuscript, University of California, San Diego, CA.
- Kronick, R (1990). "Update: Adolescent Health Insurance Status." Contract paper prepared for the Office of Technology Assessment,, U.S. Congress. Washington, DC, March 1990.
- Kumpfer, K.L. (1989). Prevention of alcohol and drug abuse: A critical review of risk factors and prevention strategies. In D. Shaffer, I. Phillips, & N.B. Enzer (Eds.), Prevention of Mental Disorders, Alcohol, and Other Drug Use in Chfldren and Adolescents. Rockville, MD: U.S. Department of Health and Human Services. Office for Substance Abuse Prevention.
- Kusserow, R (1991). Services Integration: A Twenty-Year Retrospective. Washington, DC: Department of Health and Human Services, Office of the Inspector General.
- Lamb, M. (Ed.) (1981). The Role of the Father in Child Development. (2nd Edition). New York: Wiley.
- Ledwith, T.J. (1990). Wrap-Around Services for High-Risk Children and Their Families. Alexandria, VA: The United Way of America.
- Lee, T.R. and Goddard, H.W. (1989). Developing family relationship skills to prwent substance abuse Among high-risk youth. Family Relations, **38**, 301-305.
- Levine and L. Ingram (eds.) (Washington, DC: National Academy Press. 1988)
- Levy, J.E., and Shepardson, W. (1992). Look at current school-linked efforts. In R Behrman (Ed.), The Future of Chfldren: School-linked Services, **2 (1)**, 44-55.
- Logan, B. (1991). Adolescent substance abuse prevention: An overview of the literature. Familly Community Health, **13** (4). 25-36.
- Lorion, RP. and Ross, J.G. (1992). "Programs for Change: A Realistic Look at the Nation's Potential for Preventing Substance Involvement Among High-Risk Youth." Journal of Community Psychology, OSAP Special Issue.
- Lorton, RP., Price, RH., & Eaton, W.W. (1989). The prevention of child and adolescent disorders: From theory to research. In D. Shaffer, I. Philips, & N.B. Enzer (Eds.), Prevention of Mental Disorders, Alcohol, and Other Drug Use in Children and Adolescents. Rockville, MD: U.S. Department of Health and Human Services, Office for Substance Abuse Prevention.
- Marcia, J. (1987). The identity status approach to the study of ego identity development. In T. Honess and K. Yardley (Eds.), Self and Identity: Perspectives Across the Lifespan. London: Routledge and Kegan Paul.
- MathTech, Inc. (date unknown). Collaborations That Demonstrate Service Integration: Summary of Field Work and Implications for Demonstration Design. Unpublished manuscript.
- Mazur, R. and Thureau, L. (1990). Cornell and Bronx schools join with parents to reduce

- dropouts. Human Ecology Forum. **18**, 18-20.
- McDermott, M.J.. and Hindelang. M.J. (1981). "Juvenile Criminal Behavior in the United States: Its Trends and Patterns." Albany, NY: Criminal Justice Research Center.
- Melaville. A.I., and Blank, M.J. (1991). What It Takes: Structuring Interagency Partnerships to Connect Children and Families with Comprehensive Services. Washington, DC: Education and Human Services Consortium.
- Menard. S. (1987). "Short-Term Trends in Crime and Delinquency: A Comparison of UCR, NCS, and Self-Report Data." Justice Quarterly, **4(3):455-474**.
- Miller, D.. and Lin, E. (1988). "Children in Sheltered Homeless Families: Reported Health Status and Use of Health Services." Pediatrics, **81:668-673**.
- Moore, KA, Nord, C.W, and Peterson, J.L. (1989). Nonvoluntary **sexual** activity among adolescents. Familv Planning Perspectives, **21 (3)**, 110- 114.
- Moore, T., **Stimms**, N.C., and Betsey, C.L. (1986). Choice and Circumstance: Racial Differences in Adolescent Sexuality and Fertility. New Brunswick, NJ: Transaction Books.
- Morrill**, WA (1992). Overview of service delivery to children. In R Behrman (Ed.), The Future of Children: School-Linked Services, **2 (1)**, 32-43.
- Morrill. WA, and Gerry. M.H. (1990). Integration and Coordination of Services for School-Aged Children. Unpublished manuscript.
- Mulvey, E.P.. Arthur, M.W. and Reppucci. N.D. (1990). "Review of Programs for the **Prevention** and Treatment of Delinquency." Paper prepared for the **Office** of Technology Assessment, U.S. Congress, Washington. DC: March 1990.
- National Academy of Sciences, National Research Council. Commission on Behavioral and Social Sciences and Education. Committee on the Status of Black Americans. (1989). A Common Destiny: Blacks and American Society. G. Jaynes and R Williams (Eds.). Washington, DC: National Academy Press.
- National Academy of Sciences, National Research Council, Committee on National Statistics. (1984). Income and Poverty Statistics: Problems of Concept and Measurement, Washington, DC: National Academy Press.
- National Assessment of Educational Progress. (1990). The Reading Report Card, 197 1-88. Princeton, NJ: Educational Testing Service.
- National Coalition for the Homeless. (1987). Broken Lives: Denial of Education to Homeless Children. Washington, DC.
- National Center for Health Statistics. (1991). "Advance Report of Final Natality **Statistics**: 1989." Monthly Vital Statistics Report. **40(8)**, December 12. 1991.
- National Network of Runaway and Youth Services (1991). To Whom Do They Belong?: Runaway, Homeless and Other Youth in High-risk Situations in the 1990s. Washington, D.C.: National Network of Runaway and Youth Services.
- Nelson, BA. (1989). A comprehensive program for pregnant adolescents: Parenting and

- prevention. Child Welfare, **68** (1). 57-60.
- Nelson, **P.T.** (1989). Involving families in substance'abuse prevention. Family Relations, 38, 306-3 10.
- Northrop, D., **Jacklin**, B., Cohen, **S.**, and Wilson-Brewer. R (1991). Violence prevention strategies targeted toward high-risk minority youth. Public Health Reports, **106** (3), 272-274.
- Office for Substance Abuse Prevention.** (1989). Prevention Plus II: Tools for Creating and Sustaining Drug-Free Communities. Washington, DC: Department of Health and Human Services, Alcohol, Drug Abuse and Mental Health Administration.
- Ostos, **T.** (1991). Alternatives to gang membership: The paramount plan. Public Health Reports, **106** (3), 241.
- Parker, RN., **Rescorla**, LA., Finkelstein, **J.A.**, et al. (1991). "A Survey of the Health of Homeless Children in Philadelphia Shelters." American Journal of Diseases of Children. **145:520-526**.
- Pelcovitz**, D., Kaplan, S., **Samit**, C., et al. (1984). "Adolescent Abuse: Family Structure and Implications for Treatment." Journal of Child Psychiatry, 23: **85-90**.
- Pittman**, K. and Cahill, M. (unpublished manuscript). Getting Beyond the C's: The Role of Comprehensive Programs, Case Management Services and Coordinated Community Planning in the Development of Supportive Environments for Youth. Academy for Educational Development, Center for Youth. Development and Policy Research, Washington, DC and New York. Unpublished manuscript.
- Prothrow-Sith**, D. (1991). Boston's Violence Prevention Project. Public Health Reports, **106** (3). 237-239.
- Quinn**, J. (1992). 'Report on the Consultation on Evaluation of Youth Development Programs.' Washington, DC: Carnegie Council on Adolescent Development.
- Rabkin**, J.G. (1987). "Epidemiology of Adolescent Violence: Risk Factors, Career Patterns and Intervention Programs." Paper presented at the Conference on Adolescent Violence: Research and Public Policy sponsored by the Carnegie Council on Adolescent Development, New York, NY, Feb. 5-7.
- Reid, J. (1986). "Social International Patterns in Families of Abused and Non-abused Children." In C. Waxler and M. **Radke-Yarrow** (Eds.), Social and Biological Origins of Altruism and Aggression. Cambridge, MA: Cambridge Press.
- Richman**, H., **Wynn**, J. and Costello, J. (1991). "Children's **Services** in Metropolitan Chicago: Directions for the Future." Volume **IV** of Children's Services in Metropolitan Chicago: The Current System and Alternative Approaches. Chicago, IL: **Chapin** Hall Center for Children at the University of Chicago.
- Ricketts**, E.R and **Sawhill**, I.V. (1988). "Defining and Measuring the Underclass." Journal of Policy Analysis and Management, 7, 3 16-325.
- Ruggles, P. (1990). Drawing the Line: Alternative Poverty Measures and their Implications for Public Policy. Washington, DC: Urban Institute Press.

- Rutter. M. (1979). 'Protective Factors in Children's Responses to stress and disadvantage.' In M.W. Kent and J.E. **Rolf, (Eds.), Primary Prevention of Psychopathology, Vol. 3.** Hanover, NH: University Press of New England
- Rutter. **M.**, and Gffler. G. (1984). Juvenile Delinquency: Trends and Perspectives. New York: Guilford Press.
- Ross, D.G. (1972). G. Stanley Hall: The Psychologist as Prophet. Chicago: University of Chicago Press.
- Rotheram-Borus, M.J.,** Koopman, C., and Ehrhardt. AA (1991). Homeless youths and HIV infection. American Psychologist, 46 (11), 1188-1197.
- Rubenstein. E., **Panzarine, S.** and **Lanning, P. (1990).** Peer counseling with adolescent mothers: A pilot program. Families in Society, 71, 136-141.
- Sameroff, A J. and Fiese, B. H. (1989). Transactional regulation and early interaction. In S.J. Meisels and J.P. **Shonkoff (eds).** Early Intervention: A Handbook of Theory, Practice and Analysis. Cambridge, England: Cambridge University Press.
- Santrock. J.W. (1991). Adolescence (4th Ed.). Dubuque. **IA: William C. Brown.**
- Schorr, L.B. and Schorr, D. (1988). Within Our Reach: Breaking the Cycle of Disadvantage. New York: Doubleday.
- Schwartz, I.M. (1991). Delinquency prevention: Where's the beef? The Journal of Criminal Law and Criminology, 82 (1), 132-140.
- Scoufe, **L.A.** and Rutter. **M.** (1984). The domain of developmental psychopathology. Child Development, 55, 17-29.
- Setz, V.,** Apfel. N.H. and Rosenbaum, L.K. (1991). Effects of an intervention program for pregnant adolescents: educational outcomes at two years postpartum. American Journal of Community Psychology, 19 (6). 911-930.
- Setz, V.,** Rosenbaum. C. K. and Apfel. N. H. (1985). Effects of family support intervention: A ten-year follow-up. Child Development, 56. 376-391.
- Shane. P. (1989). "Changing Patterns Among Homeless and Runaway Youth." American Journal of Orthopsychiatry, 59(2):208-214.
- Snyder, H.N., Finnegan. TA. **Nimick, E.G.,** et al. (1990). **Prepublication** draft of Juvenile Court Statistics, 1987. Pittsburgh, PA National Center for Juvenile Justice.
- Sonenstein, F.L., Ku, L., Juffras, J., and Cohen, B. (1991). Promising Prevention Programs for Children. Alexandria, VA The United Way of America.
- Sonenstein, F.L., **Pleck, J.H.** and Ku. L.C. (1989). Sexual activity, condom use and aids: awareness among adolescent males. Family Planning Perspectives, 21, (4).
- St. Louis, M. E., Conway, G. A., **Hayman, C. R.** Miller, C., Petersen, L. R. and Dondero. **T. J.** (1991). Human immunodeficiency virus **infection** in disadvantaged adolescents. Journal of the American Medical Association, 266 (17). 2387-2391.
- Steinberg, L.D. (1981). Transformation in family relations at puberty. Developmental

Psychology, 17, 833-840.

- Straus**, M. and Geles, R (1986). "Societal Change and Change in Family Violence From 1975-1985 as Revealed in **Two** National Surveys." Journal of Marriage and the Family, 48:465-479.
- Tanner, J. M. (1972). Sequence, tempo and individual variation in growth and development of boys and girls aged twelve to sixteen. In J. Kagan and R Coles (Eds.). Twelve to Sixteen: Early Adolescence. New York: Norton.
- Thome, CR, and **DeBlasse**, K.K. (1985). "Adolescent Substance Abuse." Adolescence, 20 (78):335-347.
- Tyack**, D. (1992). Health and social services in public schools: Historical perspectives. In R Behrman (Ed.), The Future of Children: School-linked Services. 2 (1). 19-31.
- U.S. Congress, General Accounting Office. (189). Children and Youths: About 68,000 Homeless and 186,000 in Shared Housing at Any Given Time. PEMD-89-14. Washington, DC: U.S. Government Printing **Office**.
- US. Congress, House of Representatives, Committee on Ways and Means. (1990). Overview of Entitlement Programs: 1990 Green Book. Comm. Pub. No. 101-29. Washington, DC: U.S. Government Printing Office.
- US. Congress, House of Representatives, Committee on Ways and Means. (1992). Overview of Entitlement Programs: 1992 Green Book. Comm. Pub. No. 101-29. Washington, DC: U.S. Government Printing Office.
- U.S. Congress, office of Technology Assessment. (1991). Adolescent Health. 1, 2, and 3. Washington, DC: U.S. Government Printing Office.
- U.S. Department of Education, Office of Educational Research and Improvement, National Center for Education Statistics. (1990). Dropout Rates in the United States. KNEES 90-659. Washington, DC.
- U.S. Department of Education, **Office** of Planning, Budget, and Evaluations. (1990). "State Education Performance Chart." Washington, DC.
- U.S. Department of Education. (1990). "Report on Activities During Fiscal Year 1989 Describing Programs and Activities Authorized by the Education for Homeless Children and Youth Program." Submitted to Senator Edward M. Kennedy, Chair, Senate Committee on Labor and Human Resources pursuant to section 724(b)(2) of the Steward B. **McKinney** Homeless Assistance Act (Public Law **100-77**). Washington, DC.
- U.S. Department of Health and Human Services. Public Health Service, Centers for Disease Control, National Center for Health **Statistics**. (1990). Unpublished 1988 data from the National Health Interview Survey. Hyattsville. MD.
- U.S. Department of Health and Human Services. Centers for Disease Control. (1991). "Weapon-Carrying Among High School Students--United States 1990." Morbidity and Mortality Weekly Report, 40:681-684, Oct. 11.
- U.S. Department of Health and Human **Services**. Office of Human Development Services, **Administration** for Children, Youth, and Families, Children's Bureau, National Center on Child Abuse and Neglect. (1980). Recognition and Reporting of Child Maltreatment:

Findings From the Study of National Incidence and Severity of Child Abuse and Neglect. Washington, DC.

- U.S. Department of Health and Human Services. Office of Human Development **Services**, Administrations for Children, Youth, and **Families, Children's** Bureau, National Center on Child Abuse and Neglect. (1988). Study Findings: Study of National Incidence and Prevalence of Child Abuse and Neglect: 1988. Washington, DC.
- U.S. Department of Health and Human Services. Office of Human Development Services. Administration for Children, Youth, and Families. (1989). Report to the Congress on the Runaway and Homeless Youth Program: FY87. Washington, DC.
- U.S. Department of Health and Human Services, **Public** Health Service. Alcohol, Drug Abuse and Mental Health Administration. National Institute on Drug Abuse. (1991). National Household Survey on Drug Abuse: Population Estimates 1990. DHHS Pub. No. **(ADM)** 91-1732. **Rockville, MD.**
- U.S. Department of **Health** and Human Services. **Public Health** Service, Centers for Disease Control. (1991). 'Alcohol and Other Drug Use Among High School Students - United States, 1990.' Morbidity and Mortality Weekly Report, 40:(No.45): 776-77 and 783-784, November 15.
- U.S. Department of Health and Human Services. (1992). Data from 1991 'The Federal Government's 17th Annual Survey of High School Seniors.' HHS News, Jan. 27.
- U.S. Department of Health and Human **Services**. (1991). Data from 1991 "Results from the Newly Expanded 1991 National Household Survey on Drug Abuse." HHS News, December 19.
- U.S. Department of Health and Human **Services**. (1990). Research findings from the "Midwestern Drug Abuse Prevention Research Project." HHS News, June 1.
- U.S. Department of Health and Human Services, **Public** Health Service, Alcohol, Drug Abuse, and Mental Health Administration, National Institute on Drug Abuse. (1991). "Summary of Findings from the 1991 National Household Survey on Drug Abuse." NIDA Capsules, **Rockville, MD**, December.
- U.S. Department of Justice, Federal Bureau of Investigation. (1988). "Uniform Crime Reports: Crime in the **United** States: 1987." Washington, DC: U.S. Government **Printing** Office.
- U.S. Department of Justice, Office of Justice Programs, Office of Juvenile Justice and Delinquency Prevention. (1990). Missing, Abducted, Runaway, and Thrownaway Children in America: First Report: Numbers and Characteristics, National Incidence Studies. Prepared by D. Finkelhor, G. Hotelling, and A **Sedlack**. Washington, DC.
- U.S. Executive Office of the President, Office of National Drug Control Policy. (1991). National Drug Control Strategy. Washington, DC: U.S. Government Printing Office. February 1991.
- Weiss, **H.B.**, & Jacobs, F. (Eds.) (1988). Evaluating Family Programs. Hawthorne, NY: **Aldine**.
- Welte, J.W., and Barnes, G.M. (1985). 'Alcohol: The Gateway to Other Drug Use Among Secondary-School Students.' Journal of Youth and Adolescence, **14:487-498.**
- Werner, E.E. (1988). "Individual **Differences**, Universal Needs: A **30-Year** Study of Resilient

High Risk Infants,” Zero to Three: Bulletin of the National Center for Clinical Infant Programs, **8(4)**, 1-5.

- Werner, E.E. (1986). “Vulnerability and Resiliency in Children at Risk for Delinquency: A Longitudinal Study from Birth to Young Adulthood.” In J. Buchard and S. **Burchard**, (Eds.), Prevention of Delinquent Behavior. **Newbury Park**, CA Sage.
- West, D.J. and **Farrington**, D.P. (1973). Who Becomes Delinquent? London, England: Heinemann Educational.
- West, D.J. (1977). Delinquency, Its Roots, Careers and Prospects. London, England: Heinemann Educational.
- White, C.P., and White, M.B. (1991). The Adolescent Family Life Act: Content, findings, and policy recommendations for pregnancy prevention programs. Journal of Clinical Child Psychology, **20 (1)**, 58-70.
- White, K.M.**, Speisman, J.C., and Costos. D. (1983). Young adults and their parents: **Individuation** to mutuality. In H.D. Grotevant and C.R Cooper (Eds.). Adolescent Development In the Family: New Directions for Child Development. San Francisco: Jossey-Bass.
- William T. Grant Foundation. (1988). The Forgotten Half: Pathways to Success for America's Youth and Young Families. Washington, DC: Youth and America's Future: The William T. Grant Commission on Work, **Family** and Citizenship.
- Wilson, W.J. (1987). The Truly Disadvantaged: The Inner City, the Underclass, and Public Policy. Chicago: Chicago University Press.
- Wilson-Brewer, R, Cohen, S., **O'Donnell**, L.. and Goodman, I.F. (1991). Violence Prevention for Young Adolescents: A Survey of the State of the Art. Washington, DC: Carnegie Council on Adolescent Development.
- Wolfgang, M.E., **Figlio**, R.M., and **Sellin** T. (Eds.), (1972). Delinquency in a Birth Cohort. Chicago, IL: University of Chicago Press.
- Wolfgang, M.E., and **Tracy**, P.E. (1982). ‘The 1945 and 1958 Birth Cohorts: A Comparison of the Prevalence, **Incidence**, and Severity of Delinquent Behavior.’ Paper presented at conference on “Public Danger, Dangerous Offenders, and the Criminal Justice System.” Cambridge, **MA**: Harvard **University**, February.
- Yankelovich, D. (1974). The New Morality: A Profile of American Youth in the 1970s. New York: McGraw-Hill.
- Youniss, J. and Ketterlinus, R.D. (1987). Communication and connectedness in mother- and father-adolescent relationships. Journal of Youth and Adolescence, **16 (3)**. 265-280.
- Youniss, J. and **Smollar**, J. (1985). Adolescent Relations with Mothers, Fathers, and Friends. Chicago: University of Chicago Press.
- Young, A.M. (1983). ‘Youth Labor Force Marked Turning Point in 1982.’ Monthly Labor Review, **106(8)**, 29-34.
- Zabin**, L.S. and Clark, S.D., Jr. (1981). Why they delay: A study of teenage **family** planning clinic patients. Family Planning Perspectives, **13**, 205-217.

Zabin, L.S., Hirsch, M.B., Smith, EA., Streett, R, and Hardy. J.B. (1986). Evaluation of a pregnancy prevention program for urban teenagers. Famflv Planning Perspectives, **18**, 119-126.

Zigler, E.. & Weiss, H. (1985). Family support systems: An ecological approach to **child** development.. In R Rapoport (Ed.) Children, Youth and Families: The Action-Research Relationship. Cambridge: Cambridge University.

INTERVIEWS

- Corriea, P. National Resource Center for Youth **Services**. Tulsa, Oklahoma. Phone **interview**, May 20, 1992.
- Dryfoos, J. Independent Consultant. Hastings-on-Hudson, New York, Phone Interview, May 2, 1992.
- Jones, J. National Center for Children **in** Poverty, Columbia University School of Public Health. New York New York. Phone **interview**, May 26, 1992.
- Loomis, A.** Stuart **Foundation**. San Francisco, **California**. Phone interview. May 22, 1992.
- Primm** Brown, G. Education and Healthy Development of **Children** and Youth, Carnegie Corporation. New York, New York. Phone **interview**, May 8 and May 20, 1992.
- Quinn, J. Carnegie Council on Adolescent Development. Washington, DC. **interview**, May 20, 1992.
- Takanishi, R** Carnegie Council on Adolescent Development. Washington, DC. Phone interview. May 12, 1992.