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What Works, Wisconsin

What Science Tells Us about Cost-Effective Programs for Juvenile Delinquency Prevention

A Report to the Wisconsin Governor's Juvenile Justice Commission and the Wisconsin Office of Justice Assistance

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A joint initiative of the University of Wisconsin–Madison Schools of Human Ecology and Social Work, and the University of Wisconsin–Extension, Cooperative Extension

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EXECUTIVE SUMMARY

Significant advancements have been made in the science of juvenile delinquency prevention in recent years. There is considerable evidence that some approaches are more effective than others in preventing crime and reducing recidivism among youth. Research has shown that implementing proven, scientifically sound programs and interventions can have a preventive effect, making it less likely that individuals will engage in crime and equipping them to make positive contributions to society. Many of these programs have been shown to result in economic benefits to society far outweighing their costs. Through the use of evidence-based programs, practices and policies, the state of Wisconsin can more effectively address the problem of juvenile delinquency while making the best use of increasingly limited financial resources.

Through the use of evidence-based programs, Wisconsin can more effectively address the problem of juvenile delinquency while making the best use of limited financial resources.

This report builds on several recent efforts to analyze the growing evidence in the field of delinquency prevention. Most notably, the Washington State Institute for Public Policy's cost-benefit analysis of dozens of prevention and intervention programs related to juvenile delinquency provided the impetus for this report. The Office of Juvenile Justice and Delinquency Prevention's Model Programs Guide also informed our work. Drawing on those resources, we highlight a number of proven, effective programs and review the strongest evidence available in several categories of interventions, from universal or primary prevention with children and families through community-based programs for juvenile offenders. Special attention is also given to several programs and approaches developed in Wisconsin.

KEY CONCEPTS

A number of principles and frameworks guide current thinking about the prevention and treatment of youth problems in general and delinquency in particular. Most fundamental to current approaches is the risk-protection framework. Certain traits of individuals, families, and communities have been identified as risk factors for the development of anti-social behavior and negative outcomes; criminologists refer in particular to risk factors for delinquent or criminal activity as "criminogenic factors." Other traits, called protective factors, make negative outcomes less likely and positive outcomes more likely. Identifying risk and protective factors makes it possible to target relevant attitudes, needs, or behaviors among people at risk for negative outcomes, and provide services and resources that promote positive outcomes. A related perspective that has informed many recent prevention and youth programming initiatives identifies "developmental assets," the building blocks necessary for healthy development.

The human capital perspective is central to understanding not only the reasoning behind offering programs to at-risk individuals, but also the concept of cost-benefit analysis. Human capital refers to the investment of resources to increase the social, emotional, and educational skills of children, parents, and families. The human capital perspective emphasizes that investments in young people's education and development can produce economic returns to the general public and personal returns to individuals. All of these "returns" can be included when estimating the effect of a program or intervention.

Putting the human capital perspective to use, information on the effects of programs and interventions can be converted into monetary values and compared to the investment required to achieve those effects. The economic benefits of prevention programs cover a wide range, including, but not limited to, reduced delinquency and crime, increased economic well-being of participants (and associated tax revenues), and cost savings within major public service and rehabilitative systems. Cost-benefit analysis (CBA) offers a practical method for helping policymakers consider alternative programs when faced with limited resources. CBA is a major departure from traditional measures of program effectiveness, which take into account only the strength of a program's impact, while ignoring the costs. Using CBA, program options can be ranked according to their effectiveness per dollar of expenditure.

CBA necessarily builds on evidence generated from high-quality program evaluations. The programs for which this type of information is available are called evidence-based programs. Evidence-based programs are those that have been shown through scientific research and evaluation to be effective and reliable. They have been subjected to rigorous evaluation using comparison groups, often including long-term follow-up to track various outcomes for program participants and non-participants. A number of federal agencies and research organizations maintain registries of evidence-based programs to guide the selection of programs for prevention of problem behaviors. Evidence-based programs are somewhat rare, but growing in number.

REVIEW OF PROGRAMS

In this report, we review the available evidence in ten categories of programs, grouped into three broad areas:

PRIMARY PREVENTION

- Preschool Education
- Family Support Programs
- Social-Emotional Learning Programs

SECONDARY PREVENTION

- Family Training Programs
- Social Skills Training Programs
- Mentoring Programs
- Vocational/Job Training Programs

JUVENILE OFFENDER PROGRAMS

- Diversion or Community Accountability Programs
- Therapeutic Interventions
- Case Management/Multimodal Interventions

Within each category, we highlight one or two evidence-based programs, including cost-benefit information whenever it is available. We also discuss the practices and approaches that appear to increase program effectiveness within each category.

The most cost-effective prevention programs reviewed in this report include preschool education, home visitation programs, and social and emotional learning programs for elementary school children. In all of these programs, the quality and intensity of services are high, staff members are well trained, and the program has a well-articulated vision with a strong conceptual base. Although mentoring and job training programs were also found to have good evidence of effectiveness, their economic returns are lower.

Among juvenile offender programs, the strongest empirical evidence of cost-effectiveness is for diversion programs and therapeutic interventions that provide a range of intensive services over relatively long periods of time. Overall, there are fewer evidence-based juvenile offender programs than prevention programs. However, a number of principles of effective intervention have been identified that can increase the likelihood that a given program or approach will be effective.

Throughout the review of programs, we also identify emerging or unproven delinquency prevention programs that appear to follow key principles of effective programs but have not yet

demonstrated reliable program impacts. These include after-school programs and enhanced probation and supervision programs. Additional research on these and other programs is needed.

CONSIDERATIONS IN IMPLEMENTING EVIDENCE-BASED PROGRAMS

Knowing that a program has undergone rigorous evaluation and has strong evidence that it works is an essential first step in moving toward more effective, evidence-based practice. However, implementing a program that will have the desired effect involves a great deal more than just using an evidence-based program. Among other things, it requires that the program selected be appropriate to the audience, that it is adequately funded and staffed, and that the selected program is implemented with fidelity. These less tangible matters are often overlooked by program sponsors, but are as important as the program model itself if the program is to have a positive impact. In addition to these issues, there exist a number of practical considerations related to the realities of program administration, which are often barriers to the use of evidence-based programs. These considerations are articulated in the full report.

RECOMMENDATIONS

Based on our synthesis of the available evidence on the effectiveness of juvenile crime prevention programs, we make the following recommendations for consideration by the Wisconsin Governor's Juvenile Justice Commission:

(1) Strongly support the use of evidence-based prevention and intervention programs and practices.

(2) Educate policy-makers and practitioners about evidence-based programs and practices and their practical and economic benefits.

(3) Use results of cost-benefit analysis to better prioritize funding of education and social programs.

(4) Adopt an appropriate and validated assessment tool in order to direct juvenile offenders to the level of intervention and supervision that is most likely to be effective for them.

(5) Develop mechanisms for disseminating effective program models and good practice guidelines to practitioners and decision-makers.

(6) Provide support for local-level delinquency prevention initiatives.

(7) Increase investments in research and development (R & D) and in evaluation of emerging, innovative, and promising prevention programs.

(8) Provide a greater balance between prevention and intervention programs and strategies.

(9) Create new, state-level, operational policies that encourage cross-agency collaboration and funding for prevention.

(10) Develop new state funding mechanisms that are equitable and consistent with the economic benefits of prevention programs.

These recommendations have the potential to positively alter the future life chances of Wisconsin youth, reduce crime, and contribute to significant cost savings. However, putting into action most of these recommendations will require both vision and courage – the vision to look beyond short-term solutions and the courage to challenge the status quo and adopt new ways of operating. We hope that this report will serve as an impetus for change and contribute to the emergence of Wisconsin as a national leader for innovative, scientific, and cost-effective policies and programs on behalf of its youth.

I. PROJECT OVERVIEW

Significant advancements have been made in the science of juvenile delinquency prevention in recent years. There is considerable evidence that some approaches are more effective than others in preventing crime and reducing recidivism among youth. Research has shown that high-quality implementation of evidence-based programs and principles often results in reduced delinquency and future recidivism as well as economic benefits to society that outweigh expenditures. Through the use of evidence-based programs, practices and policies, the state of Wisconsin can more effectively address the problem of juvenile delinquency while making the best use of increasingly limited financial resources.

Our knowledge about cost-effective programs, practices and principles in the field of delinquency prevention has grown at a phenomenal rate.

In response to a request from the Wisconsin Governor's Juvenile Justice Commission and the Wisconsin Office of Justice Assistance, this report synthesizes the current research on scientific approaches to delinquency prevention and community-based intervention. In addition, this report provides an overview of the latest concepts, terms and models related to juvenile delinquency prevention and intervention. It concludes with recommendations regarding future directions for the state of Wisconsin that can lead to more effective and economically viable approaches for reducing juvenile crime, enhancing youth development and contributing to responsible citizenship.

Three questions guide this report:

- What does science tell us about effective approaches to preventing and treating delinquency?
- What are the economic returns of the most effective programs?
- What steps should the state take to develop a more effective and cost-beneficial strategy for preventing juvenile delinquency and future crime?

PROJECT HISTORY

Over the past five years, our knowledge about cost-effective programs, practices and principles in the field of juvenile justice and delinquency prevention has grown at a phenomenal rate. The pace is so rapid that even in the process of developing the direction and scope of this report, new information became available that led to modifications in what we and the Wisconsin Governor's Juvenile Justice Commission intended to accomplish through the present report.

Initially, we had planned to provide an update and extension of the Washington State Institute for Public Policy's 2001 report on *The Comparative Costs and Benefits of Programs to Reduce Crime* [1]. However, within weeks of our beginning this project, Washington State released a new version of their report that essentially did just that (see *Benefits and Costs of Prevention and Early Intervention Programs for Youth* [2]). The availability of this new report meant that much of the work on estimating costs and benefits for delinquency and recidivism prevention programs had already been accomplished, freeing us up to address other important issues.

The current report builds on existing resources, including the Washington State report as well as the Office of Juvenile Justice and Delinquency Prevention's (OJJDP's) web-based *Model Programs Guide* [3]. Consequently, the current report includes a discussion of most of the key findings from these previously released documents but also goes well beyond them. We provide here a fairly broad and inclusive summary of what is known about the prevention of delinquency and recidivism in community-

based programs. Drawing on available cost-benefit analyses, we also discuss what is known about the potential cost savings of various approaches to prevention and community-based juvenile offender programs. In addition, building on the OJJDP Model Programs Guide and the numerous other guides and registries that have been developed in recent years, we provide an overview of what is known about proven, effective approaches to the reduction of delinquency, including a synthesis of the principles that underlie successful programs. Finally, we provide a review of some of the strategies that have been found to be critical to the successful selection and implementation of prevention and early intervention programs.

KEY CONCEPTS

There are a number of principles and frameworks that guide current thinking about the prevention and treatment of youth problems in general and delinquency in particular. In this section, we provide an overview of some of the most relevant frameworks, concepts and principles as a way to orient the reader to the current scientific thinking in this area and provide a foundation for our later discussion of what works in delinquency prevention.

Risk-Protection Framework

Most scholars and professionals in the field of prevention are guided by some variation of the risk-protection framework. This approach assumes that the best way to prevent delinquency or other problematic outcomes is to reduce or eliminate risk factors and to increase or enhance protective factors [4]. Risk factors typically are defined as individual or environmental markers that are related to an increased likelihood that a negative outcome will occur [5, 6]. Conversely, protective factors usually are defined as individual or environmental safeguards that enhance a person's ability to overcome stressful life events, risks or hazards and promote adaptation and competence [7, 8]. Criminologists use the term "criminogenic factors," which describes risk factors that (a) have been empirically linked to delinquent or criminal behavior, and (b) are dynamic, or amenable to change through intervention in an individual's life [9].

Most prevention researchers and practitioners view prevention within an ecological framework [e.g., 5, 10, 11] which assumes that risk and protective factors can exist both within individuals and across the various settings in which they live such as the family, peer group, school, and community. Closely related is the idea that most problems are multiply determined [11]. That is, there may be diverse paths to the development of a particular problem like delinquency, and efforts to address a single cause are likely to fail, because most problems have multiple causes. Similarly, the same risk factor can be related to a variety of different outcomes [8]. For example, many criminogenic factors, which put youth at risk for delinquency, also put them at risk for early parenthood or school failure. Thus, efforts to prevent youth problems must account for and target multiple settings and risk factors [11, 12]. Figure 1 presents a list of common *risk factors* and *protective factors* for juvenile delinquency organized by ecological level.

FIGURE 1.
Common Risk and Protective Factors for Juvenile Delinquency

RISK FACTORS	PROTECTIVE FACTORS
INDIVIDUAL LEVEL	
• Early initiation of problem behavior • Early and persistent antisocial behavior • Low IQ • Hyperactivity • Rebelliousness • Favorable attitudes toward deviant behavior • Involvement in other problematic or dangerous behavior	• High IQ • Intolerant attitudes toward deviant behavior • Positive social orientation • Ability to feel guilt • Trustworthiness
FAMILY LEVEL	
• Family history of criminal or delinquent behavior • Family conflict or violence • Favorable parental attitudes and involvement in problem behavior • History of maltreatment • Parental psychopathology • Teenage parenthood • Poverty	• Good relationships with parents • Good family communication • Parents/caregivers who possess strong parenting skills
PEER LEVEL	
• Friends who engage in delinquent behavior • Peer rejection	• Non-delinquent friends (or prosocially oriented friends)
SCHOOL LEVEL	
• Academic failure or poor performance beginning in late elementary school • Lack of commitment or bonding to school • Low academic aspirations	• Positive commitment to school • Academic achievement • Strong school motivation • Positive attitude toward school
COMMUNITY LEVEL	
• Availability of drugs and weapons • Low neighborhood attachment and community disorganization • Media portrayals of violence • Extreme economic deprivation • Concentration of delinquent peer groups	• Non-disadvantaged neighborhood • Low neighborhood crime • Community norms and laws that condemn drug use, crime and deviant behavior • High neighborhood stability and cohesion

SOURCE: Adapted from *Preventing & Reducing Juvenile Delinquency* (2003), p. 105. By J.C. Howell. Thousand Oaks, CA: Sage Publications [13] and *Child Delinquents: Development Intervention and Service Needs (2003)*, R. Loeber and D. Farrington, (Eds.). Thousand Oaks, CA: Sage Publications [14].

Positive Youth Development Approaches

An increasingly popular approach to problem prevention emphasizes the positive aspects of youth development and well-being. This approach is especially common with traditional youth serving agencies that provide after school and non-formal educational programs, and with initiatives concerned with facilitating youth involvement in the community. In contrast to traditional prevention programs, positive youth development assumes that simply preventing problems is not enough to prepare youth for adulthood, and that the best way to prevent problems from occurring throughout the lifespan is to promote the developmental potential of young people [8, 15].

While there exist a number of positive youth development models, in Wisconsin the most widely used approach is the Search Institute's Developmental Assets framework [16]. This model is built around 40 developmental assets, defined as the building blocks that are crucial for promoting healthy youth development and well-being [17]. According to the Search Institute, assets center on the relationships, social environments, patterns of interactions, and norms that are central to promoting youth development. Correlational data from the Search Institute show that the more developmental assets a young person possesses, the fewer problems they exhibit (including delinquency) and the greater the likelihood that they will experience positive developmental outcomes like school success and social responsibility [18].

The need for proven, effective, high quality prevention and intervention programs remains a priority in Wisconsin and across the nation.

Human Capital Perspective

Preventive interventions are increasingly conceptualized from a human capital perspective, recognizing that social programs for children and youth are "investments" that promote well-being among participants and for society at large. Human capital is a general identifier for investments of human and financial resources to increase the social, emotional, and educational skills of children, parents, and families. If they are substantial enough, these resources can improve learning and behavior in the short-term as well as economic and social well-being in the long-term. Generally, the earlier in the life course that an intervention occurs, the greater its capacity for creating enduring effects, with long-term consequences for individuals, their families, and the communities in which they live [19, 20]. The human capital perspective emphasizes that investments in young people's education and development can have economic returns to the general public as well as personal returns to individuals, and that all of these "returns" can be included when estimating the effect of a program or intervention.

Evidence-Based Programs and Practices

The need for proven, effective, high quality prevention and intervention programs remains a high priority in Wisconsin and across the nation. Unfortunately, the effectiveness of many current programs and practices remains unproven at best, while some are known to be ineffective or even harmful. Increasingly, state, federal and private funders are asking that the programs they fund have solid research evidence that they work. These programs are known as *evidence-based programs.*

Evidence-based programs incorporate strategies, activities and principles that have been shown through scientific research and evaluation to be effective and reliable. In order for programs to be considered evidence-based, they must go through a process that draws on scientifically gathered information and uses a commonly agreed upon criteria for rating research interventions, principles and strategies. Such programs:

- Are based on a solid, scientific, theoretical foundation
- Have been carefully implemented and evaluated using rigorous scientific methods that usually include:
    - A control or comparison group
    - Well-established measures and methods
- Have been evaluated in a variety of settings with a range of audiences
- Have evaluation findings that have been subjected to critical review by other researchers and published in respected scientific journals
- Have been certified as evidence-based by a federal agency or well-respected research organization based on the above criteria

There has been some confusion regarding the terms used to describe evidence-based programs. Some agencies and professionals refer to them as *research-based* or *science-based* programs. In addition, the term *model programs* is often used interchangeably with *exemplary programs*. In most cases, they are based on similar principles and criteria for scientific evidence and are therefore comparable.

There is, however, a distinction between *evidence-based programs* and *evidence-based practices* or *principles of effectiveness*. Evidence-based practices and principles are elements that increase effectiveness across a variety of programs, rather than self-standing programs that can be acquired and implemented. Researchers try to identify these "active ingredients" to increase the likelihood that programs – whether evidence-based or not – will be effective.

It is important to keep in mind that the current scientific evidence is at the level of the program, not at the level of practices or principles. Because each program is an integration of many elements, the contributions of individual program components (staffing, learning activities, timing, or duration) to the total effect are not estimated. Syntheses of the evidence across different programs lead to identification of a common set of principles, which are valuable, but not "evidence-based" in the same way that individual programs can be.

There are a number of reasons for the growing interest in the use of evidence-based programs. The first is accountability. The public wants to know that tax dollars are being spent on programs and services that actually work. Similarly, public agencies and their funders increasingly want to invest their dollars in programs that have scientifically demonstrated their effectiveness. In fact, it is becoming more common for funders to mandate that evidence-based programs be used by the organizations they fund. Another reason for the growth of evidence-based programs is efficiency. Instead of having to "reinvent the wheel," agencies can select from the growing number of programs that are known to be well designed and have undergone rigorous evaluation. Finally, and perhaps most importantly, when these programs are implemented properly, there is good evidence that they will have the positive impact that they were designed to produce. In this way, evidence-based programs enable limited public resources to be used wisely.

The growth of evidence-based prevention programs is a relatively recent phenomenon. While there were few such programs prior to the 1990s, over the past decade the number of programs has grown quickly and continues to increase at a rapid pace. Unfortunately, while there has been a remarkable growth in the number of evidence-based prevention programs, their adoption and use by practitioners lags far behind. One recent study on the use of evidence-based programs by schools found that less than a third of the prevention programs used by public schools were evidence-based [21]. In the field of juvenile justice, the percentage of programs that are evidence-based may be even lower.

Registries of Evidence-Based Programs

As the number of evidence-based programs has grown, various federal agencies and non-profit research and education organizations have developed web-based program registries that certify and list programs that have met the standards of being evidence-based. The most rigorous of these are listed in Appendix C of this report.

Many of these registries focus on a particular area of interest such as drug abuse, violence or juvenile delinquency. Others are more general in that they attempt to cover programs that address a range of outcomes. In order for a program to be included in a registry, it must have met the sponsoring organization's criteria of being evidence-based. Some registries also include programs that are classified as promising. These are programs that are based on good research and theory and usually have some preliminary evidence of being effective, but have not been evaluated as rigorously, as often, or with as much long-term follow-up as the model or exemplary programs.

There is a great deal of overlap between evidence-based program registries. This is true even for registries that are fairly diverse in the outcomes or problems that they are concerned with. The reason for this is that many evidence-based programs have been found to have a positive impact on addressing a range of problematic and positive outcomes. For example, some of the most effective family-based programs have been found to not only reduce drug abuse among youth, but also help prevent aggressive behavior and promote positive developmental outcomes like school success.

Classification of Prevention Programs

Traditionally, three different types of approaches to prevention have been identified: primary, secondary, and tertiary [22]. Primary prevention is concerned with preventing the initial occurrence of a problem within a normal population. Secondary prevention involves intervening with populations that show signs of early problems, so that more serious problems can be prevented. Tertiary prevention involves the reduction of a problem among groups of people already experiencing it [23].

A more recent development in the classification of prevention programs comes from the Institute of Medicine [24]. In this system, programs are classified based on the characteristics of the audience they target. The three categories of prevention programs are known as universal, selective and indicated. *Universal prevention* involves interventions directed at the general public or an entire population (e.g., all middle school students); *selective prevention* programs are directed at a subgroup of a population that is at risk of developing the problem but is not yet exhibiting any difficulties; *indicated prevention* involves interventions targeted at high risk individuals who show some signs or symptoms of a problem. In terms of old and new terminology, primary and universal prevention often are used interchangeably, as are indicated and secondary prevention [4].

COMMON LABELS USED TO DESCRIBE EVIDENCE-BASED PROGRAMS

Evidence-based programs and practices are often referred to by different names by various organizations. Though this can be confusing, these labels are for the most part, comparable. Some of the common labels used to describe programs that meet the criteria of evidence-based include:

- Exemplary Programs (U.S. Department of Education)
- Effective Programs (CDC, NIDA, DHHS)
- Model Programs (SAMHSA, OJJDP, Blueprints, Surgeon General)
- Proven Programs (Promising Practices Network)
- What Works (Child Trends)

Cost-Benefit Analysis

Cost-benefit analysis (CBA) offers a practical method for helping policymakers consider alternative programs while facing limited resources. CBA is a major departure from traditional measures of program effectiveness, which take into account only the strength of a program's impact, while ignoring the costs. Using CBA, program options can be ranked according to their effectiveness per dollar of expenditure. In this report, we provide estimates of the economic returns in 2004 dollars for a wide range of crime prevention programs.

Levin and McEwan define CBA as the "evaluation of alternatives according to their costs and benefits when each is measured in monetary terms" [25, p. 11]. The use of cost-benefit analysis to document the payoffs of education, prevention, and human service programs has increased in recent years [2, 19]. When program outcomes cannot be easily converted to monetary terms, *cost-effectiveness analysis* (CEA) is recommended. In CEA, program costs are in monetary terms but benefits remain in the metric of the outcome measure, such as the percent decrease in a particular undesirable behavior. The major advantage of CBA over CEA, however, is that benefits for multiple outcomes can be summarized in dollar terms, expressed as either the net return (benefits minus costs) or return per dollar invested (benefits divided by costs).

Cost-benefit analysis (CBA) offers a practical method for helping policymakers consider alternative programs.

The ability to conduct a CBA depends on whether or not it is possible to capture program benefits and costs in dollar terms. Typically, it is more difficult to calculate the dollar value of benefits than costs. Calculating program costs is relatively straightforward given that most costs can be identified and monetized. However, because the outcomes of many prevention and treatment programs are not limited to delinquency and crime, the estimated economic returns must take into account all the effects of program participation. Experiences that place children and youth at risk of delinquency should be taken into account (such as child maltreatment and school underachievement) as well as later behaviors that are expected consequences of delinquency (such as lower educational attainment and economic hardship). As with nearly any assessment of program impact, another key requirement of CBA is that equivalent outcomes are available for a control group who received no program services (or received "the usual services") and for an experimental group whose members received the modified or new program or services of interest. Consequently, the economic benefits of a particular program are derived from the average performance of program participants relative to control group participants.

The economic benefits of prevention programs cover a wide range and include youth delinquency, adult criminal behavior and related outcomes that can be readily converted to economic benefits. These outcomes include increased economic well-being of participants (and associated tax revenues) and cost savings associated with the administration and treatment of children and youth in major service systems. The two categories that account for the largest share of potential economic returns are (a) cost savings to the criminal justice system and crime victims and (b) increased earning capacity, sometimes measured indirectly by higher educational attainment. The first category is a benefit to the general public (i.e., taxpayer, governments, and crime victims). The second is primarily a benefit to program participants, but also has direct benefits for society when increased tax revenues are taken into consideration.

CBA is generally used to report on the economic benefits to society at large, which is the sum of estimated benefits to the general public and to program participants. The two major indicators of these benefits are the net program

benefit and the benefit-cost ratio, which represents the economic benefit to society per dollar invested in the program. Values above $1.00 indicate that economic returns exceed costs.

Note also that both actual and projected benefits are generally included in estimated benefits. Benefits can occur in the short- and long-run. The extent to which evaluations address long-term impacts depends on a range of factors including the goals of the program, whether sufficient time has elapsed to evaluate target outcomes for program participants, and whether investments have been made to evaluate the effects of the program over the long run. Primary prevention programs in the early childhood area, for example, are more likely to be assessed for long-run effects a decade or more post-program, whereas programs for juvenile offenders usually have a much shorter time horizon and are unlikely to track participants past the age of 18. It is worth noting that for many programs, the research findings are still limited to immediate program impacts or short-term follow-up studies. However, as longer-term follow-up becomes more widespread, evidence for the impacts of these programs – and better estimates of the long term cost savings – will become available.

INFLUENCE OF THE WASHINGTON STATE STUDY ON THE PRESENT REPORT

A major impetus for this report was the recent report commissioned and funded by the Washington State legislature. Aos and colleagues at the Washington State Institute for Public Policy estimated the economic benefits and costs of a wide range of prevention and intervention programs to enhance the well-being of children and youth [2]. Unlike their earlier report [1], the researchers measured economic benefits associated with both crime prevention and non-crime outcomes such as substance abuse prevention and educational attainment. The study's investigation of the effects of different programs was intended to advance public policies on behalf of Washington's families and, by implication, those across the country.

The Washington State report is notable because it is the most complete account to date of the benefits and costs of social programs for children and youth. Spanning 1970 to 2003, evaluations of seven types of programs were synthesized including pre-kindergarten education, child welfare/home visitation, youth development, mentoring, teenage pregnancy prevention, youth substance abuse prevention, and juvenile offender programs. The assessed outcomes for estimating economic benefits were in seven areas: crime, substance abuse, education outcomes (e.g., achievement, school completion), teenage pregnancy and parenthood, suicide attempts, child abuse, and domestic violence. Aos and colleagues found that programs and intervention approaches in four areas were particularly cost-effective. These included youth development programs with the goal of enhancing decision-making skills or parent-child relations; juvenile offender programs such as diversion interventions and family therapies; home visitation programs that provide intensive services; and preschool education for 3- and 4-year-olds.

As with the Washington State report, our report includes information on cost-effectiveness as a major indicator of program impact. We describe programs that were identified in their report as well as in other publications. Nevertheless, our report differs in several important ways. First, we emphasize programs that have demonstrated relatively high levels of cost-effectiveness in achieving their goals. Thus, the programs we describe are a select list that we believe provide the most payoff per dollar invested. Second, we base our CBA information on the original (or in some cases, most recent) cost-benefit analyses conducted for each program whenever possible. When no such original analyses exist, we revert to the Washington State study estimates, converted to 2004 dollar values. Finally, the present report goes well beyond the provision of cost-benefit information. The success of any particular program involves many

factors aside from cost-effectiveness, such as its appropriateness for the target audience and how well it is implemented. In this report we include a thorough review of such factors so that decision makers and practitioners can have a more complete picture of what it might take to select, fund and implement a cost-effective, evidence-based program directed at the prevention of juvenile delinquency.

II. COST-EFFECTIVE PROGRAMS TO PREVENT DELINQUENCY AND CRIME

Based on a comprehensive review of the available evidence on crime prevention programs, we describe effective programs for children and youth in three major classes: primary prevention programs, secondary prevention programs, and juvenile offender programs. Primary prevention programs are interventions such as preschool programs that occur before children exhibit problems or anti-social behaviors. Secondary prevention programs are implemented during the early cycle of delinquency when misbehavior and conduct problems are evident, but prior to full blown delinquency. Juvenile offender programs, which are often referred to as treatment programs or tertiary prevention programs, are interventions that occur after youth have been arrested. The goal of juvenile offender programs is to prevent recidivism. For the present report, we limit our discussion of juvenile offender programs to non-residential programs and approaches that are delivered to juvenile offenders in the community.

Before describing the most effective programs from our review, we summarize broad principles that appear to make prevention and juvenile offender programs effective and, for many of them, exemplary.

PRINCIPLES OF EFFECTIVE PRIMARY AND SECONDARY PREVENTION PROGRAMS

The most effective primary and secondary prevention programs related to delinquency share a number of key principles. Though there is great value in using established, proven programs, that is not always possible. There will always be new and emerging programs that do not yet have the evaluation data to document their impact. Drawing on a range of studies and comprehensive reviews [26-28], these principles can serve as guidelines to those who are developing new programs, wish to improve existing programs, or have the responsibility for making funding decisions about what is likely to work.

Primary and secondary prevention programs have similar principles of effectiveness. Effective programs are:

- **Delivered at a high dosage and intensity** – Effective programs tend to have relatively greater amounts of contact time with participants whether it be number of sessions, hours, weeks, or years.
- **Comprehensive** – Multi-component programs that address a variety of risk and protective factors are usually more effective than single-component programs.
- **Appropriately timed** – The most effective programs address relevant factors or processes at specific times of need, and when participants are most receptive to change.
- **Developmentally appropriate** – Programs should be age and developmentally appropriate for the target audience of children, youth, or adults.

- **Socio-culturally relevant** – Tailoring the program to the cultural traditions of youth and their families enhances recruitment, retention and sometimes outcome attainment.
- **Implemented by well-trained, effective staff** – The effectiveness of a program is tied to the staff's personal characteristics such as efficacy and confidence, and their level of training, either by education or experience.
- **Supported by strong organizations** – Effective programs receive administrative support, have low employee turnover rates, and have staff members who share the same vision.
- **Implemented using varied, active methods** – Interactive skills training methods are much more likely than didactic lecturing to increase program effectiveness and client satisfaction.
- **Based on strong theory** – High-quality programs have a strong theoretical justification, are based on accurate information, and are supported by empirical research.
- **Evaluated regularly** – Staff members are able to make modifications and improve program effectiveness when they systematically document and reflect on implementation, processes, and results.

PRINCIPLES OF EFFECTIVE JUVENILE OFFENDER PROGRAMS

Criminologists studying the effectiveness of approaches and programs for juvenile offenders [e.g., 9, 29, 30] have identified several principles of effective intervention. These principles are based on meta-analyses[1] of hundreds of program evaluations and reviews of the records of thousands of adult and juvenile offenders [31]. These principles include:

- **The human service principle** – Punishment, control, and surveillance will be ineffective at changing offenders' behavior if human services are not also provided.
- **The risk principle** – Offenders should be assigned to interventions and services based on level of risk of recidivism, and that it is possible to classify offenders by risk of re-offending.
- **The need principle** – Interventions should be selected based on the criminogenic needs (crime-related risk factors) of the individual juvenile offender, non-criminogenic needs are not worth targeting.
- **The responsivity principle** – This principle has two parts, based on responding to offenders' learning styles and willingness to change:
    - Interventions should take a behavioral approach, based on cognitive and social learning theories, so that offenders can learn new behaviors ("general responsivity")
    - Interventions should be "fine-tuned" to maximize response from individual offenders, based on their motivation, maturity, learning style, anxiety level, etc. ("specific responsivity"); and
- **The fidelity principle** – Programs should be implemented with integrity and fidelity to the original design, as relates to staff training and retention, duration and intensity of program contact, and caseloads for staff.

Application of the principles of effective intervention requires the use of an assessment tool that provides the information needed to draw conclusions about level of risk, criminogenic needs, and the appropriateness of available dis-

[1] Meta-analysis is an increasingly common statistical technique for analyzing and comparing the findings of a body of previously conducted empirical studies. A meta-analysis is a study of existing studies that allows researchers to examine whether there are any systematic patterns or findings that emerge across studies.

positions or diversion programs for an individual offender. Accurate assessment – above and beyond the screening typically used to determine whether a juvenile should be detained or referred for mental health services – is crucial to effective intervention [32]. Several states have developed standard assessments and require their use at juvenile intake [33, 34]. Wisconsin's Juvenile Classification System [35] is currently used to assess offenders placed in juvenile correctional facilities, but could be used more widely with revision and re-validation.

SUMMARY OF SELECTED COST-EFFECTIVE PROGRAMS

Table 1 describes prevention and juvenile offender programs that have been demonstrated to be among the most successful and cost-effective programs in achieving their objectives, either specifically in reducing delinquency and criminal behavior, or for outcomes that place children at significant risk of criminal behavior. The programs featured are not the only ones known to be effective, but were selected because of their solid documentation of impact and, in many cases, the availability of good cost-benefit data. In addition, we felt that these programs served as strong examples for the particular category of program being highlighted.

Unlike the Washington State report, the emphasis in our report is on a select set of programs we consider to be among the "best bets" for delinquency prevention in Wisconsin and in other states. Of course, new evidence on emerging or established programs will further inform policy decisions and complement the evidence we present.

The selected programs and the evidence for their effectiveness are described in the review of programs and approaches that follows, in a more detailed table in Appendix A, and in Appendix B, which also includes contact information for individual programs. Other effective, evidence-based programs can be found in the program registries that are listed in Appendix C.

An important emphasis of this report is the economic benefits to society at large, as described above. The main categories of benefits for the programs we review are presented below in order of their typical contribution to economic benefits:

- Reduced costs for the administration and treatment of individuals in the justice system as juveniles and adults. For most studies, cost savings are projected over adulthood based on the available evidence on the program.
- Savings to crime victims including tangible (e.g., hospitalization) and intangible (e.g., pain and suffering) costs associated with delinquency and crime.
- Increased earnings and compensation of program participants in adulthood based on actual earnings, employment, or educational attainment at particular ages. Estimates are for projected lifetime earnings up to age 65.
- Increased tax revenues to state and federal governments based on estimated earnings and compensation.
- Reduced costs for K-12 remedial services including special education placement and grade retention.
- Reduced costs for the administration and treatment of children in the child welfare system due to reported child abuse and neglect. The tangible and intangible savings to maltreatment victims also are included.
- Reduced costs for the administration and provision of social services including welfare and food stamps.
- Reduced costs for substance abuse treatment and related services.

We note that for some programs there are unique benefit categories that are not listed above. In center-based early childhood interventions, for example, parents have increased time available to devote to educational, economic, or personal development. This is measured as a

benefit to program participants. Savings associated with reduced rates of teenage parenthood as well as health and mental health problems also are applicable. Seemingly non-economic outcomes such as achievement test scores and conduct problem ratings can be converted to economic benefits on the basis of their documented links to educational attainment and juvenile crime [2].

TABLE 1.
Summary of Selected Effective Programs for Preventing Crime and Enhancing Well-Being

					Per Participant Costs and Benefits in $2004		
Program	Target group/ Focus	Intensity and length	Major crime prevention impacts	Impacts linked to crime prevention	Benefits *Costs*	Net benefit (Benefits – Costs)	Return per $1 invested
Primary Prevention *Preschool Education*							
Child-Parent Centers	Child/ Enrichment, Parent involvement	Part day, 1-2 years	Arrests, Incarceration up to age 24	Ed attainment Achievement Abuse & neglect	78,732 *7,755*	70,977	10.15
High/Scope Perry Preschool	Child/ Enrichment, Home visits	Part day, 1-2 years	Arrests, Incarceration up to age 40	Achievement Ed attainment Income	145,414 *16,648* 283,995 *16,648*	128,766 267,347	8.74 (age 27) 17.07 (age 40)
Abecedarian Project	Child/ Enrichment	Up to 8 years, including full day for 5 years	None reported	Ed attainment Achievement Mother employment	142,327 *70,588*	71,739	2.02
Family Support							
Nurse-Family Partnership – High risk	Parent/ Home visits	2 hrs biweekly, 2-2 ½ years	Arrests up to age 15	Abuse & neglect Substance use Teen pregnancy	37,041 *7,324*	29,717	5.06
Strengthening Families Program 10-14	Parent, child/ Groups	2 hrs weekly, 7-14 weeks	Conduct problems	Substance use Peer pressure	6,833 *874*	5,959	7.82

Program	Target group/ Focus	Intensity and length	Major crime prevention impacts	Impacts linked to crime prevention	Per Participant Costs and Benefits in $2004 Benefits *Costs*	Net benefit (Benefits – Costs)	Return per $1 invested
Social-Emotional Learning							
Skills, Opportunities, and Recognition	School population/ Parent and teacher training	Consistent through primary grades	Violent behavior	School behavior Achievement Alcohol misuse	14,810 *4,712*	10,100	3.14
Olweus Bullying Prevention Program	School population/ Improving school environment	Consistent through school years	Vandalism, fighting, theft, and bullying	School behavior	--	--	--
Secondary Prevention *Family Training*							
Family Effective-ness Training	Child, Family/ Training and therapy	1-1.5 hrs weekly 13 weeks	Conduct problems	Peer association Family functioning	--	--	--
Social Skills Training							
Positive Adolescent Choices Training	Child/ Social skills training	Unspecified	Aggression Violent behavior Arrests	None reported	--	--	--
Mentoring							
Big Brothers Big Sisters	Youth/ Mentoring	2-4 times monthly 12 months	Violent behavior	School behavior Achievement	4,166 *4,117*	49	1.01
Vocational/Job Training							
Job Corps	Youth/ Residential training	Full day, 4-6 months	Arrests Incarceration	Income Ed attainment Welfare use	22,883 *15,804*	7,079	1.45
Juvenile Offender Programs *Diversion*							
Adolescent Diver-sion Project	Youth/ Case mgmt, mentoring	6-8 hours per week, 18 weeks	Reduced recidivism	None reported	24,708 *1,825*	22,883	13.54

Program	Target group/ Focus	Intensity and length	Major crime prevention impacts	Impacts linked to crime prevention	Per Participant Costs and Benefits in $2004 Benefits *Costs*	Net benefit (Benefits – Costs)	Return per $1 invested
Therapeutic Interventions							
Multisystemic Therapy	Youth/ Family therapy	60 hours, 4 months	Re-arrests Out-of-home placement	Family function Mental health	15,395 *5,832*	9,563	2.64
Functional Family Therapy	Family/ Family therapy	8-12 hours	Re-offending Sibling delinquency	Family communication	29,111 *2,197*	26,914	13.25
Multidimensional Treatment Foster Care*	Youth/ Foster care with therapeutic treatment	Residential, 6-9 months	Re-arrests Subsequent days incarcer-ated	Hard drug use	27,460* *2,524**	24,936*	10.88*
Case Management/Multimodal Interventions							
Repeat Offender Prevention	Youth/ Case mgmt; center- and home-based services	Daily, 12-18 months	Sustained petitions for new offenses	Drug use Completion of court-ordered obligations	--	--	--
*Standard Services***							
Juvenile Court	Youth/ Formal hearing, adjudication, & disposition	2-3 hearings; length of supervision varies	N/A	N/A	*Average cost = 2,000*	N/A	N/A
Standard proba-tion	Youth/ Monitoring & supervision	Weekly contact, min. 12 months	N/A	N/A	*Annual cost = 2,160*	N/A	N/A
Juvenile Correc-tional Institution	Youth/ Confinement & treatment	Residential; length varies	N/A	N/A	*Annual cost = 68,255*	N/A	N/A

Note: The estimated economic benefits include actual and projected economic returns through adulthood. Estimates of both costs and benefits across studies are based on different sets of assumptions and different lengths of follow up. Estimates from the Washington State study are based on a different set of assumptions than those of the other reports.

* Costs and benefits for Multidimensional Treatment Foster Care (TFC) are given in comparison to regular group home treatment. One year of TFC costs $2,524 more than group home care for the average participant, and yields $27,460 in benefits per participant, as compared to group home residents. All other program costs and benefits are stated in comparison to "no treatment."

** Standard services are included in the table for the purpose of cost comparison.

III. REVIEW OF PROGRAMS AND APPROACHES

We now summarize the evidence for prevention and juvenile offender programs, emphasizing findings from the programs described in Table 1. We also summarize principles that are consistent across the effective programs in each category. As noted earlier, these principles are derived from the available evidence on particular programs, and have generally not been tested independently. However, they are useful for the design and initial assessment of new or untested programs and the improvement of existing programs within these categories.

In each category, we also briefly describe emerging programs and programs currently in wide use in Wisconsin. Emerging programs are ones that appear promising but may not yet have strong evidence of impact or cost-effectiveness. Several of these programs seem conceptually and operationally strong enough to contribute to crime prevention in the future. We are less certain of the effectiveness of others, but include the available information in this review because the approaches are gaining in popularity in the state and warrant more critical attention.

We address the programs and approaches within ten categories in three broad areas: Primary Prevention, Secondary Prevention, and Juvenile Offender Programs.

PRIMARY PREVENTION PROGRAMS

In the following section, we describe evidence on programs for young people who are relatively healthy and have not shown signs of problem behavior leading to delinquency. However, they may be at risk of later delinquency because they come from economically disadvantaged families or neighborhoods, have a parent with a delinquency history, or possess other risk factors. These programs generally begin early in the life course and build general cognitive, academic, social, and emotional competencies.

Preschool Education

Preschool programs refer to education in the early years of life before kindergarten. Although they are implemented for children at all levels of socio-economic status, the preschool programs identified as most effective tend to serve economically disadvantaged children. Center-based preschool education programs are specifically designed to promote children's cognitive, psychological, and social-emotional development. Many preschool programs also provide family services in a variety of forms ranging from home visits and social service referrals to promoting family-school partnerships. Family outcomes are nevertheless conceptualized as secondary to children's. Because they follow the school calendar, preschool programs have among the highest dosages and greatest intensities of prevention programs, ranging from 540 hours for a part-day, one-year program to large multiples of this amount for multi-year and full-day programs that provide comprehensive services.

Scores of studies over the years have found that participation in preschool is associated with positive school and social adjustment outcomes.

Scores of studies over the years have found that participation in preschool is associated with positive short- and longer-term school and social adjustment outcomes [36, 37]. Studies of three programs reveal significant effects on many indicators of well-being into adulthood, including reduced crime [38-40]. These effects translate into high economic returns. These three preschool programs are the **High/Scope Perry Preschool**, the **Chicago Child-Parent Centers**, and the **Abecedarian Project**. The Perry and Child-Parent Center programs are part-day programs for 3- and 4-year-olds whereas Abecedarian provides full-time educational day care for five years. Evaluations of these pre-

school programs included well-matched comparison groups for assessing long-term outcomes. As shown in Table 1, each program has economic benefits that far exceed costs.

The Perry program has conducted follow-up studies of its program participants when they were 27 and 40 years old. The evaluations indicate that the program group had fewer arrests for violent, property, drug, and other crimes, and spent fewer months incarcerated. They were also less likely to repeat a grade, more likely to graduate from high school, more likely to be employed at ages 27 and 40, more likely to own their homes, and less likely to use social services. Based on the results up to age 40, we estimate a return of $283,995 for the cost of $16,648 per participant [38].

The Chicago Child-Parent Centers program has followed a sample of 989 program participants and 550 comparison group members up to age 24, and has found significantly lower rates of juvenile arrest, adult convictions, and incarceration among program participants. Program participation also was associated with higher educational attainment and school achievement and with lower rates of child maltreatment and remedial education [39].

The Abecedarian Project has shown a similar pattern of effects as the Perry and Chicago programs, with the exception that no statistically significant effects for crime prevention have been detected, although the numerical differences favor the program group [40]. This finding may be a function of the small sample size and the low base rate of arrests in rural North Carolina where the sample resides.

Although the costs of the programs are significantly different from each other, the benefit-cost ratios all exceed 2, ranging from $2.02 per dollar invested for Abecedarian to $10.15 and $17.07 per dollar invested for the Chicago and Perry programs. The relatively low ratio for Abecedarian is the result of the high cost per participant (about $71,000 for five years). These programs' net economic benefits (benefits minus costs) were the largest of all of the programs we review in this report, ranging from about $70,000 per participant for the Abecedarian project and up to $267,000 per participant for the Perry program. Note however, that the economic returns for the Perry program may be a function of the length of follow up, since the other programs have just begun their long-term adult follow-ups, and may prove to have similar long-term benefits.

The primary sources of the economic benefits of the programs were the increased earnings of the participants (and the resulting tax revenues) and public savings due to reduced crime, averted crime victim costs, and reduced need for rehabilitation and treatment. The crime-related savings were the largest economic benefits by far for the Perry Preschool and the Chicago Child-Parent Centers program.

There appear to be five common elements of effectiveness across these programs and in the field at large. First, the preschool staff members were well trained and earned competitive salaries. Teachers for the Perry and Chicago programs had at least bachelor's degrees with certification in early childhood, while the Abecedarian teachers earned salaries that were competitive with those of public school teachers, which is unusual for such programs. Second, comprehensive services were provided in the form of center-based education for children and support services for families either through home visits, intensive school involvement, or health and nutrition services. For example, the Chicago program emphasized family-school partnerships and resource mobilization. The third common feature of the programs was the relatively high dosage and intensity of services as compared to other prevention programs. Children in the Perry and Chicago programs had close to 1,000 hours of participation, while participation in the Abecedarian project approached 5,000 hours. Child to staff ratios were small and ranged from about four to eight children per staff member. In addition, each had a curriculum philosophy that was well implemented. Finally, each of the programs provided

a literacy-rich learning environment with a wide range of age-appropriate educational activities.

Although not subjected to cost-benefit analysis, many other preschool programs have demonstrated positive effects on early and later school performance that may lead to significant levels of cost-effectiveness. These include among others, **Head Start** [41], the **Syracuse Family Development Research Program** [42], projects in the Cornell Consortium for Longitudinal Studies on Child Abuse and Neglect [36], and state-funded programs in Georgia, Illinois, and Oklahoma [43].

Family Support Programs

One of the most important influences on the lives of children and youth is the family setting in which they grow up. A plethora of research has documented the importance of the family in the prevention of delinquency and other problems and the promotion of healthy, positive development. Poor parenting skills and parent-child relations often lead to a range of negative outcomes for youth, including criminal and other risk-taking behavior. Most of the evidence-based primary prevention family programs that have been found to reduce delinquency fall into one of two types: home visitation and parent education/training programs.

One of the most important influences on the lives of children and youth is the family setting in which they grow up.

Home visitation programs

Home visitation programs are an increasingly popular approach to family-focused prevention. It is estimated that over half of a million children in the United States are currently enrolled in some type of home visitation program [44]. Most home visitation programs are directed at first-time mothers when the women are pregnant or when the child is very young. The major goals are to improve pregnancy outcomes, promote child development, reduce parental stress, prevent child maltreatment, and increase effective parenting. These programs are rarely focused directly on delinquency prevention and crime reduction per se, but several long-term studies have found that some home visitation programs have the potential to reduce such problematic outcomes while more generally improving the lives of mothers and their children [45, 46]. Home visitor programs vary along several dimensions, including the target population(s), intended outcomes, type of service provider, duration, intensity, and the types of services available. However, they all share three assumptions: 1) that parents play a critical role in well-being and development of their children; 2) that intervening and supporting parents as early as possible is the best approach; and 3) that resources and education should be brought directly to families rather than expecting families to seek them out on their own.

The diversity of home visiting programs has made the synthesis of their effects rather difficult. Overall, the literature on home visiting indicates that in some programs, at-risk families with young children who receive home visitation services fare better than control group families on multiple outcomes. A recent meta-analysis of home-visiting programs found that families in home-visiting programs did not have significantly less parental stress or reports of child abuse than other families [47]. In addition, mothers in these programs did not differ from the control group mothers in terms of self-sufficiency, employment, or dependence on social services. However, positive effects did emerge on some measures, such as parenting attitudes and behavior and children's cognitive and social-emotional development.

Although the evidence for the effectiveness of some home visiting programs has been mixed, one program has emerged as the exemplary program of its kind by consistently demonstrating an array of positive results in rigorous evaluations. Evaluations of the **Nurse-Family Partnership Program (NFP)** [45, 46] have found that compared to controls, individuals

born to women in the program experienced fewer incidences of running away from home in adolescence. In addition, these adolescents had fewer arrests, convictions, probation violations, and sexual partners, and used less alcohol and tobacco. Furthermore, this home visiting program resulted in numerous positive outcomes affecting the participating mothers and other family members. These outcomes included significant reductions in maternal substance abuse during pregnancy, fewer incidences of child maltreatment, smaller family size, fewer closely spaced births, and less reliance on welfare [45, 46].

The costs of home visiting programs can be fairly high, especially if professional home visitors are used. For example, the estimated cost for the NFP program is $7,324 per family; at the lower end, the cost per family for implementing other home visitor programs like Healthy Families America is nearly two-thirds less. However, the impact and economic benefits of the more expensive NFP program are significantly greater and make the former program a much more worthy investment. The net benefit of the NFP program is $29,717, which translates into a benefit of $5.06 for every dollar invested. In contrast, a less effective program like Healthy Families America yields a return significantly less than one dollar for every dollar invested [2].

The remarkable success of some home visitor programs has led to the rapid growth of other home visiting programs, many of which fail to take into account the key ingredients that make such programs effective.

Research has identified a number of characteristics of the NFP program that have contributed to its success and cost-effectiveness [48]. First, home visits begin early, well before the child is born, and last for about two years after the child's birth. In other words, supporting a mother before her child is born helps ensure that she gets off to a good start during the critical first few months of parenthood. Equally important is that the program is of sufficient duration and intensity, involving more than two full years of regular home visits. Each home visitor carries a caseload of no more than 25 families, allowing for appropriate intensity of services. Another reason for NFP's effectiveness is that it is comprehensive, targeting parental and environmental health, care-giving skills, positive maternal development, and social support from family and friends. Home visitors also assess the needs of individual families and provide referrals to appropriate services in the community. One critical aspect of the program, often overlooked by other home visiting approaches, involves the degree of supervision provided to staff. Each home visitor is part of a supervised team of 8 to 10 home visitors who meet regularly to discuss clients and receive ongoing guidance from a supervisor. A final critical aspect of NFP is the level of professional qualifications required of the home visitors. This program uses only trained nurses as home visitors. Most other home visiting programs have used other types of professionals, paraprofessionals and volunteers as home visitors with much less success.

These features of the NFP program help to explain why it has been so successful in producing positive outcomes for mothers and their children. Unfortunately, the remarkable success of a few home visitor programs like NFP has led to the rapid growth of other home visiting programs, many of which fail to take into account the key ingredients that make such programs effective. There has been a tendency to dilute such programs by using less qualified home visitors, not providing staff with regular training and guidance, and significantly reducing the number of home visits families receive. While these tactics will notably reduce the costs of the program, they do so at the expense of impact and cost-effectiveness.

Parent education and training programs

Research clearly demonstrates that parents and other adult caregivers are among the most

important influences for promoting positive child and adolescent development and reducing problematic outcomes like drug abuse, violence and delinquency. In fact, most scholars agree that a positive family environment which includes parental supervision; positive, supportive communication; clear rules and guidance; and consistent discipline are "the major reasons youth do not engage in delinquent or unhealthy behaviors" [27, p. 457]. In response to the important role that parents play in guiding and protecting their children, numerous parent education and training programs have emerged over the past several decades. Unfortunately, while there are thousands of parent education/training programs being offered throughout the United States and Wisconsin, very few of them are proven, evidence-based programs. National estimates indicate that only 10% of family support practitioners are implementing evidence-based programs [27].

Parent training programs are generally behavioral and skill-focused, and fall into two formats: 1) training for parents alone and 2) training for both parents and children.

Programs that only include parents usually involve skills training, directed at bringing about cognitive, affective and behavior changes in parents. Parents are also taught how to increase their positive interactions with their children, reward positive behavior and ignore undesirable behavior, and improve communication and child compliance. A review of parent-only programs found that this approach tends to be most effective for families with younger children (ages 3 to 10) and when the program also includes additional sessions where parents are given time to address their own issues [27].

Although meta-analyses of parent-only programs have indicated that some are quite effective at preventing youth problem behaviors, programs that incorporate training for both parents and children have been found to be more effective in producing positive outcomes for children [49]. Programs that also incorporate a child-focused component tend to be most effective when they include opportunities for children to learn how to manage anger and emotions; accept and give constructive criticism or praise; develop problem solving, decision-making, peer resistance, and communication skills; and develop friendships with prosocial peers. In addition, some programs give parents and children the opportunity to practice their skills together, leading to the promotion of more positive parent-child interaction and communication. Perhaps the most important reason why parent-child family programs are more effective than parent-only programs is that they address more risk and protective factors. In addition to enhancing parenting skills, they also promote the child's social competence and the facilitation of positive family interactions and communication. Such programs have been found to work best for elementary and middle school children.

Research on both parent-only and family-focused interventions indicates that the most effective programs share a number of important features [50]. Such programs are comprehensive, addressing a broad range of risk and protective factors in the family environment. Programs are also interactive, requiring family members to interact with each other (and other group members, when appropriate). Programs that use didactic instruction are less effective in producing change in individuals. Research has indicated the timing of programs to be critical; first, the program implementation must occur when family members are amenable to change. In addition, programs are generally more effective when they intervene earlier in the child's life, especially before problems have occurred or become severe. Programs beginning later carry the burden of correcting years of dysfunctional family interactions. Finally, the program's duration should be sufficient for the types of relational and behavioral changes that are sought. For example, highly dysfunctional families require a higher-intensity intervention for a longer period of time. It should be noted that most current evidence-based parenting programs involve a minimum of 5 sessions, with most requiring 10 or more sessions. In contrast,

many of the unproven parenting programs currently in use consist of fewer sessions, which may in part explain their ineffectiveness.

One of the reasons that parenting programs can be so cost-effective is that by helping parents acquire new childrearing and relational skills, a

Wisconsin Ideas:
FAMILIES AND SCHOOLS TOGETHER (FAST)

One widely implemented prevention program, **Families and Schools Together (FAST)**, was developed in Wisconsin and continues to attract the attention of prevention-oriented researchers and practitioners. The FAST program, developed by Dr. Lynn McDonald of the Wisconsin Center for Education Research, University of Wisconsin–Madison, is currently implemented in 45 states in the U.S. and five countries internationally.[1] It has been recognized as an evidence-based program by the Substance Abuse and Mental Health Services Administration (SAMHSA), the Strengthening America's Families project, and the Office of Juvenile Justice and Delinquency Prevention (OJJDP).

This program is built on the belief that parents are necessary prevention agents in their children's lives. The program targets children 4 to 12 years old and their families. Initially the program was developed for high-risk children and their families; it is currently also being implemented as a universal program in schools in high-risk communities. Each program site serves 5 to 25 families at a time for 8 to 10 weeks of intensive group-based intervention. Families come together, often at their children's school, for family meals, parent-child play time, and parent support groups. Following graduation from the intensive 8-week intervention, parents participate in FASTWORKS, comprised of two years of monthly community planning sessions.[2]

The FAST program has shown positive results in four experimental evaluations. To date, no long-term follow up studies have been conducted to determine FAST's effects on juvenile delinquency, although current data indicate that FAST can alter several risk and protective factors for delinquency. Compared to control group children, FAST children at post-test showed lower levels of aggression and anxiety, and higher levels of social skills and academic performance. In addition, parents in the FAST program increased their school and community involvement.[2, 3, 4]

Costs for FAST implementation are estimated at $1,200 per family.[4] Currently no cost-benefit analysis of the FAST program is available, although a preliminary analysis is planned for Fall 2005.[5]

Recently an adaptation of FAST, called **Baby FAST**, has begun implementation at 10 sites in Wisconsin. Baby FAST serves new parents, particularly teenage parents, with children 0 to 3 years old in 8 weekly group meetings. Program developers are currently evaluating aspects of the Baby FAST program for effectiveness.[6]

1 *FAST Program Description*. Retrieved May 20, 2005, from http://www.wcer.wisc.edu/fast/

2 McDonald, L. *FAST Fact Sheet*. Retrieved May 9, 2005, from http://www.wcer.wisc.edu/fast/how/FACTsheets/FACTSheet_18.pdf

3 Development Services Group for the Office of Juvenile Justice and Delinquency Prevention. (2004). *Model programs guide (Version 3.2)*. Retrieved March 18, 2005, from http://www.dsgonline.com/Model_Programs_Guide/Web/mpg_index_flash.htm

4 Substance Abuse and Mental Health Services Administration (SAMHSA). *SAMHSA Model Programs*. Retrieved May 18, 2005, from http://modelprograms.samhsa.gov/

5 Trahan, M., FAST Program Manager, Wisconsin Center for Education Research, UW–Madison. Personal communication with S. Cooney, May 19, 2005.

6 *Baby FAST*. Retrieved 2005, May 24, from http://www.wcer.wisc.edu/fast/how/Baby%5FFAST/

new family environment is created that remains in place long after the program is over. As a result, the intervention can have long-lasting effects not only for a target child, but also for his or her siblings. Such sibling spillover effects are not usually taken into account in cost-benefit estimates of such programs, which likely results in conservative estimates of the programs' true benefits.

One of the most well-studied and effective family-focused prevention programs is the **Strengthening Families Program for Parents and Youth 10 to 14 (SFP 10-14)**. This universal, primary prevention program is implemented with families who have children between the ages of 10 and 14. It provides opportunities for parents and children to work separately on skill building and then participate in activities together to practice their skills and address common issues. The SFP 10-14 program runs for seven sessions with the option of four additional booster sessions. Evaluations of the program have found that children who participated were less likely to use alcohol and other drugs, were less aggressive, had fewer conduct problems, and resisted peer pressure better than youth in the control group at a four-year follow-up [3, 51]. Program parents were found to show more affection and set more appropriate limits for their children. The relatively brief nature of the program (7 sessions) along with its well-documented and impressive impacts has made this an increasingly popular program. In Wisconsin, the University of Wisconsin-Extension, Cooperative Extension, has made this a priority program and has begun to implement it around the state, often in cooperation with other local agencies. The program is relatively inexpensive to implement and has been found to have an impressive benefit-cost ratio. The program has been found to save $7.82 in avoided future costs for every dollar invested.

Social-Emotional Learning Programs

The last century has seen increased pressure on schools to prevent unhealthy and delinquent behavior in children. Schools are now expected to provide an education that prepares children not just for future work, but also for fully responsible citizenship. Unfortunately, the individual-level factors found in children with behavior problems can influence others in the school setting. Moreover, when a large number of children with these characteristics attend the same school, the result can be a school environment replete with aggression, bullying, gangs, and disrespect for people and personal property.

Some researchers in the area of school-based prevention have suggested Social-Emotional Learning (SEL) programs as an effective approach for schools that want to prevent student problem behaviors. SEL is defined as "the process of developing the ability to recognize and manage emotions, develop caring and concern for others, make responsible decisions, establish positive relationships, and handle challenging situations effectively" [52]. Programs of this type provide frameworks for the whole school system, including parents and community members, to fully promote the social and emotional competencies of students. Proponents of this category of programs contend there are five skills that can be taught in schools for the maximum benefit of student development [52]:

(1) Self-awareness, defined as knowing and understanding one's own feelings, thoughts, and abilities;

(2) Social awareness, defined as knowing and understanding others' thoughts and feelings, and having the ability to interact with diverse individuals;

(3) Self-management, defined as setting goals and overcoming obstacles to achievement, and handling personal emotions in a positive, constructive manner;

(4) Relationship skills, defined as beginning and maintaining positive relationships, resisting negative pressure from peers, resolving conflict peacefully, and cooperating with others; and

(5) Responsible decision-making, defined as considering the advantages and disadvantages of actions and taking responsibility for one's own behavior.

Recent meta-analyses indicate that implementing prevention programs in schools can decrease school dropout and truancy, substance abuse, conduct problems, delinquent behavior, and drug use [53]. The **Skills, Opportunities, and Recognition (SOAR)** program, formerly known as the Seattle Social Development Project, has been found to be an especially cost-effective program for the prevention of youth delinquency. This program, which targets children in grades 1 through 6 in urban areas, consists of two components: cooperative, developmentally-appropriate teaching practices in the classroom and optional parental education classes. The program is somewhat unique in that it targets both family and school risk factors.

An evaluation of this program in Seattle elementary schools found that at the beginning of the 5th grade, program students, compared to control group students, reported higher scores on measures of family bonding, communication, involvement, and proactive management. Students participating in the program perceived school to be more rewarding, and they were more attached and more committed to school. Program students also reported lower levels of alcohol use and delinquency [54]. Another evaluation found that six years after completing the program, the program participants showed positive outcomes on multiple measures compared to control group individuals. Program students reported better behavior in school, greater attachment to school, and greater improvement in academic achievement. Program participants were also less likely than controls to report committing violent acts, drinking alcohol heavily, engaging in sexual intercourse, and having more than one sexual partner [55].

Cost-benefit analyses reveal that the benefits of the SOAR program significantly outweigh the costs. The program costs approximately $4,712 per participant, but the gains to society total $14,810, a $3.14 return for every dollar invested.

Research has highlighted several characteristics of successful SEL programs. First, no one practice or program is likely to have a large, sustainable effect on behavior [53]. Instead, providing continuous, multi-faceted instruction will produce the most beneficial effects. For example, the success of the SOAR program can be explained in part by the persistence of its implementation in each school. When schools implement the SOAR program, they do so continuously from first through sixth grade. In addition, effective school-based programming is developmentally appropriate. The implementation of SOAR varies at each grade level to target skills most appropriate for the program students. The optional parenting education programs are also adjusted to the ages of the program students. Because of the differing developmental needs and strengths of youth in elementary, middle, and high schools, effective SEL programs necessarily take different forms for different ages [56]:

Elementary school. This time in a child's life is filled with changes in the cognitive and social realms. Effective programs implemented during this period help children develop their personal and social competencies to achieve pro-social goals. Developing the ability to accurately process and positively respond to social information is important at this stage. Children in elementary schools are ideal for programs that promote non-violent values and develop conflict resolution skills. Because violent behavior is learned, programs that start early can prevent violence throughout the life span.

Middle school. Young adolescents face predictable changes in cognitive abilities, physical maturation, and increased influence from their social environment. Exploratory and non-conforming behavior is normal at this stage. However, the adoption of a healthy lifestyle and the ability to make responsible decisions affects present and future quality of life. Effective programs at this stage engage families, provide life

skills training for the adoption of healthy behaviors, and provide productive extra-curricular activities for students.

High school. Although programs target competencies that continue from the middle school years, here the focus is on students becoming mature, responsible, productive citizens. Effective high school programs aim to develop the skills needed for success in adult life including those related to health and physical activity, personal relationships, decision-making, creativity, employment, citizenship, and moral/ethical values.

School-based primary prevention programs other than SOAR have shown positive outcomes. One such program is the **Olweus Bullying Prevention program**, a universal prevention program designed for school-wide implementation. The program aims to reduce and prevent bullying and victimization in schools. An evaluation using a pre-test and post-test design in 42 Norwegian schools found reductions in bullying, victimization, vandalism, fighting, theft, and truancy. Students also reported more positive attitudes toward their school after participating in the program [57]. Unfortunately, no cost-benefit analyses or long-term follow-up studies have been conducted on the Bullying Prevention program to date.

SECONDARY PREVENTION PROGRAMS

This section describes programs for children and youth who already exhibit some problem behaviors within family or school settings but have not been arrested and processed as juvenile offenders. Secondary prevention programs aim to remediate these problem behaviors before they become more serious.

Family Training Programs

As noted above, a plethora of research has documented the importance of the family in the prevention of youth delinquency and the promotion of healthy, positive development. **Family Effectiveness Training (FET)** has emerged as an effective, family-focused secondary prevention program. FET targets Hispanic families with children 6 to 12 years old in which family conflict, often the result of both family development and acculturation processes, is occurring. The program posits that behavioral disorders of the child are the result of maladaptive family processes. A therapist or facilitator works with the family members in 13 weekly sessions to strengthen current positive family interactions and to provide treatment for negative patterns of interaction. An evaluation of this program found that compared to a control group, youth in the training had fewer conduct and personality problems, demonstrated greater maturity, and held more positive self-concepts. Families improved their functioning relative to controls. At a six-month follow-up assessment, intervention families continued to fare better than controls on most measures [58]. Unfortunately, cost-benefit analyses have not been conducted on this family-focused secondary prevention program.

The **Strengthening Families** program developed at the University of Utah has been recognized by several agencies as an evidence-based family training program [59]. This secondary prevention program is similar to the SFP 10-14 primary prevention program, but it requires a greater number of sessions. Evaluations of this program have found significant reductions in youth conduct disorders and positive changes in several aspects of family functioning [60]. To date, this program has not been subjected to a cost-benefit analysis.

Social Skills Training Programs

As noted above, schools are now a primary delivery site for interventions related to youth delinquency. The **Positive Adolescent Choices Training (PACT)** program, a secondary prevention program targeting African-American students with histories of aggressive behavior and/or victimization, has demonstrated positive effects in evaluation research. The program trains students on social skills, anger management, and violence education through culturally

appropriate videotaped vignettes and opportunities for discussion and reinforcement. An evaluation of this program indicates that in relation to comparison youth, program youth showed less physical aggression in school and had better social skills, fewer contacts with the juvenile court system, fewer violence-related charges, and fewer criminal offenses in general. At a 2-year follow-up assessment, program youth and comparison youth had both increased their rates of criminal offending. However, comparison youth had rates twice that of program participants [61]. Unfortunately, cost-benefit analyses have not been conducted on this program.

Mentoring Programs

In recent years, mentoring programs have received increased interest from policy-makers and practitioners concerned with the decreased availability of parental support and supervision in many young people's lives. Mentoring is usually defined as a relationship between an adult and a young person in which the adult provides guidance and support. Mentoring programs are based on the assumption that children and adolescents can benefit from a close relationship with an adult other than a parent. Proponents of these programs believe that mentoring can influence youth through several pathways [62]. First, social and emotional development is fostered through close relationships characterized by communication and trust. Such positive relationships can increase a young person's self-worth and hopes for the future. Second, cognitive development is aided by interactions with more knowledgeable, capable adults. These interactions give youth the opportunity to think and communicate critically about issues important to them. Finally, the role modeling provided by successful adults can decrease youth's beliefs that their opportunities in life are very limited.

Mentoring programs vary along several dimensions. The goals of the programs vary such that some are broad enough to cover all positive youth developmental outcomes, while others may focus on one specific area, such as improving academic achievement or preventing substance abuse. Some programs consist primarily of one-on-one interactions between mentors and matched youth. Others are more comprehensive, offering tutoring, life-skills training, or workshops for parents. Despite these variations, mentoring programs share some commonalities. Matches are often made by the gender, race, geographic location, and shared interests of the mentor and youth.

Evaluation data reveal that this approach, when well implemented, can positively influence both criminal and non-criminal behavioral outcomes in youth. For example, a recent summary evaluation of ten youth mentoring programs found that overall, mentored youth do better than other youth on measures of academic performance, educational attainment, and prosocial attitudes and relationships. In addition, mentored youth sometimes do better than others on measures of substance abuse and delinquent behavior. According to this report, it appears that at-risk youth in economically disadvantaged neighborhoods and/ or single parent homes are the youth most likely to benefit from positive mentoring relationships [63].

The **Big Brothers Big Sisters of America (BBBSA)** program is the most frequently implemented mentoring program in the United States. Currently, BBBSA serves youth through more than 500 organizations across the United States. The program matches children and adolescents from single-parent families with a volunteer adult mentor to provide support in their lives. Mentors and matched youth meet two to four times a month for at least a year. An extensive evaluation of the program yielded several notable findings. Program youth, compared to those in the control group, were 46 percent less likely to begin using drugs, 27 percent less likely to begin using alcohol and one-third less likely to hit someone. In addition, youth who were mentored in the program missed half the number of school days, showed greater academic improvement, and had better relationships with their family and their friends

when compared to youth in the control group [64].

Current cost-benefit analyses indicate that BBBSA is not substantially cost-effective according to the outcomes measured. At a cost of $4,117 per participant, the benefits only amount to $4,166, a net gain of $49 per youth. This translates into $1.01 gained for every dollar invested in the program.

Effective mentoring programs take steps to encourage long-lasting relationships.

Evaluation research has indicated several characteristics of programs that foster successful mentoring relationships. These principles can help guide decision-making for both practitioners and policy-makers. Most importantly, effective mentoring programs take steps to encourage long-lasting relationships. For example, BBBSA requires participants to agree to maintain their mentoring relationship for at least one year. Research has indicated that longer mentoring relationships produce better outcomes for youth [65]. Mentoring matches lasting longer than a year produce the most positive benefits for youth, including improvements in academic, behavioral, and psychological domains. Matches that last at least six months but less than one year produce some positive effects, but not to the extent that longer matches do. In addition, matches lasting less than three months produce negative effects, including a decline in the self-worth and scholastic competence of youth participants. Research has also indicated that matches lasting less than six months can lead to increases in alcohol use of youth participants. For these reasons, program implementers must be especially careful to make good matches and to encourage the continuation of the relationship.

Effective programs provide ample training and support to mentors before and during the mentoring relationship. In several studies, those mentors who received the most training had the longest lasting relationship with their youth participants [63]. In addition, effective programs take steps to facilitate interaction between youth and their adult mentors. Programs may organize activities for matches and thus decrease the chance that the relationship will fail out of lack of interest. Research has also shown that mentoring relationships are less likely to fail if the pair engages in activities that reflect the interests of the youth rather than those of their mentors [63]. Finally, the most effective programs have a history of internally monitoring their program and improving their practices based on evaluation data. BBBSA is the most successful program model of its kind; its success can at least partially be attributed to its history of evaluating program implementation and outcomes.

Vocational/Job Training Programs

Vocational and job training programs are built on the premise that increasing education and employment opportunities will combat juvenile delinquency and adult criminal behavior. This strategy is implemented in an attempt both to prevent youth from first committing delinquent acts and to discourage future criminal behavior in youth already in contact with the system. Evaluations of vocational training programs have produced mixed results. Some programs have produced negligible or negative impacts on employment, delinquency, and other outcomes, essentially producing costs greater than benefits [20, 66]. Others, such as the **Job Corps**, have demonstrated more positive results.

According to the U.S. Department of Labor, Education and Training, over 60,000 youth ages 16 to 24 participate in a Job Corps program every year. Only one long-term evaluation of participant outcomes, the National Job Corps Study, has been conducted for the Job Corps program [67]. Evaluation results indicated that those participating in Job Corps had significantly fewer arrests and convictions, and less time incarcerated, than those in the control group. Job Corps participants spent more time in academic classes than did the control group, and overall had larger increases in their educa-

tion and skill levels. The evaluation also revealed that the Job Corps participants earned more money than the control group individuals after completing the program. Cost-benefit analyses indicate that the benefits of the Job Corps program outweigh its costs. At a cost of approximately $15,804 per participant, program participation yields about $22,883 in benefits to society, a net gain of $7,079 per youth. This translates to a benefit of $1.45 for each dollar invested in the program.

Emerging and Unproven Programs

Two increasingly widespread approaches that many practitioners and policymakers believe have promise for preventing delinquency are after-school programs and alternative schools. Below we examine existing evidence for the effectiveness of each of these strategies.

After-school programs

After-school programs have been widely heralded for the prevention of juvenile delinquency. Recent research has repeatedly found evidence that juvenile crime peaks during the after-school hours, from approximately 2 pm to 6 pm [68]. Most hypothesize that this peak occurs due to a lack of adult supervision. Thus, many communities have considered implementing after-school programs as a strategy to reduce delinquent behavior. Such programs are offered prior to and following regular school sessions and typically include services such as tutoring, volunteer opportunities, second language instruction, computer instruction, athletic events, and recreational activities.

One of the problems with after-school programs as a prevention strategy is that at-risk youth are unlikely to join and regularly attend after-school programs.

A recent meta-analysis of after-school programs indicates that these programs can reduce delinquency for middle-school but not elementary-school students [68]. In addition, after-school programs were found to increase youths' intentions not to use drugs. Participation in after-school programs was somewhat related to increases in social skills and associations with positive peers, all of which were related to reductions in delinquency. Those programs emphasizing social skills had the largest effects on reducing problem behavior. The elementary school programs in this meta-analysis generally did not focus on social skills, one possible explanation for their lack of effectiveness. Researchers have pointed out that one of the problems with after-school programs as a prevention strategy is that the most at-risk youth are unlikely to join and regularly attend after-school programs [i.e., 68]. Thus, one cannot assume that after-school programs will reduce delinquency in those youth most at-risk. At this point in time, no cost-benefit analyses have been conducted on after-school programs.

Alternative schools

Of the 127 charter schools that the Wisconsin Department of Public Instruction lists on its website, almost half are described as serving students who are truant, aggressive, disruptive, at-risk for school failure, or who have been expelled from regular public schools [69]. Alternative schools are often viewed as a viable solution for problem or delinquent youth who do not succeed in the typical school setting. Unfortunately, the empirical research documenting the effectiveness of alternative schools is seriously deficient. Several evaluations have found alternative schools to be ineffective, while other evaluations have found a few, small, positive effects. For example, one evaluation of three alternative schools found that in-school problem behaviors decreased for alternative school students relative to peer counterparts, but this effect did not hold for delinquent behavior in general [70]. The most substantial evidence to date comes from a meta-analysis of 57 alternative school evaluations. It found that alternative schools had a small, positive effect on school performance, attitudes

toward school, and self-esteem but had no significant effect on delinquency [71].

JUVENILE OFFENDER PROGRAMS

In this section, we consider non-residential programs and approaches that are delivered to juvenile offenders in the community, whether they are formal dispositions given by a juvenile court, or diversion programs that keep first-time offenders out of the courts. Residential programs are not considered here except to the extent that they often serve as the "control group" for comparing rates of recidivism and cost-effectiveness of community-based programs.

Two frameworks are relevant for understanding current thinking about intervention with juvenile offenders. First, the principles of effective intervention help us to understand on a broad level what kinds of approaches will work and what will not. These principles were described in more detail in Section II. The principles include:

- the human service principle;
- the risk principle;
- the need principle;
- the responsivity principle, which has two parts: "general responsivity" and "specific responsivity"; and
- the fidelity principle.

Adherence to the principles of effective intervention is best achieved with the use of a risk and need assessment tool administered to juvenile offenders when they come into contact with law enforcement or the juvenile court. Sound assessment should inform all decisions about court processing and dispositions so that each offender receives the level of supervision and services that are most likely to be effective.

Second, the balanced and restorative justice (BARJ) model, endorsed by Wisconsin's juvenile justice legislation, provides the philosophical grounding for many current approaches to juvenile offender programming. BARJ emphasizes that responses to delinquency must ensure public safety and offender accountability, while at the same time supporting offenders to develop the competencies that will help them become productive, law-abiding adults. All of the programs and approaches described in the review below can be employed in a BARJ approach.

Juvenile Offender Program Categories and Considerations

Through meta-analyses and comparisons of different program types, researchers have found that programs implemented in the community are significantly more likely to reduce recidivism than are programs implemented in residential settings [72, 73]. Within the realm of community-based interventions, though, there is a wide range of effectiveness among particular programs and approaches. Some interventions are more likely than others to have the desired effect on juvenile offenders, while others actually appear to encourage recidivism.

Programs implemented in the community are significantly more likely to reduce recidivism than are residential programs.

Evidence for the effectiveness of various responses to juvenile delinquency is far weaker than evidence for the effectiveness of prevention programs. The fields of primary and secondary prevention are increasingly characterized by evidence-based programs that are available for purchase and use. In the area of juvenile offender programs, on the other hand, there are very few of these "packaged" programs that are disseminated for wider use. Individual states or jurisdictions are more likely to develop their own programs based on approaches that appear promising. This results in programs that may go by the same name and incorporate some common elements, but which cannot be assumed to have the same effect on juvenile offenders. Moreover, very few of these programs have been rigorously evaluated, making it difficult to know if they are truly effective.

In recent years, there has been movement within the juvenile justice field toward evidence-based programs. However, currently available evidence speaks more to general approaches than to specific programs. The quality of that evidence leads us to conclude that some of these approaches hold promise for reducing recidivism among juvenile offenders, but limits our ability to say with confidence that certain approaches "work." In the following review, we present general approaches as well as specific programs within several categories. We also discuss several approaches that hold promise, or are emerging as popular, community-based responses to delinquency but have not been empirically proven to be effective.

Note that the categories of programs and approaches used in this report are not mutually exclusive. In fact, there is significant overlap between the categories. Many of the programs and approaches described are sometimes used as diversion from the juvenile court; all of them can be used as elements in a balanced and restorative justice model; and case management and multimodal programs employ many types of interventions which may be included in other categories here.

Diversion/Community Accountability Programs

Diversion describes any response to juvenile delinquency in which adjudication is postponed while the offender completes a rehabilitative program.[2] Diversion programs are also referred to as community accountability programs. Due to the costs of juvenile court processing (estimated at about $2,000 per offender [37]) and other advantages of keeping low-risk offenders out of the juvenile court system, diversion programs hold promise as a cost-effective response to delinquency. One such program, the Adolescent Diversion Project, has been shown to be highly effective. Diversion programs vary widely, and not all are as effective as ADP, but this is an area that shows promise for cost savings, reduced caseloads in the juvenile justice system, and reduced recidivism among offenders.

Diversion or community accountability programs are designed to ensure accountability among low-risk offenders while reducing caseloads and expenses for the juvenile justice system. This allows resources to be used on offenders who pose more of a risk and require more supervision and services. However, criminologists and juvenile justice professionals express several legitimate concerns about diversion programs [13, 74]. First, these programs can result in "net widening," bringing youth into unwarranted contact with the justice system, and resulting in undue punishment as well as inefficient use of resources. This is related to a concern about the constitutionality of sanctions being determined outside the confines of the juvenile court and without due process. Another concern is differential treatment; statistics show that white youth are more likely to be diverted from adjudication than are minority youth who are arrested for similar offenses [75]. Finally, the goals of offender accountability and public safety may not be accomplished if diversion programs are weak or ineffective, and offenders do not benefit from the experiences.

To address these concerns and ensure that diversion programs are used fairly and efficiently,

- clear guidelines should be in place for determining whether offenders warrant inclusion in a diversion program, release without diversion, or formal processing through the juvenile court [e.g., 76], ideally attached to the use of a standard, validated, risk and needs assessment tool [e.g., 33, 34];

[2] Community-based treatments are often referred to as "placement diversion" programs, because the young offender is diverted from residential placement. Diversion is also sometimes used to refer to release to parents with a warning but no services or restrictions. In this report, "diversion" refers to diversion from formal adjudication into a structured program that provides services and/or makes demands of offenders.

- offenders should be informed of their right to refuse participation in a diversion program if they contest the charges against them; and
- consequences for lack of compliance with the demands of a diversion program should be serious, and should be enforced quickly.

When compared to regular juvenile court processing, diversion programs cost significantly less, and many have achieved outcomes better than or similar to those of juvenile court. The Washington State study concluded that diversion programs in general, and ADP in particular, were cost-beneficial alternatives to regular juvenile court processing.

The **Adolescent Diversion Project (ADP)**, also known as the Michigan State Diversion Project, is one of the few evidence-based programs in the diversion category. ADP pairs diverted juvenile offenders with college student mentors/caseworkers. The students, mainly juniors and seniors, receive training in behavioral intervention and advocacy through a semester-long course. Students and offenders then work one-on-one, for 6–8 hours per week, for 18 weeks. Several experimental evaluations of this model revealed that the young offenders responded well to one-on-one work with college students, whether they used behavioral contracting, youth advocacy/case management, or therapeutic approaches. Recidivism was lower among ADP participants than among both offenders who were formally processed through the juvenile court *and* offenders who were released to their parents [74]. Due to its reliance on college students, ADP is a relatively low-cost program to implement, at $1,825 per participant. With benefits of $24,708 per participant based on reduced recidivism, ADP is a very cost-effective program. We estimate a return of $13.54 per dollar invested in ADP.

Emerging and Unproven Diversion Programs

Specialized courts separate from the juvenile court are another form of diversion programs that have grown rapidly in recent years. Efforts are underway to systematically evaluate the effectiveness of both Teen Courts and Juvenile Drug Courts, but at this point in time, the evidence is still inconclusive as to whether these approaches are effective.

Teen Courts are an increasingly popular approach to dealing with status offenses and non-violent juvenile crime. The National Youth Court Center lists 37 Teen Courts in Wisconsin on its website [77], associated with counties, municipalities, and schools around the state. One explanation for the rapid rise of Teen Courts is that they are relatively inexpensive to operate, because they rely on youth and adult volunteers (including offenders sentenced to community service) to fulfill the roles of attorneys, judges, and jury members. Teen Courts also present an opportunity for interested non-delinquent youth to learn about the justice system and make a meaningful contribution to their community [78]. However, many argue that Teen Courts are essentially net-widening programs. Initial evaluations of Teen Courts have found that they are most effective with low-risk offenders, while higher-risk offenders are less likely to comply with their sentences, and show no reduction in recidivism compared to high-risk offenders participating in other justice programs [79-81].

Juvenile Drug Courts provide increased supervision and accountability for substance-using offenders, who report back to the Drug Court at regular intervals throughout their recovery. Drug Courts also link offenders and their families to treatment services, and sanction lapses in offenders' recovery. Proponents claim that Drug Courts help to reduce the caseload of the regular courts and reduce subsequent substance abuse and re-arrest. However, because Drug Courts are a relatively new phenomenon, it is not yet possible to draw conclusions about their effectiveness for reducing recidivism and substance abuse among juvenile drug offenders [82].

Therapeutic Interventions

There is significant evidence that providing juvenile offenders with proven, well-implemented therapeutic treatment reduces the likelihood that they will re-offend. In addition to several comprehensive, evidence-based treatment programs, there is evidence from multiple sources that many types of interventions are more effective when they incorporate a therapeutic component, particularly cognitive-behavioral therapy.

The evidence-based programs in this category involve therapeutic treatment for offenders and their families, based on the assumption that the roots of delinquent behavior are found not only within young offenders themselves, but also in their families and in how they relate to their peer groups, schools, and communities. These programs are characterized by regular meetings of family members with a therapist.

Providing juvenile offenders with proven, well-implemented therapeutic treatment reduces the likelihood that they will re-offend.

Multisystemic Therapy (MST) has shown success in reducing recidivism among participants, as compared to recipients of usual community-based mental health services [83] and compared to offenders who received individual therapy [84]. MST therapists provide in-home treatment to families of juvenile delinquents, with a focus on improving parenting effectiveness by empowering parents and teaching them new parenting skills. Average treatment includes about 60 hours of contact over a 4-month period, with therapists available 24 hours a day, seven days a week. Caseloads range from four to six families at a time. MST costs per family are estimated at $5,832. The Washington State report highlighted MST as a consistently cost-effective intervention for juvenile delinquency, with an estimated average return of $15,395 per juvenile offender, or $2.64 for every dollar spent on the program.

Functional Family Therapy is a flexible approach, grounded in clinical theory, which is used to treat a variety of complex problems in the families of high-risk and delinquent youth. Families receive an average of 8–12 hours of therapy. Several rigorous evaluations indicate that FFT can reduce recidivism among juvenile offenders by 20 to 60 percent, and is highly effective compared to other treatments. The program also reduces future offending by siblings of the target youth [85]. Per-family costs are estimated at $2,197. The Washington State Institute for Social Policy reports a return of over $13 per dollar invested in FFT programs, representing $29,111 in benefits per delinquent youth.

Multidimensional Treatment Foster Care (TFC) is an alternative to group home placement, in which a troubled or delinquent youth receives treatment through trained foster parents and continues to attend school in his or her home community. Case managers supervise the foster parents, coordinate needed interventions at school, and develop an individualized behavior management program to be implemented by the foster parents. The youth's family of origin is also trained in behavior management techniques to promote better supervision and continuing intervention when the juvenile returns home. Evaluations of TFC have found it to be more effective than group home placement for reducing subsequent offending and substance abuse, with only slightly higher costs [86]. The added cost of roughly $2,500 per youth results in benefits of over $27,000, or $10.88 for every dollar invested, making TFC a cost-beneficial approach.

Finally, although it is not embodied in one particular program, **cognitive-behavioral (CB) therapy** has emerged as an evidence-based practice for responding to juvenile delinquency. CB theory is grounded in the principle that deviant, impulsive behavior stems from deviant, impulsive thinking. CB therapies target these unproductive thought processes and teach offenders new skills and behavioral strategies.

Andrews and colleagues found that cognitive-behavioral approaches were among the most effective of all treatment types, especially when the intervention was appropriate for the offender (as defined by the principles of effective intervention) [29]. Lipsey and colleagues also found CB therapy to be effective in another meta-analysis [87]. CB therapy is often delivered to offenders in small groups, which allows for role-playing, such as practicing skills for resisting negative peer pressure. However, as with other types of programs, bringing together groups of delinquent youth can also have negative consequences. Based on his review of the research, LaTessa recommends treatment groups of no more than eight offenders and frequent meetings, at least twice a week through the treatment period [88].

A number of studies support the use of CB therapeutic treatment in the context of other interventions. Lipsey conducted a meta-analysis of hundreds of delinquency interventions, and concluded that interventions incorporating practical, skills-based, behavioral or cognitive-behavioral treatment components were more effective at reducing recidivism than others, regardless of the type of intervention overall [72]. Other evaluations have found that program effectiveness did not improve when insight-oriented counseling, psycho-dynamic counseling, or other therapeutic approaches *not* grounded in cognitive and behavioral theories were offered to participants [89].

Case Management/Multimodal Interventions

The last decade has seen a movement towards integrating or coordinating services for children and youth, particularly those with serious emotional disturbances, who are involved in the juvenile justice and child welfare systems. This movement has generated several approaches for connecting children and families to existing resources and coordinating the services they receive from various programs and agencies. As these approaches are used in the field of juvenile justice, they incorporate many of the program types already discussed in this report. Mounting evidence suggests that these case management or multimodal interventions can be effective in managing offenders in the community and reducing re-offense.

Interventions in this area are built around strong assessments of juveniles at intake and/or at disposition, to determine their needs and the needs of their families, and to ensure that they receive the appropriate services. These programs are most effective when funding streams are blended to allow care coordinators freedom in connecting families to the services they need. When services are coordinated and even co-located, youth and families can access the resources they need to resolve or manage issues in their lives and get young offenders back on track toward successful adulthood [13].

California's **Repeat Offender Prevention Program (ROPP)** is the only evidence-based program in this category. ROPP is a case assessment and management program for juvenile offenders who are assessed to be at high risk of recidivism. It is one component of "The 8% Solution," a graduated sanctions model that was developed after research in Orange County, CA, revealed that about 8% of offenders were responsible for over half of all referrals to the juvenile courts. High-risk offenders report to a Youth and Family Resource Center in their community, where they receive intensive case management, sometimes referred to as "an individualized intensive supervision program" [3] that integrates services from a variety of youth- and family-serving agencies. This includes coordination of educational and rehabilitative services, facilitation of community service and restitution completion, drug testing, in-home family support, and supervision of the offender. A 2002 report to the state legislature concluded that ROPP participants showed significant improvements in school attendance and academic achievement, were more likely to complete restitution and community service obligations, tested positive for drugs less often, and were less likely to recidivate for new offenses than were control group members who received standard probation services [90]. No cost-benefit

analysis has been conducted for ROPP to determine whether its benefits justify the additional cost of the program when compared to traditional probation.

Emerging and Unproven Programs and Approaches

Enhanced Probation and Supervision Programs

Probation has often been called the cornerstone of the juvenile justice system. According to the Office of Juvenile Justice and Delinquency Prevention, roughly 60% of adjudicated juveniles are put on probation [91].[3] Concerns about the effectiveness of probation for reducing delinquent activity both during and after the probation period led to the development of enhanced probation services, either delivered through the juvenile justice system or through social service agencies. The defining characteristic of these programs is that they increase the amount of contact between offenders and probation officers or caseworkers. Many enhanced probation programs also intensify the surveillance of young offenders, for example with the use of electronic monitoring, and provide services such as therapeutic intervention or

Wisconsin Ideas:
THE WRAPAROUND APPROACH

Wisconsin is a leader in developing **coordinated service teams, integrated services projects, and wraparound programs** for families with involvement in multiple systems, such as child welfare, juvenile justice, and mental health services.[1] **Wraparound Milwaukee** has attracted national attention for the favorable results it demonstrated in a non-experimental evaluation. Milwaukee has also developed the **FOCUS Program**, which combines short stays in a child caring institution (which provides out-of-home care and supervision) with longer-term wraparound services for delinquent boys.

Wraparound programs provide treatment and service coordination for delinquent and non-delinquent youth with mental health disorders, with the goal of keeping youth in the community and with their families when possible. Using blended funding from the juvenile justice and child welfare systems, Wraparound Milwaukee allows families to select from among an array of services and providers, and provides "care coordination" to ensure the best use of resources.[2] Wraparound programs, coordinated service teams, and integrated services projects accomplish similar goals in other communities around the state.

The FOCUS Program, a Milwaukee county pilot project that began in 2003, aims to reduce disproportionate minority confinement by diverting delinquent boys with mental health diagnoses from correctional placements, instead placing them in a child caring institution for 4–5 months and providing Wraparound Milwaukee services for them and their families afterwards.[3]

Neither Wraparound Milwaukee nor the FOCUS program has been subjected to evaluations rigorous enough for a cost-benefit analysis to be completed. In 2000, Wraparound Milwaukee reported that 650 youth were served in the community (at a monthly cost of about $3,300 per participant) with the same funds that otherwise would have served only 350 institutionalized youth (at a monthly cost of about $5,000 per bed).[2]

1. Wisconsin's Collaborative Systems of Care (WCSOC). *WCSOC's Resource Website*. Retrieved May 12, 2005, from http://www.wicollaborative.org/
2. Kamradt, B. (2000). Wraparound Milwaukee: Aiding youth with mental health needs. *Juvenile Justice, 7*(1), 14-23.
3. Milwaukee County's DMC Project. (2005). *Goals and Activities: FOCUS Program - An alternative to correctional placement*. Waukesha, WI: Presented at the Juvenile Law Seminar, April 14, 2005.

treatment for alcohol and other drug abuse issues.

Intensive supervision is widely used in Wisconsin. The Division of Juvenile Corrections estimates that roughly one-half of Wisconsin's counties are using intensive supervision [92]. According to state statutes, caseworkers in **intensive supervision and probation (ISP)** programs must have at least one face-to-face contact each day with each juvenile offender in their caseload, not to exceed 10 juveniles at any given time [93]. Programs may use electronic monitoring, and juveniles may be taken into custody in response to a violation of probation, at the caseworker's discretion.

Evaluations of ISP programs have shown them to be roughly as effective as other standard approaches. An evaluation of an ISP program in Mississippi showed that participants were slightly less likely than standard probationers to recidivate in the year following program completion [94]. Another study in Michigan found that ISP probationers were no more likely to recidivate than their counterparts who were placed in state residential facilities [95]. These two studies drew different conclusions about the cost-effectiveness of ISP because of their different control groups. ISP was deemed to be a cost-effective alternative to commitment to the state in Michigan, because it achieved the same results at less than one-third of the cost. However, ISP was not found to be cost-effective in the Mississippi study because its small effect did not justify the increased costs when compared to standard probation. One meta-analytic review found no effect of ISP on recidivism, as compared to regular probation [96]. Giving greater weight to studies with larger sample sizes, the researchers actually concluded that ISP increased the likelihood of recidivism. However, the authors did conclude that intensive supervision programs that also offer offenders therapeutic treatment are more likely to be effective than those that simply increase supervision [96].

Community service and restitution may contribute to reductions in recidivism when used within a restorative framework.

Because there have not been any rigorous evaluations of Wisconsin's ISP model, we cannot be certain whether these programs are likely to be effective at reducing recidivism or achieving other outcomes. However, based on evaluations of ISP programs in other locations, Wisconsin's guidelines for caseload size and frequency of contact appear to describe an effective approach to reducing recidivism, particularly if treatment and services are made available to offenders beyond what is required by the statutes.

Day treatment centers are another emerging approach that increase supervision and provide treatment options for offenders with substance abuse issues. Day treatment appears to be a relatively popular intervention in Wisconsin, particularly for young offenders. No control-group studies have been completed, but non-experimental studies of day treatment centers have shown reduced recidivism among offenders who reported to day treatment [3, 97].

Restorative Justice Programs

While a wide variety of programs and approaches can be incorporated into the balanced and restorative justice (BARJ) model, "restorative justice" also describes specific approaches that focus on repairing the harm done by juvenile offenders. Restorative justice involves offenders in restoring damaged property to its original condition, repaying victims for their financial losses, providing services to victims or to the community at large to make up for damage done, and apologizing to victims.

Very few experimental evaluations have been carried out on restorative justice programs in this country. Most of the existing evidence relates to victim satisfaction with the process, rates of reaching an agreement, and rates of sentence completion and agreement fulfillment. **Victim-offender mediation** is the only approach

that has been extensively evaluated, and even then, the evidence is encouraging but not conclusive [98, 99]. We cannot say for sure whether such approaches are effective at reducing recidivism, nor can we come to any conclusions about the relative costs and benefits of these programs with the available information.

It appears that **community service** and **restitution** may contribute to reductions in recidivism when used within a restorative framework. Several studies found that when these approaches were used just as "punishment," they were not effective at reducing recidivism. However, when they were used to repair the harm of the crime and develop job-related skills or lasting social connections, they were more effective [13, 100]. In a meta-analysis, Lipsey found that programs that coupled restitution with competency development were effective in reducing recidivism [101]. This included assistance from probation officers or caseworkers in finding appropriate job placements to earn money to pay damages, or meaningful volunteer placements where offenders learned marketable skills.

IV. CONSIDERATIONS FOR IMPLEMENTING EVIDENCE-BASED PROGRAMS

Knowing that a program has undergone rigorous evaluation and has strong evidence that it works is an essential first step in moving toward more effective, evidence-based practice. However, whether a program is effective involves a great deal more than just using an evidence-based program. Among other things, it requires that the program selected be appropriate to the audience, that it is adequately funded and staffed, and that the selected program is implemented with fidelity. These less tangible matters are often overlooked by program sponsors, but are as important as the program model itself if a program is to have an impact. In addition to these issues, there exist a number of practical considerations related to the realities of program administration, which are often barriers to the use of evidence-based programs. In the following section, we briefly review some of these considerations.

SELECTING AN APPROPRIATE EVIDENCE-BASED PREVENTION PROGRAM

Knowing that a program has undergone rigorous testing and evaluation can reassure potential program sponsors that the program is likely to be effective under the right conditions and with the appropriate audience. However, knowing which program is the "right" one for a particular setting and audience is not always easy to determine. There are a number of critical factors that planners need to consider when selecting a program for their organization or community. In Appendix D, we provide a detailed set of guidelines to assist program planners in the task of selecting an appropriate, evidence-based program for their particular agency and audience.

STRATEGIES FOR SUCCESSFULLY IMPLEMENTING PROGRAMS

Selecting an appropriate, proven, evidence-based program is just the first step in having a successful program and achieving desired outcomes. It is becoming increasingly clear that a program's success is also highly dependent on how well it is implemented. Well-designed, evidence-based programs will not produce desired results if they are implemented poorly. For a program to be successful, it needs people who care about and "champion" the program, qualified staff members who have access to training and technical assistance, and an organization that is ready and willing to implement the program as designed.

A major goal of the OJJDP-supported Blueprints project at the University of Colorado has been to identify those factors that are critical for effective program implementation [57]. Several key elements need to be in place if a program is to succeed. Based on their evaluation of successfully implemented evidence-based programs, the Blueprints team identified factors that are important for successful program implementation: site assessment, effective organization, qualified staff, program champions, program integrity, training and technical assistance, and implementation fidelity.

Site assessment. Members of the sponsoring organization or program site should come together to examine and assess their needs, commitment and resources before they actually implement the program. This might include discussion of the program's feasibility, including potential problems and obstacles that might arise and ways to overcome them. This step can provide a forum for program staff and sponsors to gain a better understanding of the program's operation and requirements, which in turn can lead to increased enthusiasm for the program by the staff, as well as less fear and resistance.

Effective organization. It is important for groups planning to implement a program to have a strong organization in place that includes solid administrative support, agency stability, a shared vision and interagency links. Administrative support is critical because it is administrators who usually hold the power to allocate resources and make program decisions, but it is usually program staff who are responsible for implementing the program. If they are not in synch with one another, or if staff do not feel supported from above, the chances of a program failing increases significantly. Effective organizations also have a high degree of staff stability. When there is high staff turnover, there may be less continuity in how the program is delivered. Staff may be less prepared to deliver the program, and delays in implementation may occur. Effective organizations also have a shared vision of the program's goals and objectives and how they fit with the organization's philosophy and goals. Without a common vision, programs may be implemented differently by staff members, leading to inconsistency, confusion and even friction between staff and administrators. Finally, programs are more likely to succeed when other organizations and programs are supportive of them and where there are established interagency links. This is especially important for programs where a participant's intervention plan requires coordination with other agencies or programs.

Qualified staff. An often overlooked aspect of effective programs is the quality and commitment of the staff who will be implementing it. Many assume that the effectiveness of a program resides primarily in the program activities, but it is becoming increasingly clear that the quality, training and commitment of the staff are also essential. The Blueprints study found that well implemented, successful programs had staff members who were motivated to do the program, felt a sense of ownership for it, and had the credentials, skills and experience needed to do the required tasks. While the importance of these staff characteristics may sound obvious, it is not uncommon to have staff members implementing a program who are unprepared or unqualified. Moreover, when program decisions are made by administrators without the input of staff, the staff implementing the program may not be committed to it and may resent having to spend their time on it.

A final staff issue that appears to be very commonplace is the lack of adequate time to implement the program. In many cases, when a site decides to implement a new prevention or intervention program, it is added on top of existing programs or work with clients. In other words, additional responsibilities are added to existing ones without an adjustment in staff workloads. When this occurs, staff members are more apt to become overworked, frustrated and dissatisfied with the program, leading to reluctance to devote the time, energy and commitment necessary to implement the program well or even at all.

Program champions. Most successfully implemented programs have what is typically referred to as a program champion. This is someone in the sponsoring organization who is enthusiastic about the program and possesses enough organizational power and staff rapport to influence decisions and implement plans. They usually assume the role of the program's director or coordinator. For this reason, champions are often from the administrative level, but they can come from any level of the sponsoring organization and need not be limited to a single person. If there is no one in the organization to champion a program, its chances of success are significantly diminished.

Training and technical assistance. Central to a program's success is the provision of strong training and ongoing technical assistance to support the program. Without adequate training, staff members may not be prepared to implement the program or implement it well. The Blueprints study found that staff who were trained were more likely to implement their programs and were more likely to do so with greater fidelity to the original model. They were also more confident and better prepared to overcome problems that arose. Other research has found that programs with well-trained staff are more likely to have favorable participant outcomes [102]. In addition, the availability of ongoing technical assistance can help program staff address unforeseen problems and obstacles that often arise when implementing a new program.

Implementation fidelity. A common finding of successful evidence-based programs is that they are implemented with fidelity. Fidelity refers to how well a program is implemented according to the original program design. When programs are disseminated to new settings it is not uncommon for the new site to make modifications in the program's design or delivery. Often these changes make the program less effective, leading to poorer outcomes [103, 104]. There are several aspects of fidelity that program staff should consider when implementing a new program:

- *Adherence*: Does the program include the components and materials as it was originally designed or have core components of the program been modified or dropped? Is the program being used with the appropriate audience?
- *Exposure or Dosage*: Are the number, length and frequency of sessions the same as the program's original design, or have they been significantly modified or shortened?
- *Quality of program delivery:* Are the individuals delivering the program well trained and prepared to deliver the program in the manner prescribed?
- *Participant responsiveness:* Are the participants engaged and involved in the program as originally intended?

BARRIERS TO IMPLEMENTING EVIDENCE-BASED PROGRAMS

As this report has demonstrated, there are a growing number of programs that have been found to be effective in reducing delinquency and related problems. However, a number of significant barriers are likely to keep practitioners from using such programs. Understanding these barriers can be a first step in developing strategies to overcome them.

Perhaps the greatest barrier to the use of evidence-based programs is that many practitioners and policy makers have little or no understanding of what they are and why they can be beneficial. Moreover, they do not know where to find them. Consequently, a first step in the wider dissemination of evidence-based programs is to educate practitioners and policy makers about what they are, their practical and economic benefits, and where they can be found.

An equally important obstacle to the adoption of evidence-based programs is the significant financial and human resources that many of these programs require. One of the reasons that evidence-based programs work is that they are intensive and long term. However,

many practitioners may be reluctant to make such a long-term investment or commit the required number of staff because it draws time and resources from other initiatives. This is one of the most common reasons given by program administrators and staff for using less intensive, unproven programs.

Because evidence-based programs often need to be purchased from the program designers, their initial costs can be fairly significant, especially when compared to untested programs or programs devised by agency staff. In addition, many evidence-based programs can only be implemented by individuals who have undergone formal training by the original program designers or their representatives. This is usually an additional expense and can be a financial burden to agencies that are already strapped for funding. Moreover, to ensure that programs are implemented well and that staff learn from the process and make ongoing improvements, programs must be monitored and evaluated. To do this right, program staff may need ongoing access to technical assistance on program design, implementation and evaluation. Without such access, implementation problems may occur that can undermine a program's effectiveness.

CULTURAL/ETHNIC CONSIDERATIONS

As Wisconsin and the nation become more ethnically and culturally diverse, it is increasingly important to take into account how both policies and programs might affect minority populations. This is especially crucial in the juvenile justice system where some racial/ethnic groups are disproportionately represented. An increasingly common question raised by policy makers and practitioners is whether commonly implemented programs that are not specifically tailored to minority audiences are equally effective for minority and majority youth.

A recent meta-analytic study by Wilson, Lipsey and Soydan examined this question and provides some initial insight [105]. They found that delinquency prevention programs, as a group, were equally effective for minority and white youth. However, they did find some trends suggesting that the effectiveness of some particular programs was slightly less for minority youth than white youth.

These findings indicate that programs can be equally effective for multiple groups without being tailored to any particular group. It may well be that programs specifically tailored to particular minority populations are more effective than culturally blind, mainstream programs. However, because there are so few culturally tailored programs – and even fewer studies that examine their effectiveness – this question cannot yet be answered empirically.

While considering this question, it is important to note that disproportionate minority contact (DMC) with the juvenile justice system is not a problem that can be solved solely by tailoring prevention and intervention programs for particular cultural and ethnic groups. Unfortunately, current practices in the arrest, detention, disposition, and release of juveniles tend to favor white youth over minority youth at every stage in the process [75, 106]. While making prevention and intervention programs more effective is a desirable goal and a step in the right direction, concrete changes in the practices that bring youth into the juvenile justice system are more likely to make an impact on DMC in the short-run.

V. RECOMMENDATIONS

Based on our synthesis of the available evidence on the effectiveness of juvenile crime prevention programs, we present some recommendations for enhancing the quality and impact of juvenile crime prevention programs in Wisconsin.

(1) **Strongly support the use of evidence-based prevention and intervention programs and practices.** The scientific knowledge base regarding the prevention and treatment of juvenile delinquency has reached a critical mass. Although a great deal is known about the types of approaches that are likely to be effective, the use of these evidence-based programs and practices lags far behind. Much current practice is based on past history and good intentions. The effectiveness of current practice could be significantly improved if practitioners were to adopt evidence-based practices and funders were to direct funding toward programs and practices supported by current scientific evidence. We have identified a number of proven and cost-effective programs in several categories of prevention that provide a good foundation for future crime prevention.

(2) **Educate policy-makers and practitioners about evidence-based programs and practices and their practical and economic benefits.** A major barrier to the adoption of evidence-based programs and practices is the common lack of understanding of what these programs and practices are and why they are more credible than less scientific approaches. The benefits of evidence-based programs are not limited to their ability to bring about effective, verifiable impacts. They also encourage efficiency in that local constituencies/agencies can draw on existing programs without needing to spend time creating their own. This allows limited human and financial resources to be used wisely. The use of evidence-based programs also has important political benefits, especially in a period of limited funding. Particularly when cost-benefit analysis can be calculated, evidence of program effectiveness can be used to assure policy-makers, funders and practitioners that such programs are a wise and worthy investment. Finally, education about evidence-based programs must emphasize the importance of implementing programs with fidelity to the original program design. Diluted programs are likely to violate the principles of effectiveness and unlikely to produce the same effects as the originals.

(3) **Use results of cost-benefit analysis to better prioritize funding of education and social programs.** In a time of increasingly limited fiscal resources, greater scrutiny of existing programs and services becomes essential. Cost-benefit analysis and other impact evaluations are especially important because they can identify the most efficient use of taxpayer dollars for crime prevention and other outcomes. Although there are many criteria to be used in funding decisions and not all effective programs are analyzed for returns, increased funding for and use of economic analyses of social programs are some of the best ways to determine the most efficient use of public investments in young people.

(4) **Adopt an appropriate and validated assessment tool in order to direct juvenile offenders to the level of intervention and supervision that is most likely to be effective for them.** A high-quality assessment tool helps to ensure that juvenile justice funds are being used

effectively. To the extent that assessment tools are attached to standards for diversion, detention, and disposition, they also ensure fairness and reduce concerns about differential treatment from one offender to another based on race, class, or other personal characteristics unrelated to likelihood of re-offending. Several states and jurisdictions have developed high-quality assessment tools. Multnomah County, Oregon, for example, has developed the "Risk Assessment Instrument," used both at intake and at preliminary hearings, which assigns point values to various criminogenic factors that influence an offender's risk of recidivism [107]. Offenders with few risk factors are then diverted away from court processing and into appropriate diversion programs. Washington State has also developed a "Juvenile Court Pre-Screen Assessment" [34]. Wisconsin's Juvenile Classification System [35] has been validated for use with offenders placed in juvenile corrections but could be revised and re-validated for use with all juvenile offenders earlier in their contact with law enforcement and juvenile justice.

(5) **Develop mechanisms for disseminating effective program models and good practice guidelines to practitioners and decision-makers.** In order to facilitate the adoption of evidence-based programs and practices, decision-makers and practitioners need to have access to the latest knowledge base on what works, as well as technical assistance for selecting and implementing high-quality programs. Getting this information out to those who need it will require some investment and creativity. Several strategies that we believe hold promise for facilitating the wider dissemination and use of evidence-based programs and practices include:

- "What Works" practitioner guides for various categories of programs and approaches
- Dissemination of this report in print and online, with links to other resources like the OJJDP Model Programs Guide and the Juvenile Justice Evaluation Center
- Developing a system to keep practitioners updated on the latest programs and practices, such as the planned training series to be offered in partnership with the Department of Corrections, and the development of a "What Works, Wisconsin" web site that is regularly updated
- Developing a statewide infrastructure to provide regular training on evidence-based programs and practices, assistance on how communities can select, implement, fund and sustain such programs (including how to work collaboratively with other agencies), and a system for ongoing technical assistance for all aspects of program implementation and evaluation.

(6) **Provide support for local-level delinquency prevention initiatives.** Ultimately, most decisions about delinquency prevention are made and implemented locally, even though they are often funded by state and federal sources. Without local support and action, most prevention initiatives will have little chance of success. Because effective prevention approaches need to be comprehensive, targeting multiple risk and protective factors, their success depends on the cooperation of multiple private and public agencies. Such collaboration becomes even more important if initiatives involve the use of time- and resource-intensive evidence-based programs and practices. In addition, the success of such community initiatives depends on developing a local infrastructure to help plan and implement them. Sharing such models and providing local support and

guidance for their development around the state is critical. Fortunately, there are a number of potential partners (like UW Cooperative Extension) who may be able to serve as key partners in the dissemination of such knowledge and as catalysts for local organizing and action.

(7) **Increase investments in research and development (R & D) and in evaluation of emerging, innovative, and promising prevention programs.** The National Science and Technology Council estimates that of the total annual expenditures of social programs for young people, only 1/3 of 1 percent goes to R & D along the lines of the evaluation research documented in this report [108]. In comparison, national R & D investments in energy, biomedical sciences, and transportation average 2 to 3 percent of total expenditures (estimated by GDP). R & D investments are needed both to assess the effectiveness of existing programs and to support innovation to address emerging issues and needs at the local, state, and national levels. Resources should be set aside for developing new programs and for rigorously evaluating interventions and policies that have been developed within Wisconsin or have been implemented widely in the state. For example, there is a pressing need for development and evaluation of prevention programs tailored to specific ethnic or cultural groups to ensure that all Wisconsin residents have access to programs and services that effectively meet their needs. Through set-aside funds or matching grants with state and local governments, we recommend that R & D investment in crime prevention approach the 2 to 3 percent commonly invested in other areas.

(8) **Provide a greater balance between prevention and intervention programs and strategies.** Current funding practices at all levels emphasize treatment over prevention, despite the fact that the evidence for the effectiveness of prevention approaches to delinquency far surpasses the evidence about the effectiveness of treatment. The National Science and Technology Council estimates that of the $555 billion devoted annually to children and youth up to age 21 through established sources (e.g., K-12 education, juvenile justice, health), only $15 billion or 2.7% of total expenditures went to investments that could be classified as prevention [108]. Thus, only about 1 dollar of every 40 public dollars goes to prevention programs like the ones reviewed in this report. Public expenditures in Wisconsin do not appear to be different than in other states. By increasing the ratio of public investments for prevention relative to treatment, public policies for children and youth would be better aligned with the current evidence base.

(9) **Create new, state-level, operational policies that encourage cross-agency collaboration and funding for prevention.** Traditional funding practices are outdated and do not support new understandings of what makes for effective action. Categorical funding streams that provide support only in response to narrowly defined problems and are available only when problems become chronic or severe dominate the terrain, making it almost impossible to create multi-pronged, responsive community-based support systems that would support effective interventions. Wraparound programs, for example, may be most effective when funding streams are blended to allow care coordinators freedom in connecting families to the services they need. To strengthen effectiveness of crime prevention efforts, adequate and stable funding for prevention services is essential.

(10) **Develop new state funding mechanisms that are equitable and consistent with the economic benefits of prevention programs.** Much of the funding and almost all of the human resources for the programs we examined are provided locally,

often by community groups or agencies. However, as the Washington State report points out, the long-term economic savings do not primarily accrue to the local jurisdiction but to the state, which benefits by reducing its need to invest in future rehabilitation, incarceration and other related programs [2]. Because of this economic imbalance in the benefits of prevention, local jurisdictions may lack the incentives and resources necessary to invest in the types of evidence-based programs that are going to have long-term impacts and lead to future state savings. It is important for state policy-makers to understand how long-term savings are likely to accrue from initial local investments in community-based prevention and consider funding mechanisms that are appropriate.

A similar issue arises at the level of state agencies. Most prevention programs are broad in their impact, leading to reductions in a range of problematic outcomes and the promotion of a variety of positive developmental consequences. For example, investments in quality, evidence-based early childhood programs not only benefit the educational system but also the welfare, juvenile justice and corrections systems. State funding, however, continues to follow very narrow streams, focusing on specific outcomes such as the prevention of child abuse, delinquency or drug abuse. If prevention is going to work within the state, significant reorganization is needed on how state agencies fund prevention.

We recommend that the following mechanisms for prevention funding be considered, several of which have been established in other states:

- Form a state-level prevention commission comprised of representatives of state agencies that invest in prevention, similar to California's Children's Commission. Each agency would annually contribute funds to be invested in evidence-based programs overseen by the commission. Two to three percent of the total amount of funding would be reserved for research and evaluation.
- Create a public/private endowment for funding evidence-based prevention programs. Similar to investment strategies in biotechnology, the state would provide base levels of funding for cost-effective prevention programs, which could then be matched by local communities and the private sector. Minnesota uses such an endowment to fund preschool programs.
- Issue state bonds to finance prevention initiatives that are likely to provide high economic returns. Given the availability of evidence on the cost-effectiveness of many prevention investments, the state of Wisconsin could finance targeted investments by issuing bonds. The programs funded by the bonds would have a strong research base from which to define the length of time needed for the program to recover the interest on the bonds and provide positive economic returns. While issuing state bonds for specific prevention programs is unprecedented, Wisconsin and California currently issue bonds for general revenue outlays.
- Develop a check-off box on the state income tax form for voluntary contributions to prevention program funding. As implemented in Illinois and other states, taxpayers could contribute any dollar amount to prevention programs overseen by the state prevention commission or a specified government agency. Among the options for contributions could be

preschool education, child abuse prevention, birth to three services, and domestic violence.

- Redirect a portion of funds from existing expenditures to prevention. Current categorical funding for many education and justice system programs is heavily weighted toward remediation or treatment. Rebalancing the allocations even by a small percentage would provide needed funds to implement cost-effective prevention programs. For example, in K-12 education, the state Department of Public Instruction and local school districts receive millions of dollars per year in Title I block grants to schools serving low-income students. Nearly 95% of these funds are directed toward remedial education, while less than 5% goes to prevention programs such as preschool education.

VI. CONCLUSIONS

The costs of juvenile crime and delinquency deplete both our human and economic resources. Delinquency and crime negatively affect our families, schools and community life while increasing the economic burden on federal, state and local government. For example, in 2004, the cost of housing a juvenile offender in corrections in Wisconsin for 12 months was $68,255 – and is projected to increase nearly 20% by 2007. When these expenditures are considered along with financial and emotional costs to crime victims, as well as costs to society for future adult crime and incarceration, it becomes clear that the prevention of delinquency is both a social and economic priority.

Over the past decade, our knowledge of cost effective programs and practices related to delinquency prevention and treatment has grown significantly. Unfortunately, a great deal of current practice is based on past customs and good intentions and does not draw on this rich, scientific knowledge base. Our review found that there is a great deal of valuable and valid scientific knowledge that could be used to inform current practice. The utilization of such knowledge by decision makers and juvenile justice professionals has the potential to increase the effectiveness of current programs and practices and lead to long-term economic benefits.

This report identified programs and approaches that can significantly reduce the odds that children and youth will engage in delinquent behavior, thus increasing the likelihood that they will be contributing members of society and helping taxpayers avoid the high costs of juvenile treatment and adult incarceration. The cost of almost all of these programs is a small fraction of the costs of treatment and future crime.

The most cost effective prevention programs reviewed include preschool education, home visitation programs, parent education, and social and emotional learning programs for school-aged children. In all of these programs, the quality and intensity of services are high, staff members are well trained, and the program has a well-articulated vision with a strong conceptual base. Although mentoring and job training programs were also found to have good evidence of effectiveness, their economic returns are lower. Among juvenile offender programs, the strongest empirical evidence of cost-effectiveness is for diversion or community accountability programs and therapeutic interventions that provide a range of intensive services over relatively long periods of time.

We also examined several promising crime prevention programs that appear to follow key principles of effective programs but have not yet demonstrated reliable program impacts. These include after-school programs and enhanced probation and supervision programs. Additional research on these and other programs is needed.

This report concludes with a series of recommendations that have the potential to positively alter the future life chances of Wisconsin youth, reduce crime, and contribute to significant cost savings. These recommendations include changes in how funding decisions are made; how practitioners are trained and supported; how programs are selected, implemented and evaluated; and how state agencies coordinate and fund prevention initiatives. However, putting into action most of these recommendations will require both vision and courage – the vision to look beyond short-term solutions and the courage to challenge the status quo and adopt new ways of operating. We hope that this report will serve as an impetus for change and contribute to the emergence of Wisconsin as a national leader for innovative, scientific, and cost-effective policies and programs on behalf of its youth.

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APPENDIX A:
EVIDENCE-BASED PROGRAM DETAILS

TYPE	PROGRAM NAME	USED IN WI?	REGISTRIES (See App. C)	DELIVERY SITE/ CONTEXT	AGE RANGE OF TARGET AUDIENCE	TARGETED POPULATIONS	DOSAGE/ DURATION
PRIMARY PREVENTION							
PRESCHOOL							
	CHICAGO CHILD-PARENT CENTERS	Yes	6,8,7,10,11	School	3-9 years	Economically disadvantaged children in urban area	Up to 6 years
	HIGH SCOPE PERRY PRESCHOOL	No	1,2,5,6,7,8,9, 10, 11	School	3-4 years	Low SES children	1 to 2 years
	ABECEDARIAN PROJECT	No	9,10,11	School	6-12 weeks old through kindergarten	Low SES children	Up to 8 years, with 5 days per week for 5 years
FAMILY SUPPORT							
	NURSE-FAMILY PARTNERSHIP	No	1,2,4,6,8,9,11	Family	0-2 years	Children of low-income, first-time mothers	Weekly-monthy visits, beginning in pregnancy and ending when child is age 2.
	STRENGTHENING FAMILIES - 10-14	Yes	2,3,4,8	Family	10-12 years	General population	7 2-hour sessions + 4 boosters
SOCIAL-EMOTIONAL LEARNING							
	SKILLS, OPPORTUNITIES, AND RECOGNITION (SOAR), formerly known as SEATTLE SOCIAL DEVELOPMENT PROJECT	Unknown	1,2,3,5,6,7,8,11	School	Grades 1-6	Elementary school children in urban, high crime areas	Multi-year; consistent during school year
	OLWEUS BULLYING PREVENTION	Yes	1,2,7,8	School	6-15 years	Elementary and junior high school students	Multi-year; consistent during school year

APPENDIX A:
EVIDENCE-BASED PROGRAM DETAILS

EVALUATED OUTCOMES-DELINQUENCY RELATED	EVALUATED OUTCOMES-NON-DELINQUENCY RELATED	AGE/TIME AT LAST FOLLOW-UP	COSTS PER YOUTH	BENEFITS PER YOUTH	NET BENEFIT	RETURN PER $1 INVESTED
PRIMARY PREVENTION						
PRESCHOOL						
Compared to control group: less delinquency up to age 18, fewer multiple arrests, fewer arrests for violent offenses	Compared to control group: greater school readiness at kindergarten, higher scores in reading and math in third grade, less likely to repeat a grade, less likely to receive special education, higher scores on life skills competency exams, higher ratings of parent involvement, fewer reports of child maltreatment, greater educational attainment	Age 21 years	$7,755	$78,732	$70,977	$10.15
Compared to control group: reductions in anti-social behavior and misconduct, fewer fights, fewer criminal justice contacts, fewer arrests, less time on probation	Compared to control group: greater educational attainment for the females but not males, stronger commitment to school, less likely to have mental impairment, higher job earnings, more likely to own their own homes, less welfare assistance	Age 40 years	$16,648	$283,995	$267,347	$17.07
None	Compared to control group: higher math and reading scores, less likely to repeat a grade, less likely to receive special education, higher IQ and school achievement	Age 21 years	$70,588	$142,327	$71,739	$2.02
FAMILY SUPPORT						
As Adolescents: less likely to run away, less likely to be arrested, less likely to be convicted of a crime	As Adolescents: fewer sexual partners, less cigarette smoking. For mothers: less substance use during pregnancy, smaller family size, fewer closely spaced births, less welfare assistance, fewer cases of child abuse and	Age 15 years	$7,324	$37,041	$29,717	$5.06
Fewer conduct problems	Less likely to use substances, less likely to affiliate with a delinquent peer group. Parents more affectionate and set better limits for children.	4 years	$874	$6,833	$5,959	$7.82
SOCIAL-EMOTIONAL LEARNING						
Fewer violent acts	Better behavior in school, more attachment to school, greater self-reported achievement, less likely to be sexually active, less likely to have multiple sex partners, less likely to drink alcohol heavily	6 years	$4,712	$14,810	$10,100	$3.14
Decrease in vandalism, fighting, theft, bullying	Improved classroom order and discipline; more positive attitudes toward school	2.5 years				

APPENDIX A:
EVIDENCE-BASED PROGRAM DETAILS

TYPE	PROGRAM NAME	USED IN WI?	REGISTRIES (See App. C)	DELIVERY SITE/ CONTEXT	AGE RANGE OF TARGET AUDIENCE	TARGETED POPULATIONS	DOSAGE/ DURATION
SECONDARY PREVENTION							
FAMILY TRAINING							
	FAMILY EFFECTIVENESS TRAINING (FET)	Unknown	1,8	Family	6-12 years	At-risk Hispanic/Latino youth and their families	13 1-1.5 hour sessions
SOCIAL SKILLS TRAINING							
	POSITIVE ADOLESCENT CHOICES TRAINING (PACT)	Unknown	8	School	10-18 years	African American student with conduct problems and/or histories of victimization	
MENTORING							
	BIG BROTHERS BIG SISTERS OF AMERICA	Yes	1,2,8	Community	6-18 years	Disadvantaged/at-risk youth; youth from single-parent families	2-4 times per month for at least one year
VOCATIONAL/JOB TRAINING							
	NATIONAL JOB CORPS	Yes	8	School and Community	16-24 years	Economically disadvantaged youth	Average 8 months
JUVENILE OFFENDER PROGRAMS							
DIVERSION							
	ADOLESCENT DIVERSION PROJECT, also known as MICHIGAN STATE	No	8,9	Community	10 to 18	Youth entering justice system	6-8 hours a week for 18 weeks
THERAPEUTIC INTERVENTIONS							
	MULTISYSTEMIC THERAPY	No	1,2,4,7,8	Home, school, and community	12-17 years	Juvenile offenders at high risk of out-of-home placement	Average 60 hours of therapist contact in a 4-month period
	FUNCTIONAL FAMILY THERAPY	No	2,4,7,8	Family	11-18 years	High-risk/acting out youth (delinquency, violence and substance use) and their families	Average 8 to 12 hours, no more than 26 hours
	(MULTIDIMENSIONAL) TREATMENT FOSTER CARE	Yes	1,2,3,4,7,8	Foster home	11-18 years	Juvnile offenders; adolescents with chronic antisocial behavior or emotional disturbances	6-9 months
CASE MANAGEMENT/MULTIMODAL							
	REPEAT OFFENDER PREVENTION PROGRAM	No	8	Community	8 to 15	First-time offenders under 15.5 years old and exhibiting at least three risk factors	Varies, average 12-18 months

APPENDIX A:
EVIDENCE-BASED PROGRAM DETAILS

EVALUATED OUTCOMES-DELINQUENCY RELATED	EVALUATED OUTCOMES-NON-DELINQUENCY RELATED	AGE/TIME AT LAST FOLLOW-UP	COSTS PER YOUTH	BENEFITS PER YOUTH	NET BENEFIT	RETURN PER $1 INVESTED
SECONDARY PREVENTION						
FAMILY TRAINING						
Decrease in youth conduct problems	Decrease in associations with delinquent peers, improved self-concept, improved family functioning	6 months				
SOCIAL SKILLS TRAINING						
Less physical aggression, less involvement with the juvenile court system, less violence-related charges, fewer offenses		Immediate post-test				
MENTORING						
Compared to control group: less likely to hit someone in the past year	Compared to control group: less initiation of alcohol and drug use, fewer school absenses, higher grades, higher scholastic competence scores, better relationships with family and friends	18 months after found eligible to participate	$4,117	$4,166	$49	$1.01
VOCATIONAL/JOB TRAINING						
Reduction in recidivism; compared to control group: fewer arrests, fewer convictions, less time incarcerated	Compared to control group: more time in academic classes, larger increases in education and skill levels, more money earned after completing the program	48 months after entering program	$15,804	$22,883	$7,079	$1.45
JUVENILE OFFENDER PROGRAMS						
DIVERSION						
All but one of the treatment models outperformed the control group for reduction in		2 years	$1,825	$24,708	$22,883	$13.54
THERAPEUTIC INTERVENTIONS						
Reduction in long-term re-arrest rates	Improved family functioning, decreases in youth mental health problems, reduction in subsequent out-of-home placements	4 years	$5,832	$15,395	$9,563	$2.64
Reductions in recidivism, reductions in sibling entry into high-risk behaviors	Improved family positive communication, reduced negative/blaming communication styles	5 years	$2,197	$29,111	$26,914	$13.25
Compared to group home placements: fewer subsequent arrests, fewer subsequent days incarcerated	Less hard drug use	12 months	$2,524	$27,460	$24,936	$10.88
CASE MANAGEMENT/MULTIMODAL						
More likely to complete court-ordered obligations for restitution, work, and community service; Fewer sustained petitions for new offenses; Less likely to abscond	Reduced percentage of positive drug tests; Improved school attendance; Improved grade point average; Less likely to fall below grade level	2 years after original offense	N/A	N/A	N/A	N/A

APPENDIX A:
EVIDENCE-BASED PROGRAM DETAILS

TYPE	PROGRAM NAME	USED IN WI?	REGISTRIES (See App. C)	DELIVERY SITE/ CONTEXT	AGE RANGE OF TARGET AUDIENCE	TARGETED POPULATIONS	DOSAGE/ DURATION
STANDARD SERVICE MODEL							
	JUVENILE COURT	Yes	N/A	Justice system; Community	N/A	Juvenile offenders	2-3 hearings
	STANDARD PROBATION	Yes	N/A	Justice system; Community	N/A	Juvenile offenders	Varies; avg. 12-15 months
	JUVENILE CORRECTIONAL INSTITUTION	Yes	N/A	Justice system; Institution	N/A	Juvenile offenders	Varies

APPENDIX A:
EVIDENCE-BASED PROGRAM DETAILS

EVALUATED OUTCOMES-DELINQUENCY RELATED	EVALUATED OUTCOMES-NON-DELINQUENCY RELATED	AGE/TIME AT LAST FOLLOW-UP	COSTS PER YOUTH	BENEFITS PER YOUTH	NET BENEFIT	RETURN PER $1 INVESTED
STANDARD SERVICE MODEL						
N/A	N/A	N/A	$2,000 average cost	N/A	N/A	N/A
N/A	N/A	N/A	$2,160 annual cost	N/A	N/A	N/A
N/A	N/A	N/A	$68,255 annual cost	N/A	N/A	N/A

APPENDIX B: EVIDENCE-BASED PROGRAM DESCRIPTIONS

CHICAGO CHILD-PARENT CENTERS

The Child-Parent Centers aim to promote academic achievement by providing service to preschoolers, kindergarteners, and first- through third-grade children and their families. The centers provide a stable learning environment with small class sizes to educationally and economically disadvantaged children. This community-based intervention provides both educational and family-support services. The Centers encourage parental involvement in the school and in the children's learning.

For more information:
Sonja Griffin
sogriffin@csc.cps.k12.il.us
(773) 553-1958

HIGH/SCOPE PERRY PRESCHOOL

The High/Scope Perry Preschool targets disadvantaged children 3 to 4 years old. The preschool program seeks to foster positive intellectual, social, and physical development in participating children. Ultimately, the program aims to decrease crime, teenage pregnancy, and use of welfare by improving the employment prospects for its participants.

For more information:
High/Scope Educational Research Foundation
http://www.highscope.org/

ABECEDARIAN PROJECT

The Abecedarian program begins at 6 to 12 weeks of age and ends when the child enters kindergarten. Primarily it is a preschool program in which children receive developmentally appropriate education and health care. Parents attend group meetings and often receive home visits.

For more information:
FPG Child Development Institute
University of North Carolina
http://www.fpg.unc.edu/

NURSE-FAMILY PARTNERSHIP

The Nurse-Family Partnership is a home-visiting program targeting low-income, first-time mothers and their babies. Home visits begin during pregnancy and continue until the child is 2 years old.

For more information:
National Center for Children, Families, and Communities
University of Colorado
http://www.nccfc.org/

STRENGTHENING FAMILIES FOR PARENTS AND YOUTH 10 TO 14

The Strengthening Families for Parents and Youth 10-14 program initially separates parents and children to work on behavioral and cognitive skills, and then brings them together to practice their skills in family activities. The program runs for seven sessions with four booster sessions.

For more information:
Iowa State University Extension
http://www.extension.iastate.edu/SFP

SKILLS, OPPORTUNITIES, AND RECOGNITION (SOAR), formerly known as SEATTLE SOCIAL DEVELOPMENT PROJECT

The SOAR program aims to promote strong bonds between families and schools. The program consists of two components: cooperative, developmentally-appropriate teaching practices in the classroom and optional parental education classes. The program is designed to prevent or reduce conduct problems, peer rejection, and academic failure in elementary school students in urban areas.

For more information:
Social Development Research Group
University of Washington
http://depts.washington.edu/ssdp/

OLWEUS BULLYING PREVENTION

The Bullying Prevention program is a universal prevention program designed for school-wide interventions. The program aims to reduce and prevent bullying and victimization in schools.

For more information:
National Center of Rural Justice and Crime Prevention
Clemson University
http://virtual.clemson.edu/groups/ncrj/

FAMILY EFFECTIVENESS TRAINING

Family Effectiveness Training targets Hispanic and Latino families with children 6 to 12 years old. The training focuses on families in which problems, such as negative peer influence on the child, poor behavior/conduct of the child, or poor parent-child communication, occur. The therapist or facilitator works with the family members to establish good communication and order within the family.

For more information:
Center for Family Studies
University of Miami School of Medicine
http://www.cfs.med.miami.edu/

POSITIVE ADOLESCENT CHOICES TRAINING (PACT)

The PACT program typically targets at-risk African-American youths aged 10 to 18, but can be adapted to other populations, such as youths with conduct disorder or a history of victimizations. This program teaches social skills and problem-solving techniques through videotaped scenarios involving African-American youths. The training focuses on issues related to interpersonal violence.

For more information:
The Center for Child and Adolescent Violence Prevention
Wright State University
http://www.wright.edu/sopp/ccavp/

BIG BROTHERS BIG SISTERS OF AMERICA

Currently, Big Brothers/Big Sisters serves youth through more than 500 organizations across the United States. The program matches children and adolescents from single-parent families with a volunteer mentor adult to provide support in their lives. Mentors and matched youth meet two to four times a month for at least a year.

For more information:
Big Brothers/Big Sisters of America
www.BBBSA.org

JOB CORPS

Job Corps provides economically disadvantaged youths 16 to 24 years of age education and vocational training in a residential living setting. The Job Corps environment aims to provide the skills necessary for job attainment.

For more information:
U.S. Department of Labor
http://jobcorps.doleta.gov/

ADOLESCENT DIVERSION PROJECT/MICHIGAN STATE DIVERSION PROJECT

Juvenile offenders receive behavioral therapy and/or other services from college students, mainly juniors and seniors, who receive training in behavioral intervention and advocacy. Students and offenders work one-on-one, for 6-8 hours per week, for 18 weeks. Variations on the program place emphasis on family involvement in the intervention, relationship building between client and caseworker, or on different behavioral therapy approaches.

For more information:
Department of Psychology
Michigan State University
william.davidson@ssc.msu.edu

MULTISYSTEMIC THERAPY

The family of a juvenile offender receives in-home treatment from therapists who are available 24 hours a day, seven days a week. Therapists have caseloads of 4-6 families at a time, and they focus on improving parenting effectiveness by empowering parents and teaching them new parenting skills. Average treatment includes about 60 hours of contact over a 4-month period.

For more information:
Multisystemic Therapy Services
http://www.mstservices.com/

FUNCTIONAL FAMILY THERAPY

Functional Family Therapy is designed to treat high-risk youth and their families. The therapy practice is grounded in clinical theory but is flexible enough to be adapted to treat a variety of complex family problems.

For more information:
Functional Family Therapy
http://www.fftinc.com/

(MULTI-DIMENSIONAL) TREATMENT FOSTER CARE

In this alternative to group home placement, a troubled or delinquent youth receives treatment through trained foster parents and continues to attend school in his or her home community. Case managers supervise the foster parents, coordinate needed interventions at school, and develop an individualized behavior management program to be implemented by the foster parents. The youth's family of origin is also trained in behavior management techniques to promote better supervision and continuing intervention when the juvenile returns home.

For more information:
TFC Consultants, Inc.
http://www.mtfc.com/

REPEAT OFFENDER PREVENTION PROGRAM / THE 8% SOLUTION

All juvenile offenders in California are assessed for recidivism risk at intake. Lower risk offenders are assigned to the Intensive Intervention Program (for medium-risk) or the Immediate Accountability Program (for low-risk). High-risk offenders under age 15½ are referred to the Youth and Family Resource Center in their community, where several youth-serving agencies work together to devise a case plan. (Other programs are available for high-risk, older adolescents.) Participants attend school at the center, are provided transportation to and from the center, receive intensive in-home services for their families, and may also participate in other center programs, including:

- Parent education and teen parenting classes
- Health screening and health education services
- Drug and alcohol abuse services
- Mental health screening and services
- Afternoon recreation and specialized programming
- Saturday field trips and community service projects

For more information:
Orange County Probation Department – The 8% Solution
http://www.oc.ca.gov/probation/solution/index.asp
California Board of Corrections, Repeat Offender Prevention Program
http://www.bdcorr.ca.gov/cppd/ropp/ropp.htm

APPENDIX C: LIST OF PROGRAM REGISTRIES

1. Substance Abuse and Mental Health Services Administration (SAMHSA) Model Programs
   U.S. Department of Health and Human Services
   http://modelprograms.samhsa.gov/

2. Blueprints for Violence Prevention
   Center for the Study and Prevention of Violence
   University of Colorado
   http://www.colorado.edu/cspv/blueprints/index.html

3. Exemplary and Promising Safe, Disciplined and Drug-Free Schools Programs
   U.S. Department of Education
   http://www.ed.gov/admins/lead/safety/exemplary01/index.html

4. Strengthening America's Families
   University of Utah
   http://www.strengtheningfamilies.org/html/

5. The Collaborative for Academic, Social, and Emotional Learning (CASEL)
   University of Illinois - Chicago
   http://www.casel.org/about_sel/SELprograms.php

6. Promising Practices Network
   RAND Corporation
   http://www.promisingpractices.net/benchmark.asp?benchmarkid=52

7. Youth Violence: A Report of the Surgeon General
   http://www.surgeongeneral.gov/library/youthviolence/chapter5/sec3.html

8. Office of Juvenile Justice and Delinquency Prevention (OJJDP) Model Program Guide
   http://www.dsgonline.com/mpg_non_flash/mpg_index2.htm

9. Price, R. H., Cowen, E.L., Lorion, R.P., and Ramos-McKay, J. (Eds.). (1988). *14 Ounces of Prevention: A Casebook for Practitioners*. Washington, D.C.: American Psychological Association.

10. Crane, J. (Ed.). (1998). *Social programs that work*. New York: Russell Sage Foundation.

11. Weissberg, R. P., and Greenberg, M.T. (1997). School and community competence-enhancement and prevention programs. In I. E. Sigel, and Renninger, K.A. (Eds.), *Child psychology in practice* (5 ed., Vol. 5). New York: John Wiley & Sons.

APPENDIX D: GUIDELINES FOR SELECTING EVIDENCE-BASED PROGRAMS

Knowing that a program has undergone rigorous testing and evaluation can reassure potential program sponsors that the program is likely to be effective under the right conditions and with the appropriate audience. However, knowing which program is the "right one" for a particular setting and audience is not always easy to determine. There are a number of critical factors that planners need to consider when selecting a program for their organization or community. Here we provide a detailed set of guidelines to assist program planners in the task of selecting an appropriate, evidence-based program for their particular agency and audience. Below we provide a summary of some of these principles.

The goals and objectives of the program should be consistent with the goals and objectives of the sponsoring organization and the targeted program participants.

Program sponsors should have a good handle on the outcomes that they would like to achieve. When determining outcomes it is important to consider not only the goals and interests of the program's sponsors, but also the desires and needs as seen from the perspective of potential participants. Appropriate programs should be keyed to the assets and risk and protective factors that are relevant to the target audience.

Questions to consider:

- What are your goals and objectives for implementing this program? How well does the program address them?
- What are the goals and objectives of the participants? How well does the program address them?
- Does the program address the risk and protective factors most relevant to the sponsor's and participants' goals? Does it build assets and resources in those areas that are most important?
- Is the program of sufficient length and intensity to meet the goals of the facilitator and/or participants?

There should be sufficient resources and time available to implement the program.

Some evidence-based programs are fairly expensive to implement, requiring many resources and a significant time commitment. For example, they may require that facilitators attend multi-day trainings offered by the program's developers or that the program be facilitated by professionals with particular qualifications. Program sponsors need to assess whether they have the human and financial resources that a program demands.

Questions to consider:

- Are there sufficient financial resources to implement the program?
- Is special training required of program facilitators? How accessible and affordable are materials and training?
- Does the sponsoring organization(s) have staff members who are willing to make the time commitment? Do the staff members have the skills and experience needed to implement the program?
- Can the program be implemented within the time available?

The program's assumptions and activities should be consistent with the values and cultural practices of the target audience.

Taking into account the values and culture of the intended audience is critically important. Some programs are intentionally designed for certain populations or cultural groups. Others are more generic and designed for universal audiences. It's important to consider whether particular programs are compatible with particular groups.

Questions to consider:

- Does the program take into account the class, cultural and historical backgrounds of the participants?
- Are the outcomes and practices consistent with the values and norms of the target audience?
- Does the program take into account developmental, gender and individual differences of both adults and children?
- Are the assumptions made about human nature, development and how people learn and change consistent with the cultural beliefs of the target audience?

The program should be flexible enough to be adapted to the local setting and situation.

In order for an evidence-based program to be effective, it needs to be implemented in a way that is similar to its original, documented design. Most programs have well-specified program components that should be implemented with close correspondence to the original model. This is known as program fidelity. On the other hand, in order to meet local needs and promote program ownership, it may be necessary to adapt a program to the local conditions where it will be delivered. This is known as program adaptation. Depending on the design, some programs are more easily adapted.

Questions to consider:

- How rigid or flexible is the program?
- Can the program be adapted to the needs or culture of your audience?
- Is the program's designer available to assist with local adaptation?

The program should be found effective for the specific population(s) with which you are working.

In order for a program to be deemed evidence-based, it must go through a series of rigorous evaluations and meet certain standards. Even so, most evidence-based programs have only been evaluated with a limited number of populations and under a relatively narrow range of conditions. While it is likely that most well-established evidence-based programs will be effective and appropriate for a range of audiences and situations, they will not be suitable or effective for every audience or situation. When considering the merits of a program for a particular setting, it is important to examine whether there is evidence that the program will be appropriate for the target audience.

Questions to consider:

- Under what conditions has the program been found to be effective? Are these conditions similar to yours?
- Has the program been evaluated with audiences similar to your target population, and do the results indicate that the program is effective?
- Are participants similar to your target population satisfied with the program?

The program should have a reasonably high probability of being sustained in the future.

When planning a program it makes sense to think long-term and consider which programs are most likely to be continued in the future. Programs that require significant external funding are especially prone to abandonment after the funding runs out. Some programs are more readily adopted by existing organizations and are easier to support over the long run.

Questions to consider:

- Will there be sufficient financial and human resources to continue the program in the future?
- Is there enough local commitment to the program so that it will be continued in the future, especially when external funding is no longer available?

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Title: What Works, Wisconsin: What Science Tells Us About Cost-Effective Programs for Juvenile Delinquency Prevention

Author(s): Small, S. A.
Reynolds, A. J.
O'Connor, C.

Year: 2005
Format: Report
Language English
Organization: University of Wisconsin-Madison
Source: Office of Juvenile Justice and Delinquency Prevention, Office of Justice Programs

Abstract: Significant advances have been made in the science of juvenile delinquency prevention, say these authors. There is considerable evidence that some approaches are more effective than others in preventing crime and reducing recidivism among youth. This 65-page report builds on several recent efforts to analyze the growing evidence in the field of delinquency prevention, most notably the Washington State Institute for Public Policy's cost-benefit analysis of prevention and intervention programs and the Office of Juvenile Justice and Delinquency Prevention's Model Programs Guide. Drawing on these resources, the authors highlight a number of proven, effective programs and review the strongest evidence available in several categories of intervention, from universal or primary prevention with children and families through community-based programs for juvenile offenders. They give special attention to several programs and approaches developed in Wisconsin. They conclude with recommendations for consideration by the Wisconsin Governor's Juvenile Justice Commission.

Availability: University of Wisconsin-Madison, School of Human Ecology, 1300 Linden Drive, Madison, WI 53706; E-mail: sasmall@wisc.edu or areynolds@waisman.wisc.edu or http://oja.wi.gov/search.asp?locid=97 for download

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