



*The* LEWIN GROUP

# Performance Measurement Development for Hawaii Teen Pregnancy Prevention and Positive Youth Development Programs

## *Final Report*

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Benefit, Employment and Support Services  
Division  
Hawaii Department of Human Services

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May 31, 2007

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## EXECUTIVE SUMMARY

The Hawaii Department of Human services (DHS) currently uses the Temporary Assistance for Needy Families (TANF) block grant to fund a diverse set of positive youth development (PYD) programs to prevent teenage pregnancy and other behaviors that can negatively affect a successful transition to adulthood. DHS contracted with The Lewin Group to develop objective criteria for measuring the effectiveness of these programs.

The TANF block grant has four purposes, all of which support the overarching program goal of helping families achieve self-sufficiency:

1. Provide assistance to needy families;
2. End dependence of needy parents' by promoting job preparation, work, and marriage;
3. Prevent and reduce out-of-wedlock pregnancies; and
4. Encourage the formation and maintenance of two-parent families.

While the first two purposes target TANF recipients, Purposes #3 and #4 are preventive. Because these services seek to avert entry into the welfare system, the target population is broader and includes families and individuals not receiving TANF. The federal government encourages states to use TANF flexibly and in innovative ways to support the program's purposes.

### A. DHS Teen Pregnancy Prevention and Positive Youth Development Initiative

Many youth in Hawaii are at risk of negative outcomes due to risky behavior, such as unprotected sexual activity and substance abuse. Although trends are moving in a positive direction for most behaviors—rates of teenage sexual activity, pregnancy, and births are declining, as are rates of alcohol, tobacco and other drug use—a sizable minority of youth are still at risk. For example, one-third of Hawaii high school students have had sex; more than one in five report that they are currently sexually active. The pregnancy rate in Hawaii, although falling, exceeds the national average. A substantial minority also reported drinking alcohol (34 percent) or smoking marijuana (17 percent) in the previous month.

Research suggests that these outcomes can have negative consequences for youth and society. Teenage parenthood, for example, has implications for the educational attainment and subsequent economic wellbeing of the teenage mother, the teenage father, and the children born to teenage parents.

DHS has been funding PYD programs since 2003 under the auspices of TANF Purpose #3. DHS selected a PYD approach as the mechanism for decreasing teenage pregnancies as well as other risky behaviors that can derail a successful transition to adulthood and self-sufficiency because:

- A broader PYD approach is expected to be more cost-effective than a narrower teenage pregnancy prevention (TPP) approach, and

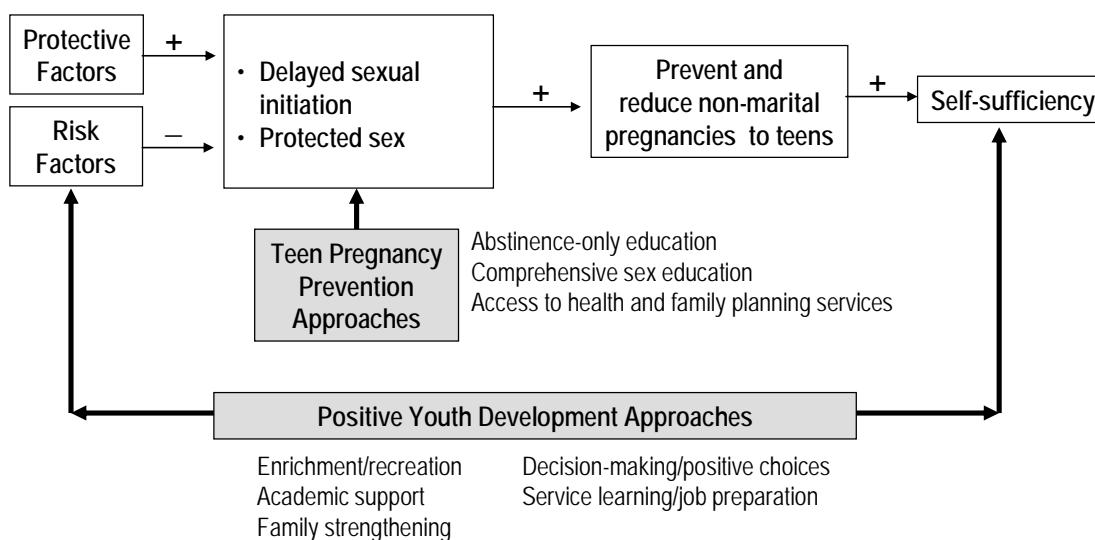
- A PYD approach yields numerous other social benefits related to fostering self-sufficiency (e.g., staying in school, avoiding abuse of alcohol and drugs, building character, developing job and decision-making skills).

In 2006, DHS expended more than \$21 million in TANF funds to support more than 100 programs pursuant to TANF Purpose #3. In some instances, DHS contracts directly with providers. In most cases, however, DHS has a memorandum of agreement (MOA) with other state departments or agencies to identify and contract with providers. Although each program shares the same ultimate goal – prevention of dependence – each adopts a different strategy and underlying program logic for achieving this goal.

*Exhibit ES.1* shows the overarching initiative framework and logic. As it demonstrates, two general approaches help youth transition to adulthood and attain self-sufficiency. The TPP approach targets sex-related antecedents of teenage pregnancy. DHS-funded providers that focus on this approach implement one (or more) of the following intervention components:

- Abstinence-only education
- Comprehensive sex education
- Access to reproductive health and family planning services

**Exhibit ES.1: DHS Initiative Logic**



The PYD approach targets the underlying risk and protective factors associated with delayed sexual initiative, protected sex, or both (e.g., educational achievement, supportive adult relationships, positive peer relationships) as well as non-sex-related antecedents of self-sufficiency (e.g., effective decision-making, job skills). DHS providers that focus on this approach implement one (or more) of the following intervention components:

- Academic support
- Enrichment and recreational activities
- Decision-making and positive choices
- Service learning/job preparation
- Family strengthening

Some providers implement intervention components associated with both approaches (e.g., an abstinence-related curriculum is combined with enrichment and recreational activities).

## **B. Findings**

DHS contracted with The Lewin Group to develop objective criteria for measuring the effectiveness of TANF-funded TPP and PYD services. DHS intends to use these objective criteria (or “performance measures”) in funding TANF Purpose #3-related programs. The key project tasks were a literature review, field research, and development of performance measures.

### **1. Literature Review**

The literature review identified risk and protective factors (“antecedents”) shown to predict teenage pregnancy; program activities that have been shown, or are “reasonably calculated,” to lead to prevention and reduction of out-of-wedlock pregnancy and PYD; and candidate performance measures that might apply to DHS contracts.

The search included programs that target “sex-related” antecedents and thus aim to reduce teenage pregnancy and out-of-wedlock childbearing *directly*—such as abstinence education programs and comprehensive sex education programs. It also included a review of programs that target “non-sex-related” antecedents and thus aim to reduce teenage pregnancy and out-of-wedlock childbearing *indirectly* by addressing the social and psychological factors that lead to unprotected non-marital sex—such as academic support, mentoring, recreational activities, and family strengthening programs.

The review found that both TPP approaches (i.e., abstinence-only education, comprehensive sex education, access to reproductive health and family planning services) and PYD approaches (i.e., academic support, enrichment and recreational activities, decision-making and positive choices, service learning/job preparation, family strengthening) target the risk factors and protective factors of teenage pregnancy. Moreover, program evaluations find that these programs can exert positive effects on a number of youth outcomes. Strong evidence exists that programs can change knowledge and behavioral intentions. Evidence that these programs change risk-taking behaviors—such as delay in sexual initiation, consistent use of condoms or other contraceptives, decrease in the number of partners, reduction in use of alcohol and other drugs—is less clear. Some evidence indicates that programs had positive effects on non risk-taking behaviors important to adolescent development. Participants in PYD programs, for example, exhibited better academic achievement and less school failure and suspensions than adolescents in the control or comparison groups.

The absence of strong program outcomes or impacts on risk-taking behaviors, however, does not necessarily indicate failure of a particular approach. Rather, findings should be considered within the context of the overall evaluation field. For one, evidence is limited. Few rigorous evaluations of some approaches have been conducted, notably abstinence and PYD programs. One well-regarded review found only six evaluations of abstinence programs that met strict criteria for inclusion in the review; of those, none was “abstinence only.” Similarly, the same review identified only 13 PYD programs.

Additionally, evidence is mixed. Quality evaluations of comprehensive sex education programs, abstinence programs, and PYD programs found that, although many had positive impacts on the behaviors assessed, others had no statistically significant outcomes, and a few had negative outcomes. Failure to find an effect could be due to multiple factors—for example, the program was implemented incorrectly, the research design was flawed (e.g., contamination between the treatment and control or comparison groups), or the basic logic or theory on which the program was based was unsound.

In sum, the review suggests that TPP and PYD programs can be reasonably calculated to prevent teenage pregnancy and other outcomes that can derail a successful transition to adulthood. However, no “silver bullet” exists. A number of approaches show promise, but more research is needed to determine model programs.

## **2. Field Research**

During the site visits, the research team gathered information about the nature of program activities as well as the types of data currently collected and reported to program funders. Field researchers met with staff from 27 programs—reflecting the range of providers and approaches funded by DHS—on four islands (Oahu, Maui, Hawaii, and Kauai). Key findings included the following:

- Many providers operated interventions that encompassed more than one component.
- Providers are interested in feedback that can be used for program management.
- All providers were collecting some type of information on program performance. At a minimum, providers collected attendance information. Many also assessed program completion rates among participants. Some tracked referrals to other service providers, development of service plans, or enrollment in case management or counseling services. Many used pretests and posttests to measure changes in knowledge, behavior, and attitudes among participants. Some attempted to track longer-term outcomes, such as declines in dropout rates and pregnancy rates.
- Variation exists in what contractors are required to report. Some MOA holders, such as the Office of Youth Services, developed detailed performance targets and milestones for contractors. Others are in the process of developing measures. Some require contractors to respond to a specific question in quarterly reports (i.e., the number served with DHS funds). Still others give contractors a great deal of latitude in reporting performance.

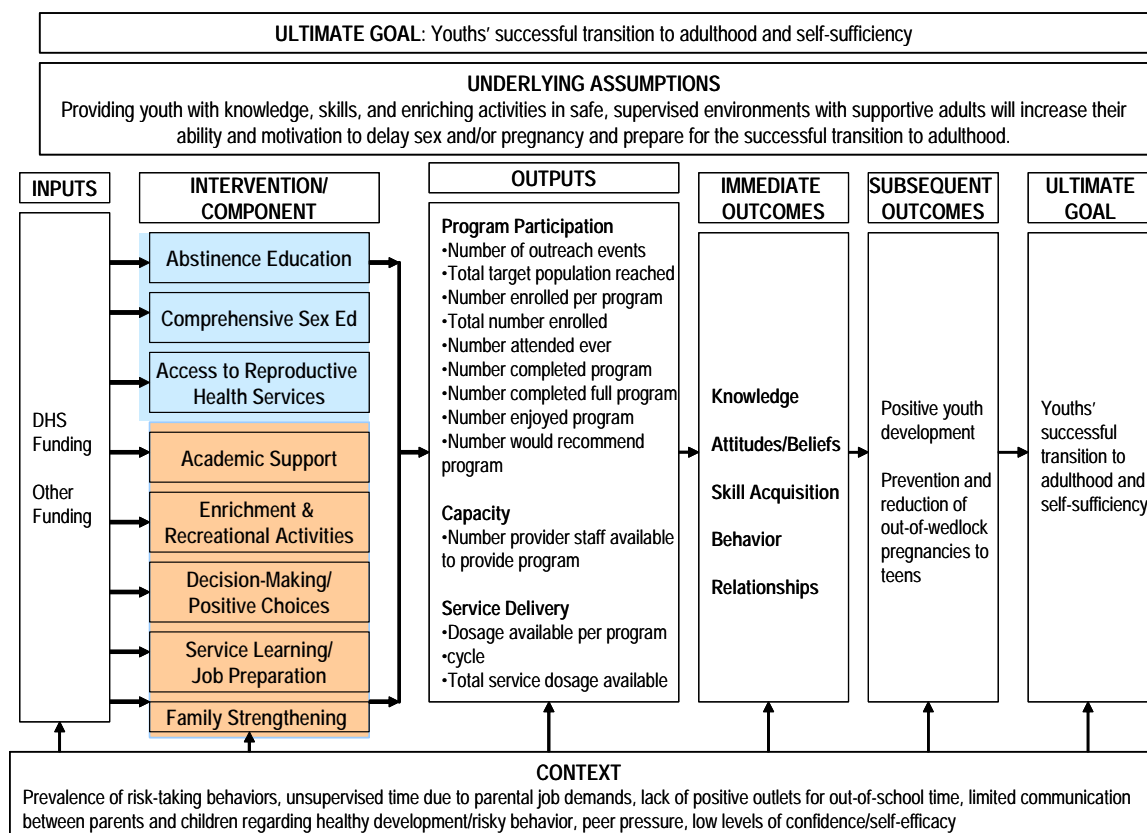
### 3. Performance Measures

The research team used a logic model framework to guide the development of performance measures. A logic model links what a program does to what it hopes to achieve and how to measure that achievement. This framework was deemed appropriate because multiple contractors provide a diverse set of programs and services and target a range of populations. Although they share the same ultimate goal, each adopts a different strategy and underlying program logic to achieving this goal. The logic model for the overall DHS Teen Pregnancy Prevention and Positive Youth Development initiative, shown in *Exhibit ES.2*, comprises the following elements:

- “Ultimate goal,” or the overarching goal sought by the intervention
- “Assumptions” as to what the problem is, why it is a problem, and why the proposed intervention should help
- “Context” in which the intervention operates
- “Intervention components,” or sets of activities that target a specified group of people (e.g., teenagers)
- “Outputs,” or what the program produces that ultimately benefits participants
- “Immediate outcomes,” or the expected benefits to participants immediately on completion and as a direct result of exposure to the program
- “Subsequent outcomes,” or outcomes that can reasonably be expected to occur if immediate outcomes are achieved



## Exhibit ES.2: Initiative-Wide Logic Model



As shown, the ultimate project goal is successful transition to adulthood and self-sufficiency, achieved by providing a number of intervention components – either alone or in combination – to Hawaii youth (column 2). Through enrolling and participating in these programs (column 3), participants are reasonably expected to gain knowledge and skills, refine attitudes and beliefs, change behaviors, and develop or strengthen positive relationships with peers, parents, and other supportive adults (column 4). The subsequent outcomes expected across all program approaches are prevention and reduction of out-of-wedlock pregnancies. By avoiding teenage parenthood, youth are better positioned to transition to self-sufficient adulthood (ultimate goal).

Performance measures should reflect what programs are producing (outputs) and outcomes the intervention targets directly (immediate outcomes). Subsequent outcomes, although reflecting outcomes of ultimate interest, are poorly suited to serve as performance measures, given that these longer-term outcomes are affected by many intervening circumstances and events outside the program's control. Linking subsequent outcomes causally to a program requires a rigorous evaluation design. For this reason, the recommended performance measures focus on outputs and immediate outcomes.

- Outputs.** The recommended output measures are shown in column 3 of the logic model. They measure program participation (i.e., outreach, enrollment, completion), program capacity (i.e., staff availability to provide services), and service delivery (i.e., number of sessions available to the target population). These measures are germane across the TPP and

PYD intervention components (e.g., abstinence education, academic support), so any service provider can use them, regardless of program design and activities.

- **Immediate Outcomes.** Unlike outputs, immediate outcomes must be tailored to the general program approach. Thus, the project team developed outcomes for each of the eight intervention components in column 2. The recommended outcome measures document changes in knowledge, attitudes, and, behavior; skills acquired; and relationships developed or strengthened. Although the general categories of immediate outcome measures are the same across components, the measures differ by component.

The measures are designed so providers can select ones specific to their intervention components. *Exhibit ES.3* shows the recommended performance measures and relevant intervention components.

### Exhibit ES.3: Performance Measures and Relevant Intervention Components

Performance Measure	Relevant Intervention Components
<i><b>Knowledge</b></i>	
Sexuality and healthy adolescent development	Abstinence–Only Education Comprehensive Sex Education
Benefits of abstinence	Abstinence–Only Education Comprehensive Sex Education
Use of condoms and other contraceptives	Comprehensive Sex Education
Accessing reproductive health and family planning services	Access to Reproductive Health and Family Planning Services
Effect of risky behavior on goal attainment	Decision-Making and Positive Choices
Understanding of the workplace environment	Service Learning/Job Preparation
Understanding of different types of jobs	Service Learning/Job Preparation
Parents and adult family members viewed as a resource	Family Strengthening
Parents and adult family members see themselves as a resource	Family Strengthening
Effect of parents and families on school success (parent)	Family Strengthening
<i><b>Attitudes and Beliefs</b></i>	
Confidence and self-efficacy in choosing abstinence	Abstinence–Only Education
Value abstinence	Abstinence–Only Education Comprehensive Sex Education
Confidence and self-efficacy in avoiding risky sexual behavior	Comprehensive Sex Education
Value contraception	Comprehensive Sex Education
Confidence and self-efficacy in obtaining needed services	Access to Reproductive Health and Family Planning Services
Confidence and self-efficacy in school success	Academic Support
Value education	Academic Support
Confidence and self-efficacy in learning something new	Enrichment and Recreational Activities

Performance Measure	Relevant Intervention Components
Value learning something new	Enrichment and Recreational Activities
Value cultural heritage	Enrichment and Recreational Activities
Confidence and self-efficacy in making healthy decisions	Decision-Making and Positive Choices
Confidence and self-efficacy in getting and keeping a job	Service Learning/Job Preparation
Confidence and self-efficacy in talking to a parent or other adult family member (youth)	Family Strengthening
Confidence and self-efficacy in talking to a child (adult)	Family Strengthening
<b><i>Skill Acquisition</i></b>	
Communication skills	Abstinence–Only Education Comprehensive Sex Education Service Learning/Job Preparation Family Strengthening
Resistance and refusal skills	Abstinence–Only Education Comprehensive Sex Education Decision-Making and Positive Choices
Study skills	Academic Support
New skill	Enrichment and Recreational Activities
Decision-making skills	Decision-Making and Positive Choices
New job-related skills	Service Learning/Job Preparation
Condom and other contraceptive use skills	Comprehensive Sex Education
<b><i>Behavior</i></b>	
Delay or discontinue sexual activity	Abstinence–Only Education Comprehensive Sex Education
Parent-child communication about sexual activity	Abstinence–Only Education Comprehensive Sex Education
Avoid risky sexual behaviors	Comprehensive Sex Education
Visits to family planning clinic or medical office	Access to Reproductive Health and Family Planning Services
Homework completion	Academic Support
Time spent studying	Academic Support
Participate in recreational activities	Enrichment and Recreational Activities
Participate in cultural activities	Enrichment and Recreational Activities
Goal-setting	Decision-Making and Positive Choices
Avoidance of risky behaviors	Decision-Making and Positive Choices
Practice job skills	Service Learning/Job Preparation
Participate in community service	Service Learning/Job Preparation
Communication with parents and other family members	Family Strengthening
Family time	Family Strengthening

Performance Measure	Relevant Intervention Components
Parent or adult involved in school-related activities	Family Strengthening
<i>Relationships</i>	
Performance Measure	Relevant Intervention Components
Staff-youth relationships	Abstinence–Only Education Comprehensive Sex Education Academic Support Enrichment and Recreational Activities Decision-Making and Positive Choices Service Learning/Job Preparation
Peer relationships	Abstinence–Only Education Comprehensive Sex Education Enrichment and Recreational Activities Decision-Making and Positive Choices Service Learning/Job Preparation
Parent-child relationship	Family Strengthening
Parent-school relationship	Family Strengthening
Youth-school relationship	Academic Support Enrichment and Recreational Activities Decision-Making and Positive Choices Family Strengthening

Each measure includes a definition and example of how this measure could be implemented in a post-participation survey. Take the example of the abstinence-only education attitudes and beliefs measure: confidence and self-efficacy in choosing abstinence.

- Definition of measure: The percentage of participants who report feeling more confident they can and will delay sexual activity as a result of the program.
- Question examples: On a scale of 1 to 5, where 1 = strongly disagree and 5 = strongly agree, “I have confidence I can abstain from sexual activity,” and “I think it is ok to say ‘no’ to sex, even if I think others are sexually active.”

### C. Implications for DHS Performance Monitoring

DHS will determine ultimately how to implement the recommended performance measures, including notifying providers or potential providers of performance measurement requirements and helping providers work through the requirements.

If DHS implements a uniform set of performance measures, contract staff will have to notify providers, potential providers, or both that they will assume responsibility for collecting specific information on program performance and reporting it to DHS. This commitment could occur at the request for proposal (RFP) stage or the contracting stage. DHS can decide whether to simply require that providers, or applicants, collect performance measures (letting them

select which component-specific performance measure they will report on), or DHS can require a minimum common set of performance measures – for each intervention component – that all providers must collect and report on. For example:

- At the RFP stage, DHS could require or recommend that applicants for TANF TPP-related funds identify which of the eight intervention components they plan to implement. In addition, DHS could require applicants to propose how they will collect information that will enable them to report on the recommended output performance measures and the immediate outcome measures germane to the proposed program approach.
- DHS could include in the contract a requirement that the contractor report on the output performance measures and relevant outcome performance measures.

DHS can facilitate this process for applicants and contractors in a number of ways.

- At the RFP stage, DHS could provide a list and brief description of each of the eight major intervention components to help applicants identify and categorize the strategies they propose to implement.
- After contract award, DHS could show contractors how to collect the information necessary for documenting performance and reporting performance measures to DHS. The nature of this guidance could involve the following:
  - Description of the source and mode of data collection (i.e., post-participation surveys)
  - Content of the post-participation survey (i.e., component-specific items)
  - Method for calculating output performance measures (i.e., participation rates, capacity, service delivery), what constitutes program “completion,” and desired output thresholds (e.g., 80 percent of enrollees complete the program)
  - Desired reporting format, to facilitate contractors’ consistent reporting of performance, to enable DHS to track what contractors are achieving with program funds, and to compare and contrast performance across contractors

## I. INTRODUCTION

The Temporary Assistance for Needy Families (TANF) block grant is intended to help families achieve self-sufficiency. TANF has four purposes, one of which is prevention and reduction of out-of-wedlock pregnancies. The Hawaii Department of Human Services (DHS) administers the state's TANF program and currently uses the block grant funding to support all four program goals. With regard to non-marital pregnancy prevention, DHS funds an array of positive youth development (PYD) programs that aim to prevent teenage pregnancy as well as to create additional social benefits (e.g., school completion, avoidance of drugs and alcohol, character-building, job readiness) that can reasonably be expected to contribute to prevention of dependence in Hawaii. DHS is interested in developing objective criteria for measuring the effectiveness of these teenage pregnancy prevention (TPP) programs. This report describes the development of the performance measures, including the overarching methodology, the literature review, and the field research. The report begins with an overview of Hawaii's TANF program and the context in which the program—including the youth-related initiative—operates.

### A. TANF Program Background

The 1996 federal Personal Responsibility and Work Opportunity Reconciliation Act (PRWORA) repealed the Aid to Families with Dependent Children program (AFDC), a federal entitlement to cash assistance, and replaced it with the TANF program. PRWORA authorized capped block grant funding to states for TANF, imposed a five-year limit on lifetime cash assistance provided with federal TANF funds, and mandated stricter work participation requirements than had existed under AFDC. The 1996 federal law also defined four program purposes of TANF:

1. To provide assistance to needy families;
2. End needy parents' dependence by promoting job preparation, work, and marriage;
3. Prevent and reduce out-of-wedlock pregnancies; and
4. Encourage formation and maintenance of two-parent families.

In addition to creating a temporary safety net for poor families, the law focuses explicitly on prevention. Unlike Purposes #1 and #2—which target individuals and families already receiving TANF—*Purposes #3 and #4 seek to prevent entry into the welfare system.* Thus, the target population eligible for programs and services funded under these purposes is broader and includes individuals and families not currently receiving TANF.

The U.S. Department of Health and Human Services Administration for Children and Families (ACF) gave states considerable flexibility in designing their TANF programs to address these four purposes, including deciding how much of the federal funding is used for cash benefits, employment services, supportive services, and other activities.

TANF caseloads have declined significantly since PRWORA's enactment. In September 2006, 1.7 million families were on TANF nationwide, a 60 percent decrease from August 1996. The number of recipients fell 67 percent—to 4 million—during that period.

The TANF program was reauthorized as part of the Deficit Reduction Act of 2005 (DRA). The DRA kept TANF's four purposes intact and added funding for family strengthening, including \$150 million per year for healthy marriage and responsible fatherhood initiatives.<sup>1</sup>

## **B. Hawaii Context**

TPP and PYD programs operate within a unique environment. This includes the goals of the TANF program and caseload dynamics, as well as trends in teenage pregnancies, births and risk-taking behaviors. This section describes the program context, along with the purpose of the study and organization of the remainder of the report.

### **1. TANF Program**

DHS receives about \$99 million in federal funds each year for the TANF program. In addition to the federal block grant, Hawaii TANF Maintenance of Effort (MOE) expenditures totaled about \$33 million, and MOE expenditures in a separate state program totaled \$39 million in FY 2005.<sup>2</sup> These funds support assistance-related expenditures (i.e., cash grants) as well as non-assistance activities (e.g., work-related activities, transportation). Hawaii also transferred TANF block grant funds to the Child Care Development Fund and the Social Services Block Grant.

#### **a. Goals and Caseloads**

Each state must submit to ACF a plan that describes how it will operate its TANF program. According to Hawaii's plan for federal FY 2006 to FY 2008, "Hawaii's TANF program provides assistance to needy families with (or expecting) children and provides parents with job preparation, work, and support services that enable them to leave the program and become self-sufficient."<sup>3</sup> The program's guiding principles are as follows:

- Welfare is temporary and not a way of life;
- Parents, not government, are responsible for the support and maintenance of their children;
- Parents who are able to work must work; and
- Families must be financially better off by going to work than staying on welfare.

Hawaii implemented a "labor force attachment model" to help recipients become employed quickly in fulltime or part-time work. This approach puts a premium on rapid entry into the job market (as opposed to more focus on longer-term training). Program participants who are not exempt from work activities must participate for 32 hours per week in an allowable activity.<sup>4</sup>

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<sup>1</sup> U.S. Department of Health and Human Services, Administration for Children and Families. *Welfare Reform: Deficit Reduction Act of 2005 Fact Sheet*. Available online at <http://www.acf.hhs.gov/programs/ofa/drafact.htm>.

<sup>2</sup> U.S. Department of Health and Human Services, Administration for Children and Families. Fiscal Year 2005 TANF Financial Data. Tables A, B, and C. Available online at [http://www.acf.hhs.gov/programs/ofs/data/2005/tanf\\_2005.html](http://www.acf.hhs.gov/programs/ofs/data/2005/tanf_2005.html).

<sup>3</sup> State of Hawaii. (2005) *State Plan, Temporary Assistance for Needy Families Title IV-A of the Social Security Act*. Submitted December.

<sup>4</sup> Allowable activities include unsubsidized employment, subsidized employment, work experience, on-the-job training, job search and job readiness assistance, community service programs, vocational education training, job skills training directly related to employment, education directly related to employment, secondary school or GED preparation for individuals who have not

The percentage of the non-exempt caseload participating in activities — 70.5 percent — was among the highest in the country in FY 2004, the last year for which national data are available (the national average was 32 percent).<sup>5</sup>

Since PRWORA's implementation, Hawaii's TANF caseload has declined. In September 2006, 6,818 *families* were on TANF in Hawaii, a 7 percent decline from the previous year and a 69 percent decline from August 1996. The total number of *recipients* in the state followed a similar pattern. There were 17,019 TANF recipients (including adults and children) in September 2006, a 5 percent decline from the previous September and a 74 percent decrease from 1996.

#### *b. Purpose #3—Specific Expenditures*

Starting in 2003, DHS began funding programs that supported TANF's preventive purposes. In 2006, DHS spent approximately \$21 million in TANF funds to support more than 100 programs pursuant to TANF Purpose #3. DHS intends to leverage TANF funds strategically to meet the stated TANF purposes and to create an array of additional social benefits that will contribute, as broadly as possible, to preventing dependence in Hawaii.

ACF guidance on TANF-related expenditures encourages states to assume that funds can be used in innovative ways to achieve the goals laid out in the TANF statute. The guidance notes that program funds can be used to support a service or benefit that will *directly lead* to accomplishing one of the goals. Program funds can also be used for services that can be *expected to lead* to accomplishing one of the goals. For example, a state could fund an initiative that improves youth motivation, academic performance, and self-esteem because it can reasonably be expected to reduce school dropout and teenage pregnancy.<sup>6</sup>

In spending TANF funds on Purpose #3, DHS seeks to prevent non-marital pregnancies and, ultimately, dependence, through fostering PYD. DHS' focus on PYD is based on the following rationale:

- Adopting a broader PYD approach is more cost-effective than narrower TPP approaches; and
- A PYD approach yields numerous other social benefits related to fostering self-sufficiency, including dropout prevention; alcohol, tobacco, and other drug use prevention; character-building; and job readiness.

Although the various PYD programs funded under Purpose #3 share the same ultimate goal — prevention and reduction of teenage pregnancies as a means of fostering self-sufficiency — they adopt a variety of strategies and underlying program logic for achieving this goal. Some programs provide sex education; others provide recreational activities; and still others focus on

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finished secondary school, and provision of childcare to individuals participating in community service. Source: *State Plan, Temporary Assistance for Needy Families Title IV-A of the Social Security Act*. Submitted December 2005.

<sup>5</sup> Table available online at <http://www.acf.hhs.gov/programs/ofa/particip/indexparticip.htm>.

<sup>6</sup> U.S. Department of Health and Human Services (1999). *Helping Families Achieve Self-Sufficiency: A Guide on Funding Services for Children and Families through the TANF Program*. Available online at <http://www.acf.hhs.gov/programs/ofa/funds2.htm>.



improving academic achievement. Many combine a variety of approaches and offer numerous program components.

The Benefit, Employment, and Supportive Services Division (BESSD,) within DHS, contracts directly with some providers to deliver PYD programming. Most programs, however, are funded through contracts between providers and other state agencies and departments with whom BESSD has a memorandum of agreement (MOA). **Box 1** shows the current MOA holders. **Appendix A** lists an inventory of programs funded by DHS under TANF Purpose #3, including their number of contracts.

**Box 1: DHS Memoranda of Agreement, TANF Purpose #3 Programs**

- Office of Youth Services (DHS)
- Department of Education
- Department of Defense
- State Foundation for Culture and the Arts
- Kanu a ka Aina Learning (KALO)

## **2. Teenage Pregnancies, Birth Rates, and Risk-Taking Behaviors**

In 2005, there were 78,064 adolescents ages 15 to 19 in Hawaii. The vast majority (85 percent) were enrolled in school, although 4.5 percent were “idle” – that is, neither in school nor in the labor force and disconnected from activities associated with a successful transition to adulthood.<sup>7</sup>

DHS is focusing on PYD and successful transition to adulthood at a time when indicators of a number of behaviors typically associated with negative outcomes – including sexual activity and drug and alcohol use – are moving in a positive direction. However, although risky behaviors are declining, a sizable minority of Hawaii youth is still at risk of adverse outcomes.

### **a. Trends in Sexual Activity, Pregnancies, and Births**

Teenagers in Hawaii are less likely than the average American teenager to have ever had sex. According to the Youth Risk Behavior Survey (YRBS), one-third of Hawaii high school students reported ever having had sexual intercourse, compared to 47 percent nationally. Moreover, the proportion of high school students who have ever had sex declined 19 percent from 1999.<sup>8</sup> Other notable findings include the following:

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<sup>7</sup> Census Bureau, 2005 American Community Survey. *Teenagers' Characteristics, Hawaii*. Available online at [http://factfinder.census.gov/servlet/STTable?\\_bm=y&-geo\\_id=04000US15&-qr\\_name=ACS\\_2005\\_EST\\_G00\\_S0902&-ds\\_name=ACS\\_2005\\_EST\\_G00\\_](http://factfinder.census.gov/servlet/STTable?_bm=y&-geo_id=04000US15&-qr_name=ACS_2005_EST_G00_S0902&-ds_name=ACS_2005_EST_G00_).

<sup>8</sup> Saka, S., & Bunao, V. (2005). *Highlights of the 2003 Hawaii Youth Risk Behavior Surveys*. Available online at <http://www.hawaii.gov/health/statistics/other-reports/2003-yrbs-rpt.pdf>.

- The proportion currently sexually active (i.e., had intercourse with one or more people during the past three months) also declined between 1999 and 2003, from 28 percent to 23 percent.
- The proportion of youth currently sexually active who used a condom at last intercourse increased slightly from 47 percent to 49 percent, although the proportion who used birth control pills declined (from 18 percent to 15.5 percent).

Despite some positive trends, the teenage *pregnancy rate* in Hawaii exceeds the national average. In 2000 (the last year for which data are available), the pregnancy rate for adolescents ages 15 to 19 was 93 per 1,000 in Hawaii, compared with the U.S. average of 84 per 1,000. Although higher than the national rate, the teenage pregnancy rate in Hawaii is declining faster: between 1992 and 2000, the pregnancy rate in Hawaii decreased by 33 percent, compared with 24 percent nationally. Among younger teenagers (ages 15 to 17), the decline was even steeper: 47 percent (compared with 32 percent nationally).

Although Hawaii's pregnancy rate is higher than the average state pregnancy rate, its teenage *birthrate* in 2004 (the most recent year for which data are available) was slightly lower.<sup>9</sup> In that year, there were 36.1 births per 1,000 15- to 19-year-old females in Hawaii, compared to 41.1 per 1,000 nationally.<sup>10</sup> Hawaii's teenage birthrate has declined about 37 percent since 1991, compared with 33 percent in the U.S.<sup>11</sup>

#### *b. Public Costs of Teenage Childbearing in Hawaii*

Although Hawaii pregnancy and birthrates have been falling, the costs associated with teenage childbearing remain substantial. The National Campaign to Prevent Teen Pregnancy estimates that teenage childbearing in Hawaii cost taxpayers at least \$22 million in 2004, including \$6 million for public health care, \$9 million for child welfare, \$8 million for incarceration, and \$10 million in lost tax revenue due to decreased earnings and spending.<sup>12</sup> Of these costs, two-thirds were state and local costs, while one-third were federal.

The analysis found that the average annual cost in the state for teenage childbearing is \$1,012 per teenage birth. However, births to younger teenagers result in higher costs to society. The average annual cost associated with a birth to a female 17 or younger was \$4,104. The report estimates that between 1991 and 2004 Hawaii's 25,300 teenage births cost taxpayers more than \$400 million.<sup>13</sup>

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<sup>9</sup> Martin, J., et al., (2006). *Births: Final Data for 2004*. National Vital Statistics Reports. Vol. 55, No. 1. Table 11. Available online at

<sup>10</sup> The discrepancy between the higher-than-average pregnancy rate and lower-than-average birthrate is due to a higher-than-average abortion rate in the state.

<sup>11</sup> National Campaign to Prevent Teen Pregnancy. Hawaii State Profile. Available online at <http://www.teenpregnancy.org/america/stateSummary.asp?stateId=13>.

<sup>12</sup> National Campaign to Prevent Teen Pregnancy. (2006). *By the Numbers: The Public Costs of Teen Childbearing in Hawaii*. November. Available online at: [http://www.teenpregnancy.org/costs/pdf/fact\\_sheet/HI\\_Final.pdf](http://www.teenpregnancy.org/costs/pdf/fact_sheet/HI_Final.pdf).

<sup>13</sup> National Campaign to Prevent Teen Pregnancy. (2006). *By the Numbers: The Public Costs of Teen Childbearing in Hawaii*.

### *c. Other Health-Risk Behaviors*

The YRBS was developed to monitor health risk behaviors that contribute to mortality, morbidity, and social problems among youth. As such, questions probe actions in a variety of areas in addition to sexual activity. Results for Hawaii suggest that, although a number of health-related risky behaviors declined between 1999 and 2003, problems remain. Findings for Hawaii's high school students include the following:<sup>14</sup>

- A large number of youth have tried alcohol, although the proportion has declined from 76 percent to 63 percent (the national average was 75 percent). About one-third reported having had a drink in the past 30 days. One-fourth indicated they tried their first drink before age 13.
- One-third of high school youth reported ever trying marijuana, a decline from 45 percent in 1999 (the national average was 40 percent). Seventeen percent used marijuana in the past 30 days, and 11 percent reported first trying it before age 13.
- Use of other drugs was lower. Six percent have ever used any form of cocaine, 5 percent have used methamphetamines, and 7 percent have used ecstasy.
- Almost one-third report that they were offered, sold, or given an illegal drug on school property during the past 12 months.

Finally, a sizable minority of Hawaii high school youth appear to be depressed and at risk of self-inflicted injury. In 2003, almost 30 percent reported that they had ever felt so sad or hopeless almost every day for two weeks or more in a row that they stopped doing some usual activities during the past 12 months. Almost one in five reported having seriously considered suicide in the past 12 months (the national average was 17 percent).<sup>15</sup>

## **C. Study Purpose**

As noted above, DHS currently spends about \$21 million on programs that support TANF Purpose #3. This broad range of programs is funded under the auspices of preventing and reducing non-marital pregnancies.

DHS contracted with The Lewin Group to develop objective criteria for measuring the effectiveness of the diverse set of PYD programs funded by TANF under Purpose #3. DHS will consider using these criteria (or "performance measures") in contracting for Purpose #3-related programs. A secondary objective was to assess degree to which DHS's initiative is grounded in the literature on program approaches that are reasonably calculated to lead to the prevention and reduction of out-of-wedlock pregnancy and positive youth development.

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<sup>14</sup> Saka, S., & Bunao, V. (2005).

<sup>15</sup> Saka, S., & Bunao, V. (2005).

## D. Report Organization

Section II describes the study methodology.

Section III provides an overview of the literature on the risk and “protective factors” associated with teenage pregnancy, the interventions that have been implemented nationally to address these factors, and the available research on the effectiveness of these interventions.

Section IV describes the logic for the overall initiative and eight specific intervention components and proposes performance measures for each intervention component.

Section V summarizes the findings and describes implications for DHS program management.

## II. STUDY METHODOLOGY

This project’s overall goal was the development of appropriate performance measures of TPP and PYD programs funded under the auspices of TANF Purpose #3. First, however, the project team had to understand the terrain. How many TPP and PYD programs does DHS currently fund? What types of activities do providers offer to youth? Are these programs and activities grounded in research? That is, can they reasonably be expected to lead to DHS’ desired outcome – avoidance of unhealthy behaviors and successful transition to adulthood? What assumptions did DHS, MOA holders, and providers make about why the programs should work?

This section describes the logic model framework that guided the development of performance measures followed by the specific project tasks. A logic model is a “plausible and sensible model for how a program is supposed to work”<sup>16</sup> that links what a program does to what it hopes to achieve and how to measure that achievement.

### A. Logic Model Framework

A logic model framework, a road map or visual representation of a program or project, is appropriate because multiple providers offer a diverse set of programs and services and target a range of populations. Although each shares the same ultimate goal – prevention and reduction of teenage pregnancies and a successful transition to adulthood – each adopts a different strategy and underlying program logic to achieving this goal. We selected the logic model methodology as the best way to approach to this project for four reasons. The logic model:

1. Provides a common framework for describing programs along the same program dimensions, offering a simple way to compare and contrast program goals, activities, and outcomes;

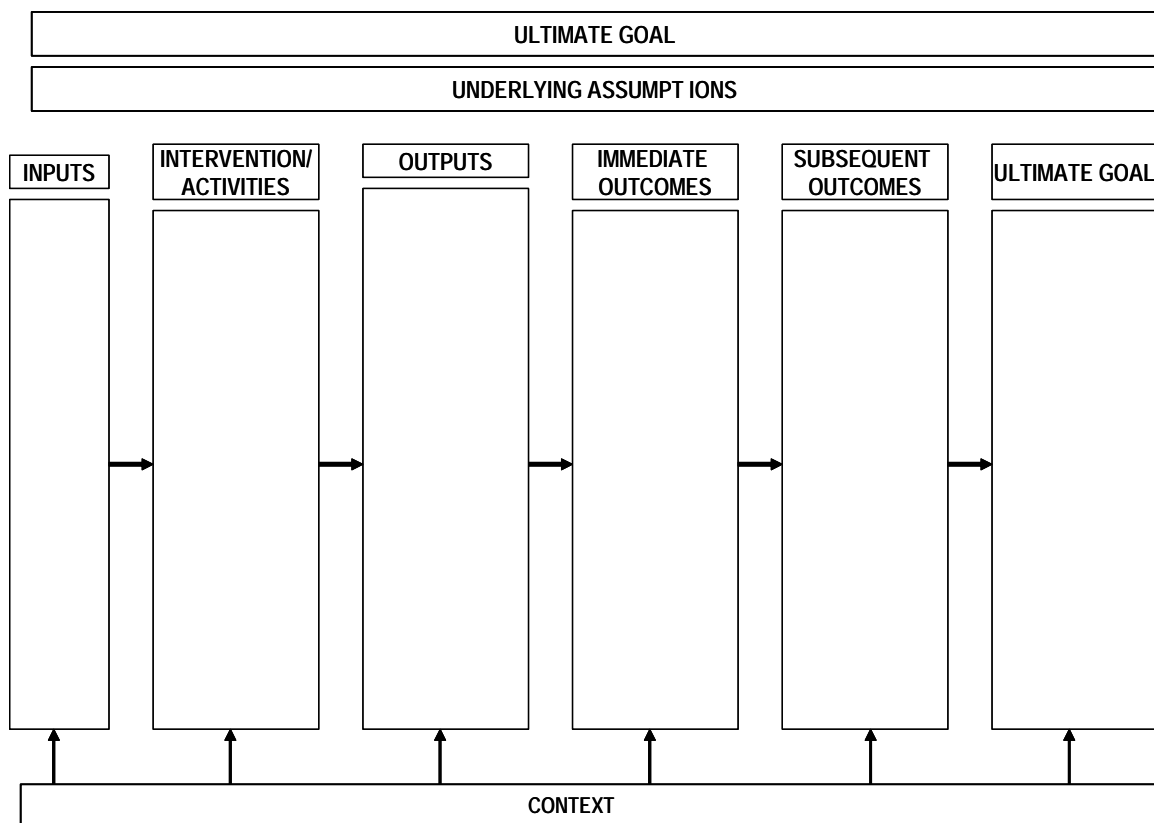
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<sup>16</sup> Bickman, L. (Ed.). (1987). Using program theory in evaluation. *New Directions for Program Evaluation* series (33). San Francisco, CA: Jossey-Bass, p. 4.

2. Combines what is typically referred to as a process evaluation (how well the program is doing what it said it would do) with an outcome evaluation (how to determine whether the program is making a difference) into one coherent framework;
3. Requires, correspondingly, an articulation of measures or indicators to assess program performance and goal attainment, including “performance indicators” of what the program is producing (outputs), “outcome measures” of program effectiveness (outcomes), and measurable “objectives” demonstrating whether ultimate program goals are being met; and
4. Proves useful at the organizational level as a strategic planning tool. It can help organizations define and communicate their priorities and goals and guide them in establishing relevant and quantifiable benchmarks, performance measures, and timeframes for achieving goals.

*Exhibit II.1* depicts the logic model framework.

**Exhibit II.1: Logic Model Framework**



Each of the individual elements of the logic model is described below.

- “Ultimate goals” refer to the overarching goal sought by the intervention. The first step in a logic model, ultimate goals must be clearly specified. For instance, the ultimate goal of DHS TANF-funded programs is self-sufficiency and successful transition to adulthood.

- “Assumptions” refer to key underlying suppositions about what the problem is, why it is a problem, why the proposed intervention and activities should help, and what the source of these assumptions is. For example, why are PYD activities – such as after-school recreational or educational activities or both – “reasonably calculated” to lead to self-sufficiency and prevention of dependence? Assumptions make explicit what is often left implicit in program development – namely, the empirical, philosophical, and theoretical beliefs on which the intervention is built.
- “Context” is the environment in which the program operates and has implications for the program’s successful implementation and ultimate effectiveness. Context includes characteristics of the environment (i.e., fiscal, political, history of grants versus contracts), characteristics of the site (or sites) where the intervention operates, characteristics and expectations of DHS, and other programs or initiatives operated by the funding agency or a partner agency that can support the program and its participants. Context affects every aspect of program design and implementation.
- “Inputs” are the resources necessary to operate the program, such as staff, space, materials, and funding. They can come from DHS, other government programs, and other program partners. Inputs are required to conduct the intervention.
- “Intervention activities” delineate what the project does and for whom. An intervention is a set of activities reflecting one or more of eight major program components and aimed at a specific group of people (e.g., middle school or high school students). The components can be a curriculum (e.g., comprehensive sex education, abstinence education), recreational activities (e.g., sports), academic support (e.g., tutoring), or job training, to name a few. Defining an intervention involves fully describing what specific activities will occur and their intensity, frequency, and dosage.
- “Outputs” refer to what the program produces that ultimately benefit participants, including products resulting from outreach (e.g., number of brochures distributed), capacity-building (e.g., number of staff trained), service delivery (e.g., number of programs offered), enrollment (e.g., number of participants signing up), and attendance or participation (e.g., number of participants served, percentage completing).
- “Immediate outcomes” refer to the expected benefits to participants immediately on completion of the program and as a direct result of exposure to it. Thus, immediate outcomes typically reflect a particular program approach and even specific curriculum content. Immediate outcomes are often expressed in terms of changes in knowledge (e.g., understanding different contraceptive methods and how to use them), attitudes (e.g., valuing avoidance of risky behaviors); skills (e.g., refusal skills); and, in some cases, actual behavior change (e.g., ceasing or abstaining from risky behavior as of program completion).
- “Subsequent outcomes,” which follow immediate outcomes, can reasonably be expected to occur at some point if the immediate outcomes are achieved. Subsequent outcomes are broader than immediate outcomes in that they do not reflect a particular program approach; rather, they reflect the broader consequences of program participation – including

reductions in sexual activity, reductions in pregnancy, and reductions in drug or alcohol use, as well as grade progression, graduation, and (eventually) employment.

In short, a logic model helps specify clearly and concisely what a program aims to accomplish, for whom, with what resources, within what context, and facing what barriers. Also, importantly, the logic model helps specify data needed to show whether the project is effective in meeting its goals. *Appendix B* contains several component-specific logic models.

## **B. Project Tasks**

The key tasks for this project were a literature review, field research, and development of component-specific logic models and performance measures. Each task is described below.

### **1. Literature Review**

The literature review identifies risk and protective factors shown to predict teenage pregnancy; program activities that have been shown, or are reasonably calculated, to lead to prevention and reduction of out-of-wedlock pregnancy and to PYD; and candidate performance measures that might apply to DHS contracts.

The search included programs that target “sex-related” antecedents and thus aim to reduce teenage pregnancy and out-of-wedlock childbearing *directly* – such as abstinence education programs and comprehensive sex education programs. It also included a review of programs that target “non-sex-related” antecedents and thus aim to reduce teenage pregnancy and out-of-wedlock childbearing *indirectly* by addressing social and psychological factors that lead to unprotected non-marital sex – such as academic support, mentoring, recreational activities, and family-strengthening programs. The literature review included:

- Reviews of published, peer-reviewed research;
- Discussions with experts in the field;
- Reviews of TPP-related Websites and resources (e.g., National Campaign to Prevent Teen Pregnancy, ETR Associates, Alan Guttmacher Institute);
- Reviews of other research organizations and resources (e.g., Child Trends, Center for Law and Social Policy); and
- Examination of “gray” literature (e.g., reports, monographs), including relevant literature authored by federal government agencies (e.g., U.S. Department of Health and Human Services).

The literature review is included in **Section III** of this report.

## **2. Field Research**

The purpose of the site visits was twofold: (1) to better understand the particular program components adopted by a variety of DHS Purpose #3 providers; and (2) to better understand how these providers measure, or could measure, performance.

In 2006, when the research team developed a site visit protocol, 29 contractors provided more than 100 programs to multiple target audiences and numerous locations across the state. Visiting all programs was beyond the scope of this project. Four criteria guided selection of providers to visit:

- The programs had been operational for some time. Newly funded programs or programs in a pilot stage likely still had to “work out the kinks,” thus were poor candidates for a site visit.
- The programs represented the diversity of DHS contracts, including ones funded through MOAs—the Department of Education, the Department of Defense, the Office of Youth Services (OYS), KALO—as well as ones directly under contract to DHS.
- The programs were geographically diverse, including ones on Oahu, Hawaii, Maui, and Kauai.
- The diversity of programmatic components was represented. Based on the literature review and an assessment of DHS and MOA contracts, the team identified eight primary program components. As described below, some of the components address sex-related antecedents to teenage pregnancy and possible dependence (i.e., abstinence education, comprehensive sex education, access to reproductive health and family planning services), while others target non-sex-related antecedents (i.e., academic support, enrichment and recreational activities, decision-making and positive choices, service learning/job preparation, family strengthening). The research team visited at least one program for each of the components.

The field researchers met with staff from 27 programs. The teams used a discussion guide based on the logic model framework. In addition, field researchers met with MOA holders to ascertain the types of information that providers currently report regarding program performance.

## **3. Component-Specific Logic Models**

Developing component-specific logic models was an intermediate step to creating performance measures. Based on the site visit notes, the research team compiled a logic model for each of the eight intervention *components* as opposed to each program. As indicated by the logic model framework, outputs and immediate outcomes are linked directly to program interventions and activities. Thus, to develop appropriate performance measures for the variety of DHS-funded PYD programs, understanding the key intervention components being implemented by each program is important.



#### 4. Performance Measures

Development of performance measures was informed by the literature review, a scan of well-known program evaluations, and the site visits. The performance measures are divided into outputs and immediate outcomes. Outputs are uniform across eight identified intervention components (abstinence-only education, comprehensive sex education, access to reproductive health and family planning services, academic support, enrichment and recreational activities, decision-making and positive choices, service learning/job preparation, family strengthening). Immediate outcomes are specific to each program component.

### III. LITERATURE REVIEW

This section begins with a discussion of predictors of teenage pregnancy, including both risk factors and protective factors. It then describes the literature pertaining to interventions aimed at reducing teenage pregnancy, including programs that directly target teenage pregnancy as well as PYD programs that might target sex-related antecedents of teenage pregnancy as one of many program goals.

#### A. Predictors of Teenage Pregnancy

The cause of teenage pregnancy is well known: unprotected sexual intercourse between biologically mature teenagers, incorrect or inconsistent use of contraception, or both. Not all teenagers who engage in sexual activity become pregnant or parent a child. Teenage characteristics—some “malleable” and others not—can influence the risk of pregnancy and parenthood.

Studies have identified numerous predictors of teenage pregnancy. “Risk factors” refer to characteristics of the teenager, her family, her peer group, or her wider community that are associated with an increased likelihood of unprotected sex (and, thus, teenage pregnancy). Conversely, protective factors are associated with a decreased likelihood of teenage pregnancy.

##### 1. Risk Factors

Some risk factors represent fairly stable characteristics that place certain subgroups of teenagers at higher risk. Though unalterable by interventions, these factors suggest possible target populations for TPP interventions. Examples of these risk factors include the following:

- **Child Age.** As children age, they are more likely to initiate sex.<sup>17</sup> However, as sexually active youth age, they are more likely to use contraception.<sup>18</sup> Thus, age is a risk factor for sexual initiation but a protective factor among sexually active youth.

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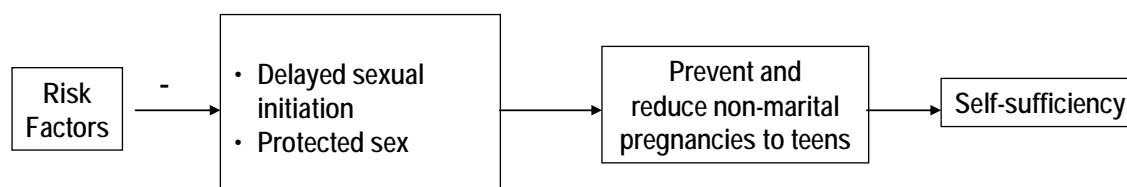
<sup>17</sup> Wight, D., Williamson, L., & Henderson, M. (2006). Parental influence on young people’s sexual behavior: A longitudinal analysis. *Journal of Adolescence*, 29, 473–494.

<sup>18</sup> Kirby, D., Lepore, G., & Ryan, J. (2005). *Sexual Risk and Protective Factors: Factors Affecting Teen Behavior, Pregnancy, Childbearing and Sexually Transmitted Disease: Which Are Important, Which Can You Change?* Washington, DC: The National Campaign to Prevent Teen Pregnancy.

- **Race and Ethnicity.** Hispanic and African-American youth are more likely to initiate sex earlier and report having more sexual partners.<sup>19</sup>
- **Sexual Abuse.** Children who have been sexually abused have, on average, increased numbers of partners and earlier ages of sexual initiation.<sup>20</sup>
- **Parent Characteristics.** Parents who were teenage parents,<sup>21</sup> have divorced or are unmarried,<sup>22</sup> have lower incomes,<sup>23</sup> or have lower levels of education<sup>24</sup> are more likely to have a child who is sexually active or pregnant as a teenager.
- **Older Sibling Characteristics.** Children (both boys and girls) with older sexually active or parenting adolescent siblings are more likely to initiate sex earlier, have more frequent sex, and become teenage parents themselves.<sup>25</sup>
- **Community Characteristics.** The community in which children reside is also related to the risk of teenage pregnancy.<sup>26</sup> High rates of poverty, residential turnover, and unemployment are all associated with earlier initiation of sex and higher pregnancy rates.<sup>27</sup>

Other risk factors are malleable and more likely reflect the underlying causes of teenage pregnancy. *Exhibit III.1* illustrates how these risk factors predispose certain youth to engage in unprotected sex, which in turn is directly related to the likelihood of becoming pregnant, which in turn alters the teenager's trajectory toward self-sufficiency.

### Exhibit III.1: Conceptual Model Linking Risk Factors to Sexual Activity, Pregnancy Prevention, and Self-Sufficiency



Research has identified the following risk factors that increase the likelihood of unprotected sex (and, thus, teenage pregnancy) and might be alterable by an intervention:

<sup>19</sup> Centers for Disease Control and Prevention. (2004). *Surveillance Summaries: Youth Risk Behavior Surveillance – United States, 2003*. *MMWR*, 53 (SS-2).

<sup>20</sup> Upchurch, D. M., & Kusunoki, Y. (2004). Associations between forced sex, sexual and protective practices, and sexually transmitted diseases among a national sample of adolescent girls. *Women's Health Issues*, 14, 75-84.

<sup>21</sup> Kirby, D., Lepore, G., & Ryan, J. (2005).

<sup>22</sup> Henderson, M., Wight, D., Raab, G., Abraham, C., Buston, K., Hart, G., & Scott, S. (2002). Heterosexual risk behaviour among young teenagers in Scotland. *Journal of Adolescence*, 25, 483-494.

<sup>23</sup> Kirby, D., Lepore, G., & Ryan, J. (2005).

<sup>24</sup> Wight, D., Williamson, L., & Henderson, M. (2006).

<sup>25</sup> National Campaign to Prevent Teen Pregnancy. (2004). *Science Says: Younger Siblings of Teen Parents: At Increased Risk of Teen Pregnancy?* Available online at <http://www.teenpregnancy.org/works/pdf/sciencesaysYoungerSiblingsofTeenMothers.pdf>.

<sup>26</sup> Kirby, D. (2001); & Wolfe, B. (1995). *Teenage Childbearing and Economic Incentives*. Available online at <http://www.irp.wisc.edu/publications/focus/textver/17.1.a/forum2.txt>.

<sup>27</sup> National Campaign to Prevent Teen Pregnancy. (2004). *Science Says: Parental Influence and Teen Pregnancy*.

- **Lack of Motivation to Avoid Pregnancy.** Teenagers who report having motivations to avoid sex, such as fear of pregnancy or sexually transmitted diseases (STD) or having concerns about embarrassment or guilt from having sex, tend to initiate sex at later ages and use contraception.<sup>28</sup>
- **Sexually Active Peers.** If an adolescent's peers are sexually active (or the teenager believes they are), he or she is likely to initiate sex earlier, have more frequent sex, and have more sexual partners.<sup>29</sup>
- **Romantic Relationships.** Teenagers who are currently partnered or report having had romantic relationships have higher rates of initiation of sex than non-partnered teenagers.<sup>30</sup> However, non-partnered teenagers – when they have sex – are less likely to use contraception.<sup>31</sup> In addition, teenagers who date an older (by three or more years) or sexually experienced partner or are in a violent dating relationship are more likely to report higher numbers of sexual partners and are less likely to use contraception.<sup>32,33,34</sup>
- **Substance Use.** Teenagers who report using alcohol, tobacco, or other drugs are more likely to have sex at early ages,<sup>35</sup> have frequent sex, and have more sexual partners, and they are less likely to use contraception.<sup>36</sup>
- **Religiosity.** Among sexually active teenagers, “religiosity” (usually measured by frequency of attendance at services at houses of worship) has sometimes been found to be associated with less contraception use.<sup>37, 38</sup>

For some risk factors (e.g., lack of motivation to avoid pregnancy), a direct causal link to unprotected sex exists. Other risk factors (relating to peer norms, parental expectations, and lack of opportunities to engage in alternative activities) are distally related to teenage pregnancy but nevertheless play a role by shaping the context in which the teenage is deciding to engage in unprotected sex.

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<sup>28</sup> National Campaign to Prevent Teen Pregnancy. (2006). *Teen Pregnancy Prevention: National Teen Pregnancy and Birth Data – General Facts and Stats*. Available online at <http://www.teenpregnancy.org/resources/data/genlfact.asp>.

<sup>29</sup> Buhi, E. R., & Goodson, P. (2007). Predictors of adolescent sexual behavior and intention: A theory-guided systematic review. *Journal of Adolescent Health*, 40, 4–21.

<sup>30</sup> Halpern, C. T., Kaestle, C. E., & Hallfors, D. D. (2006). Perceived physical maturity, age of romantic partner and adolescent risk behavior. *Prevention Science*, 14, 6–15.

<sup>31</sup> Manlove, J., Ryan, S., & Franzetta, K. (2003). Contraceptive use patterns within teens' first sexual relationships. *Perspective on Sexual and Reproductive Health*, 35, 246–255.

<sup>32</sup> Manlove, J., Ryan, S., & Franzetta, K. (2003).

<sup>33</sup> Kaestle, C. E., Mrosky, D. E., & Wiley, D. J. (2002). Sexual intercourse and the age difference between adolescent females and their romantic partners. *Perspectives on Sexual and Reproductive Health*, 34, 304–309.

<sup>34</sup> Howard, D. E., & Wang, M. Q. (2003). Psychological factors associated with adolescent boys' reports of dating violence. *Adolescence*, 38, 1–4.

<sup>35</sup> Cleveland, H. H. (2003). The influence of female and male risk on the occurrence of sexual intercourse within adolescent relationships. *Journal of Research on Adolescence*, 13(1), 81–112.

<sup>36</sup> Kirby, D., Lepore, G., & Ryan, J. (2005).

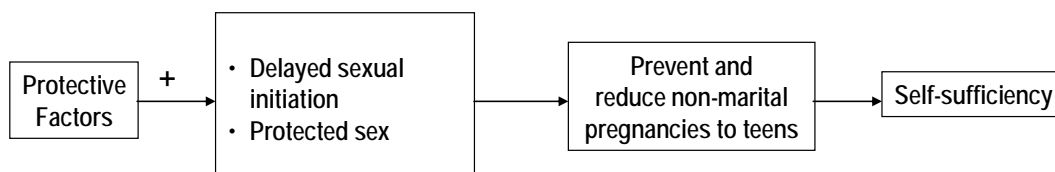
<sup>37</sup> Brewster, K. L., Cooksey, E. C., Guilkey, D. K., & Rindfuss, R. R. (1998). The changing impact of religion on the sexual and contraceptive behavior of adolescent women in the United States. *Journal of Marriage and the Family*, 60(2), 493–504.

<sup>38</sup> National Campaign to Prevent Teen Pregnancy. (2005). *The Association between Parent, Family and Peer Religiosity and Teenagers' Sexual Experience and Contraceptive Use*.

## 2. Protective Factors

Like some risk factors, key protective factors are malleable. *Exhibit III.2* shows how protective factors can increase the likelihood that youth fail to become pregnant, thus improving chances of a successful transition to adulthood.

**Exhibit III.2: Conceptual Model Linking Protective Factors to Sexual Activity, Pregnancy, and Self-Sufficiency**



Key protective factors identified in the literature include the following:

- **Personal Efficacy.** Teenagers who feel that life choices and outcomes are within their control (“internal locus of control”) have lower rates of teenage pregnancy than teenagers with a more “external locus of control.”<sup>39</sup>
- **Parents’ Conservative Attitudes toward Teenage Sex.** In some studies, parents who express conservative attitudes about adolescent sexuality are more likely to have children who delay initiation of intercourse and who have less frequent sex, reduced numbers of sexual partners, and lower rates of pregnancy.<sup>40</sup>
- **Good Parent-Child Communication.** Teenagers who report having good lines of communication with their parents have less frequent sex and have fewer sexual partners.<sup>41</sup>
- **Parental Monitoring.** Parents who monitor their children’s activities and whereabouts are more likely to have teenagers who report later initiation of sex.<sup>42</sup>
- **Religion.** Teenagers who attend Catholic school initiate sex, on average, at later ages. Religiosity has been found to be associated with later initiation of sex, decreased frequency of sex, and fewer sexual partners.<sup>43</sup>
- **School Engagement.** Teenagers who are engaged in school have, on average, lower rates of sexual initiation, decreased frequency of sex, and increased use of contraception.<sup>44</sup>

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<sup>39</sup> Buhi, E. R., & Goodson, P. (2007).

<sup>40</sup> Buhi, E. R., & Goodson, P. (2007).

<sup>41</sup> National Campaign to Prevent Teen Pregnancy. (2006). *Teen Pregnancy Prevention: National Teen Pregnancy and Birth Data – General Facts and Stats*.

<sup>42</sup> Henderson, M., Wight, D., Raab, G., Abraham, C., Buston, K., Hart, G., et al. (2002).

<sup>43</sup> National Campaign to Prevent Teen Pregnancy. (2005). *The Association between Parent, Family and Peer Religiosity and Teenagers’ Sexual Experience and Contraceptive Use*.

<sup>44</sup> Kirby, D., Lepore, G., & Ryan, J. (2005).

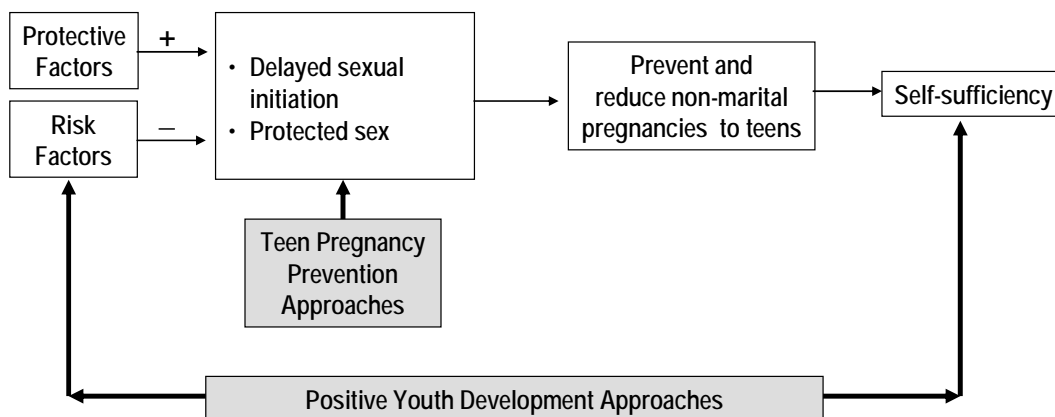
- **Involvement in Sports.** Teenagers who are involved in sports have, on average, lower rates of sexual initiation, decreased frequency of sex, and increased use of contraception.<sup>45</sup>
- **Contracepting Peers.** Teenagers who report that their friends support the use of, and actually use, condoms are more likely to use them themselves.<sup>46</sup>
- **Achieving Peers.** Teenagers whose friends are high achievers, earn good grades, disapprove of sexual activity,<sup>47</sup> and display other non-risky behaviors initiate sex, on average, later than adolescents whose peer groups exhibit risky behavior, like smoking cigarettes.<sup>48</sup>
- **Access to Family Planning Services.** Teenagers who live in communities with access to family planning clinics are less likely to experience a pregnancy.<sup>49</sup>

These risk and protective factors are most often and most strongly implicated in the causal chain leading to teenage pregnancy. PYD and TPP interventions targeting these factors can help young people avoid risky behaviors and outcomes and support healthy development and transition to adulthood. The following subsection describes such interventions.

## B. Interventions Aimed at Reducing Teenage Pregnancy

Programs seeking to prevent teenage pregnancy – either as the ultimate outcome or as a means of promoting healthy decisions among youth in general and fostering trajectories toward self-sufficiency – typically adopt one of two program approaches: TPP or PYD, as shown in the shaded boxes in *Exhibit III.3*.

**Exhibit III.3: Conceptual Model Illustrating Two Approaches to Teen Pregnancy Prevention**



<sup>45</sup> Kirby, D., Lepore, G., & Ryan, J. (2005).

<sup>46</sup> Kirby, D., Lepore, G., & Ryan, J. (2005).

<sup>47</sup> Buhi, E. R., & Goodson, P. (2007).

<sup>48</sup> Wight, D., Williamson, L., & Henderson, M. (2006).

<sup>49</sup> Kirby, D., Lepore, G., & Ryan, J. (2005).

Programs adopting a TPP approach seek to prevent teenage pregnancy by encouraging youth to delay engaging in sexual activity, to use contraception correctly and consistently, or both. In other words, they seek to address sex-related antecedents of teenage pregnancy and self-sufficiency.

PYD programs typically have a broader goal than pregnancy prevention, though this goal is often one of many program goals. Generally, PYD programs aim to help teenagers make healthy decisions around a range of issues, including sexual activity, substance use, and academics. PYD approaches can target the risk and protective factors of teenage pregnancy and self-sufficiency as well as seek to foster self-sufficiency directly by facilitating goal-setting and providing service learning opportunities and actual job preparation skills.

This subsection describes the theories behind these two approaches and offers examples of programs grounded in these theories. To the extent possible, it also includes a discussion of evaluations of the effects of these programs in reducing pregnancy and related risk factors among teenagers.

## **1. Teenage Pregnancy Prevention Approaches**

Programs addressing the goal of preventing teenage pregnancy seek to reduce the number of youth engaged in unprotected sex by encouraging them to delay engaging in sexual activity, to use contraception correctly and consistently, or both. Most of these programs are based on social behavior theory: they seek to change knowledge and attitudes about risky behaviors on the premise that young people will avoid activities in which they understand the risks to outweigh the benefits.<sup>50</sup>

TPP interventions fall into two broad categories: (1) curriculum-based sex education programs provided to groups and offered through schools or community organizations and (2) clinic-based reproductive health services that most often provide one-on-one care. The following subsections describe types of interventions within these two categories and include examples of results from evaluated programs.

### **a. Curriculum-Based Sex Education Programs**

Most schools, and many community-based health and youth organizations, offer sex education programs. Common to nearly all of these programs is education on how pregnancy occurs and how STDs are transmitted. Where these programs diverge is in their message for how to prevent pregnancy and STDs.<sup>51</sup> Curricula range from promoting abstinence until marriage, without instruction about condoms or other forms of contraception, to presenting abstinence as one behavioral option along with guidance on effective contraception. The following discussion summarizes findings from evaluations of these two types of curriculum-based programs.

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<sup>50</sup> Eisen, M., Pallito, C., Bradner, C., & Bolshun, N. (2000). *Teen Risk-Taking: Promising Prevention Programs and Approaches*. Washington, DC: The Urban Institute.

<sup>51</sup> Landry, D. J., Kaeser, L., & Richards, C. L. (1999). Abstinence promotion and the provision of information about contraception in public school district sexuality education policies. *Family Planning Perspectives*, 31(6), 280–286.

However, a few caveats are in order. There are many curriculum-based TPP programs, but only a small proportion has been evaluated, and many of these studies lack the scientific rigor necessary to draw conclusions about program effectiveness. Serious flaws include lack of an adequate comparison or a control group, reliance on one-time post-intervention surveys rather than on longer-term follow-ups, and focus on attitudes rather than on behavioral outcomes. **Box 2** demonstrates the challenges involved in determining what would have happened in the absence of the program. All of the limitations noted stem largely from limited resources for evaluation; concern over asking youth sensitive questions relating to their sexuality (especially, their sexual behavior); and practical, logistical, and ethical challenges in implementing a scientifically sound experimental or quasi-experimental evaluation.<sup>52</sup>

## Box 2: The Challenge of Making Causal Attributions

The key methodological challenge in program evaluation research lies in determining what would have happened in the absence of the program.

*Non-experimental* research designs are often used to evaluate educational interventions such as TPP programs. These evaluations typically use pretest and posttest methodologies to capture changes in knowledge (e.g., about STDs), attitudes (e.g., toward risky behavior), and intentions (e.g., remaining abstinent until marriage, using contraception consistently). However, without a comparison group, whether pretest and posttest changes experienced by program participants would have happened anyway is unclear. Consider, for example, “maturation effects”—that is, the natural improvement or decline in outcomes over time. Youth are more likely to engage in sexual activity as they grow older. As a result, pretest and posttest designs might show an increase over time in sexual activity among youth participating in a TPP program, leading to the (possibly erroneous) conclusion that the program failed to work (or worse, that it led to increases in sexual activity).

The most rigorous evaluation design that controls for these and other confounding factors is an *experimental* design—the “gold standard”—which involves randomly assigning subjects either to the program group or to a control group. Because random assignment guarantees that the two groups are identical, on average, at the outset, post-program differences in outcomes can be attributed to the program. However, experimental evaluations are relatively expensive, hard to administer and maintain, and often perceived as unethical because they deny the intervention to the control group.

As a result, many evaluated programs adopt a *quasi-experimental* design in which a group “similar enough” to the program group is identified and surveyed. Key to a scientifically sound quasi-experimental design is the adequacy of the comparison group. Because the program and comparison groups are not identical at the outset of the evaluation (as they are in experimental designs), one cannot be completely confident that differences in post-program outcomes across the two groups are a result of the program. For example, quasi-experimental TPP evaluations typically use students in other classes—either in the same or a different (but similar) school or after-school setting—as the comparison group.

That said, the evaluation literature reveals that the most effective curriculum-based programs—whether promoting abstinence only or a combined approach—focus on changing the risk and protective factors that influence sexual behavior. A recent review of experimental and quasi-

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<sup>52</sup> Alan Guttmacher Institute. (1994). *Sex and America's Teenagers*. New York, NY: Alan Guttmacher Institute.

experimental program evaluations found that the interventions that influence antecedents to teenage pregnancy employ the following strategies:<sup>53</sup>

- Focus on clear health goals;
- Address specific behaviors leading to these health goals (e.g., abstaining from sex or using condoms or other contraceptives), give clear messages about these behaviors, and develop the skills to achieve these goals;
- Cover topics in a logical sequence;
- Ensure the curriculum is appropriate for students' culture, age, and sexual experience;
- Employ teaching methods that actively involve the participants and encourage personalization of the presented materials;
- Offer multiple activities to address many of the targeted risk and protective factors; and
- Create a safe social environment for youth to become engaged.

Research also underscores the importance of intensive interventions. Programs that last only a few hours, as opposed to ones that last 14 or more hours, are less likely to prove effective in meeting program goals.<sup>54</sup>

#### i) Abstinence-Only Programs

Over the past decade, the content of classroom-based curricula has increasingly focused on abstinence, driven, in large part, by the 1996 welfare reform law – which authorized \$250 million over five years in abstinence-only program funding under Title V, Section 510 of the Social Security Act – and by increased funding (more than \$100 million since 2001) for the Community-Based Abstinence Education (CBAE) program. These programs are built on the theory that abstinence instruction will delay the onset of sexual intercourse, thus reducing exposure to pregnancy and disease.<sup>55</sup> The law spells out eight criteria for funded programs, shown in **Box 3**, one of which is that sex within the context of marriage is the expected standard. Consequently, these federally funded programs include no information on the use of condoms and other contraceptives – even as a means of preventing disease. To the extent that these topics are addressed in abstinence-until-marriage programs, it is usually to emphasize failure rates.

However, not all abstinence-only programs are funded by Section 510 or CBAE dollars and, thus, are not required to focus solely on the abstinence-until-marriage message. As a result, abstinence-only programs fall along a continuum. Some allow an objective discussion on the

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<sup>53</sup> Kirby, D., Laris, B. A., & Roller, L. (2006). *Sex and HIV Education Programs for Youth: Their Impact and Important Characteristics*. Scotts Valley, CA: ETR Associates.

<sup>54</sup> Kirby, D. (2001). *Emerging Answers: Research Findings on Programs to Reduce Teen Pregnancy*. Washington, DC: National Campaign to Prevent Teen Pregnancy.

<sup>55</sup> Borawski, E. A., Trapl, E. S., Lovegreen, L. D., Colabianchi, N., & Block, T. (2005). Effectiveness of abstinence-only intervention in middle school teens. *American Journal of Health Behavior*, 29(5), 423–434.



use of condoms or other contraceptives. Some promote abstinence until marriage, while others focus on abstaining until youth are older. Some emphasize “character education” and basic values more than sexual behavior.<sup>56</sup>

### Box 3: Federally-Funded Abstinence Education Program Requirements

All federally funded abstinence education programs must adhere to the “A through H” definition of abstinence education provided in Section 510(a)(b) of Title V of the Social Security Act, which defines an abstinence education as “an educational or motivational program that:

- A. Has as its exclusive purpose, teaching the social, psychological, and health gains to be realized by abstaining from sexual activity;
- B. Teaches abstinence from sexual activity outside marriage as the expected standard for all school age children;
- C. Teaches that abstinence from sexual activity is the only certain way to avoid out-of-wedlock pregnancy, sexually transmitted diseases, and other associated health problems;
- D. Teaches that a mutually faithful monogamous relationship in context of marriage is the expected standard of human sexual activity;
- E. Teaches that sexual activity outside of the context of marriage is likely to have harmful psychological and physical effects;
- F. Teaches that bearing children out-of-wedlock is likely to have harmful consequences for the child, the child's parents, and society;
- G. Teaches young people how to reject sexual advances and how alcohol and drug use increases vulnerability to sexual advances; and
- H. Teaches the importance of attaining self-sufficiency before engaging in sexual activity.”

*Source: Fact Sheet: Section 510 State Abstinence Education Program. Family and Youth Services Bureau, Administration for Children and Families, U.S. Department of Health and Human Services. Available online at <http://www.acf.hhs.gov/programs/fysb/content/abstinence/factsheet.htm>.*

The research base on abstinence-only programs is relatively new and small, but it is growing. A 2006 review of 83 evaluations of curriculum-based sex and HIV education programs for adolescents or young adults ages 9 to 24 published since 1990 identified six abstinence-only education programs that met the authors’ criteria for scientific rigor:<sup>57</sup>

- Reasonably strong experimental or quasi-experimental design and both pretest and posttest data collection
- Sample size of at least 100
- Measured program impact on the following:

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<sup>56</sup> Kirby, D., Laris, B. A., & Roller, L. (2006).

<sup>57</sup> Kirby, D., Laris, B. A., & Roller, L. (2006).

- One or more sexual behaviors (e.g., initiation of sex, frequency of sex, number of partners)
- Use of condoms or other contraceptives
- Sexual risk (e.g., frequency of unprotected sex)
- Pregnancy rates, birthrates, and STD rates
- Only program impacts significant at the .05 level reported

These six evaluations found mixed results.<sup>58</sup>

- **Initiation of Sex.** Of three evaluations that assessed this outcome, none delayed (nor hastened) first sexual encounters.
- **Frequency of Sex.** Of four evaluations that assessed this outcome, two found a reduced frequency, one found an *increased* frequency, and one found no effect.
- **Number of Sexual Partners.** Of two evaluations that assessed this outcome, one found a reduction in the number of sexual partners, and one found no effect.
- **Condom Use.** Of three evaluations that assessed this outcome, one increased condom use, and two found no effect.
- **Other Contraceptive Use.** Only one evaluation assessed contraceptive use other than condoms (e.g., birth control pills) and found that use increased.
- **Sexual Risk-Taking.** Of three evaluations that assessed sexual risk-taking,<sup>59</sup> one found a reduction in risk, and two found no effect.

Another 2006 review (Scher et al.) examined programs with respect to three specific outcomes: delaying first intercourse, reducing intercourse without using contraception, and reducing the likelihood of pregnancy or creating a pregnancy among teenagers. This review used a stricter criterion for including studies: the evaluation must use a randomized controlled trial. In addition, the primary intervention goal was to reduce sexual activity, pregnancy risks, or both; the control condition was “usual services” or “no services;” the impact estimates were available for one of the three target outcomes; and sample retention was at least 60 percent of the original baseline.<sup>60</sup>

Only three abstinence-focused programs were included in the study; none occurred within the last decade, and only one could be considered “abstinence only.”<sup>61</sup> None of the evaluations

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<sup>58</sup> Kirby, D., Laris, B. A., & Roller, L. (2006).

<sup>59</sup> The assessment of sexual risk-taking was typically a composite measure that included behaviors such as frequency of sexual activity, contraceptive use, and number of partners.

<sup>60</sup> Other criteria included target population of school-age youth 11 to 18; the intervention setting was the U.S. or another developed nation with relatively high rates of unplanned teenage pregnancy (e.g., Canada); data for the study was collected in a manner that causes no concern of systematic reporting bias; and the study reports estimates for the full follow-up sample.

<sup>61</sup> Of these three studies, two were also included in the 2006 Kirby review (McMaster Teen Program and ENABL). Project Taking Charge was excluded.

found statistically significant differences between program and control groups in sexual experience rates (i.e., ever had vaginal intercourse) or pregnancy risk rates (i.e., unprotected sexual intercourse). In terms of pregnancy rates, participants in one program were significantly *more* likely to experience or cause a pregnancy.<sup>62</sup>

The largest experimental evaluation of abstinence education programs, conducted by Mathematica Policy Research, is still in progress. It is assessing the impact of the Section 510 abstinence programs using an experimental design in which students were randomly assigned to a group receiving the abstinence-only program or to a control group that received the program currently available in the school or community. The first-year impact findings of four programs that target elementary school or middle school students or both show program group members were significantly more likely to have views supportive of abstinence and unsupportive of teenage sex, to be less likely to date, and to perceive the general and personal consequences of teenage and non-marital sex. Some findings also suggest that program group members were more likely to expect to abstain from sex in the future.<sup>63</sup> No significant differences occurred in friends' support of abstinence, peer pressure to have sex, self concept, refusal skills, communication with parents, and expectation to abstain as an unmarried teenager.<sup>64</sup>

**Box 4** describes one abstinence program and the evaluation findings in more detail. As is the case with many of the abstinence evaluations, the results highlight the ability of these programs to change participants' attitudes and knowledge while finding less evidence of the intervention's effect on participant behavior.

#### **Box 4: *For Keeps*, an abstinence-until-marriage curriculum<sup>65</sup>**

*Program Setting:* five urban and two suburban middle schools in the Midwest.

*Curriculum Content:* Classroom-based curriculum that emphasizes abstinence until marriage. Participants are taught about the benefits of abstinence and the physical, emotional, and economic consequences of early sexual activity. The curriculum emphasizes character development and presents virginity as a gift that is shared in marriage at a time when individuals are more prepared for sexual relationships. It also emphasizes the consequences of early sexual activity (e.g., how teenage pregnancy and disease can interfere with life goals, risks of STDs). The curriculum reinforces that condoms are not 100 percent effective in preventing pregnancy and disease. However, more emphasis is placed on how condoms and other contraceptives fail to protect adolescents from the emotional consequences of sexual activity.

*Methodology:* The evaluation employed a quasi-experimental design. About 3,000 seventh and eighth graders in

<sup>62</sup> Scher, L., Maynard, R., & Stagner, M. (2006). *Interventions Intended to Reduce Pregnancy-Related Outcomes Among Adolescents*. Last updated August 23. In process.

<sup>63</sup> For youth who have had sex, the measure refers to expectations over the next year. For youth who have refrained from having sex, the measure is expectation to abstain while an unmarried teenager. Difference in means is significant at the less rigorous level of <0.10.

<sup>64</sup> Maynard, R., Trenholm, C., Devaney, B., Johnson, A., Clark, M., Homrighausen, J., & Kalay, E. (2005). *First-Year Impacts of Four Title V, Section 510 Abstinence Education Programs*. Princeton, NJ: Mathematica Policy Research. Available online at <http://www.mathematica-mpr.com/publications/PDFs/firstyearabstinence.pdf>.

<sup>65</sup> Borawski, E. A., Trapl, E. S., Lovegreen, L. D., Colabianchi, N., & Block, T. (2005). Effectiveness of abstinence-only intervention in middle school teens. *American Journal of Health Behavior*, 29(5), 423-434.

seven schools received either *For Keeps* or a curriculum that focused on abstinence but included a discussion of contraception. Students filled out a pretest before the intervention and a posttest 16 to 25 weeks following the intervention.

*Results:* The evaluation found statistically significant differences in the expected direction between the treatment and comparison groups in terms of participants' HIV and STD knowledge, personal beliefs about the importance of abstinence, and intentions to remain abstinent in the near future when asked five months after the program ended. However, the evaluation found that the intervention failed to have statistically significant impacts on students' behavior. For example, the program failed to reduce significantly the likelihood of sexual activity among participants.

Although the criteria for federally funded abstinence programs help provide a definition of abstinence-only education, curriculum content and focus do differ from program to program. For example, the way in which programs address the issue of contraceptive methods varies. As noted above, most abstinence-only curricula make no mention of contraceptives, and if they do, it is primarily in reference to failure rates. However, this approach is not universal. The *Making a Difference* abstinence education program underscores the variation in curriculum content among these interventions. *Making a Difference* facilitators are instructed to avoid denigrating condom use if raised by students and to praise students' comments that recommend contraception as a way to prevent HIV and pregnancy. One evaluation using a randomized control trial to evaluate intervention effectiveness found that a lower percentage of individuals receiving abstinence education reported having sexual intercourse in the past three months (13 percent) than those in the control group (22 percent). However, the difference in the two groups' behavior was not statistically significant at the 6-month and 12-month follow-ups.<sup>66</sup>

## ii) Comprehensive Sex Education

Substantial variation also exists in the approaches among comprehensive sex education programs. Typically, comprehensive sex education curricula promote abstinence as the best option for teenagers, and many offer skills for negotiating relationships and avoiding pressure to have sex. They also offer information about forms of contraception that prevent STDs and unwanted pregnancies and about their relative effectiveness. Individual programs vary in the emphasis they place on pregnancy versus STD prevention.<sup>67</sup>

A substantial body of literature examines the effectiveness of comprehensive sex education in preventing teenage pregnancy. For example, the 2006 review by Kirby and colleagues identified evaluations of 50 comprehensive sex and HIV education programs in the U.S. that met the scientific criteria described above.<sup>68</sup> Among their findings are the following:

- **Initiation of Sex.** Of the 27 evaluations that measured initiation of sex, 14 (52 percent) found delayed initiation, 12 (44 percent) found no statistically significant effect, and 1 (4 percent) found *hastened* initiation of sex.

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<sup>66</sup> Jemmott, III, J. B., Jemmott, L. S., & Fong, G. T. (1998). Abstinence and safer sex HIV risk-reduction interventions for African American adolescents. *Journal of the American Medical Association*, 279(19), 1529-1536.

<sup>67</sup> Solomon-Fears, C. (2004). *Reducing Teen Pregnancy: Adolescent Family Life and Abstinence Education Programs*. Congressional Research Service. The Library of Congress, #RS20873.

<sup>68</sup> Kirby, D., Laris, B. A., & Roller, L. (2006).

- **Frequency of Sex.** Of 20 evaluations that measured frequency of sex, 5 (25 percent) found reductions in the frequency of sex, 14 (70 percent) found no significant effect, and 1 (5 percent) found *increased* frequency.
- **Number of Sexual Partners.** Of 24 evaluations that measured number of sexual partners, 8 (33 percent) found significant reductions in the number of partners, 15 (63 percent) found no significant effect, and 1 (4 percent) found *increased* the number of sexual partners.
- **Condom Use.** Of 34 evaluations that measured condom use, half found increased use, and half found no significant effect. None of these evaluations found a decreased use of condoms.
- **Other Contraceptive Use.** Of 10 evaluations examining contraceptive use other than condom use, 4 (40 percent) found significant increases in use, 5 (50 percent) found no effect, and 1 found *decreased* use.
- **Sexual Risk-Taking.**<sup>69</sup> Of 20 evaluations examining sexual risk-taking, 13 programs (65 percent) found reduced risk, and 9 (35 percent) found no effect. None of these evaluations found an increased risk.

The 2006 review (Scher et al.) summarized findings for 18 sex education programs with a contraception component.<sup>70</sup> As with abstinence programs, the review focused on three specific outcomes and used strict criteria for study inclusion.

- **Sexual Experience.** Twelve evaluations examined sexual experience rates; no statistically significant differences existed between the program and control groups.
- **Risk Behaviors.** Sixteen programs examined risky behavior (unprotected sex). Five found statistically significant differences between the program and control groups; in four of these programs, the program group was significantly less likely to engage in risky sexual behavior.<sup>71</sup>
- **Pregnancy Rates.** With regard to pregnancy rates, none of the five programs included in the review had a significant impact.

**Box 5** gives an example of a comprehensive sex curriculum with demonstrated effects on teenage sexual behavior.<sup>72</sup> The effects of this program are especially noteworthy given a

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<sup>69</sup> The assessment of sexual risk-taking was typically a composite measure that included behaviors such as frequency of sexual activity, contraceptive use, and number of partners.

<sup>70</sup> Scher, L., Maynard, R., & Stagner, M. (2006).

<sup>71</sup> The level of statistical significance was <0.01 for all studies, with the exception of the study in which the control group was significantly less likely to engage in risky behavior (significance of <0.10).

<sup>72</sup> Kirby, D., Barth, R. P., Leland, N., & Fetro, J. V. (1991). Reducing the risk: Impact of a new curriculum on sexual risk-taking. *Family Planning Perspectives*, 23(6), 253–263.

subsequent evaluation showing that the program was able to replicate the positive behavioral effects in a different demographic setting.<sup>73</sup>

**Box 5: *Reducing the Risk*, a comprehensive sex education curriculum<sup>74</sup>**

*Program Setting.* 13 California high schools.

*Curriculum Content.* A classroom-based sex education curriculum delivered in 15 sessions to predominantly 9<sup>th</sup> and 10<sup>th</sup> graders. The curriculum focuses on avoiding or changing high-risk behavior by educating students about sexuality, reproductive health, and contraception; improving their decision-making and communication skills; and empowering students to use these skills to avoid sex, use contraception effectively, or both.

*Methodology.* A quasi-experimental evaluation compared outcomes of 758 high school students assigned, by class, to either a treatment or a comparison group.

*Results.* Researchers found statistically significant increases in participants' knowledge of abstinence and contraception. They also found a statistically significant difference between the percentage of treatment and comparison group members who initiated intercourse after 18 months (29 percent and 39 percent, respectively) among the 63 percent of students who had never had sex at baseline. For students who did become sexually active, the treatment group members were significantly more likely to use contraception consistently than comparison group students at the 18-month follow-up. However, for students who were already sexually active at baseline and for high-risk youth,<sup>75</sup> no differences in contraceptive use existed between treatment and comparison groups after 18 months.

*Reducing the Risk* is relatively rare in that it is one of the few programs with demonstrable effects on teenage sexual behavior to have been replicated effectively. Consider, in contrast, the example of the *Postponing Sexual Involvement* program. At one point, one of the most widely implemented middle school curricula of its kind,<sup>76</sup> the program seeks to increase postponement of sexual involvement through student-led classes on resisting peer pressure. A quasi-experimental evaluation found that *Postponing Sexual Involvement* program participants who had not previously had sexual intercourse were more likely than similar students in a comparison group to postpone sexual involvement.<sup>77</sup>

However, the evaluation of a subsequent effort to replicate the program failed to document significant positive changes in participants' sexual behavior. Although the researchers noted that the study did not have a "strict no-treatment control group" and suffered from several other limitations, they suggested it was unlikely there were program effects the evaluation failed to capture. Instead, they suggest that program implementation issues accounted for the

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<sup>73</sup> Hubbard, B. M., Giese, M. L., & Rainey, J. (1998). A replication of reducing the risk, a theory-based sexuality curriculum for adolescents. *Journal of School Health*, 68(6), 243–247.

<sup>74</sup> Kirby, D., Barth, R. P., Leland, N., & Fetro, J. V. (1991).

<sup>75</sup> The researchers defined high risk to include students who met one of the following criteria: did not live with both parents, mother did not finish high school, received mostly Ds or lower in high school, drank alcohol at least once in the preceding month (and normally drank five or more drinks on each occasion).

<sup>76</sup> Kirby D., Korpi, M., Barth, R. P., & Cagampang, H. H. (1997). The impact of the *Postponing Sexual Involvement* curriculum among youths in California. *Family Planning Perspectives*, 29(1), 100–108.

<sup>77</sup> Howard, M., & McCabe, J. B. (1990). Helping teenagers postpone sexual involvement. *Family Planning Perspectives*, 22(1), 21–26.

difference. Furthermore, the authors suggested that more recent research highlights the need for a more intensive, longer-term intervention than *Postponing Sexual Involvement* offers.<sup>78</sup>

#### *b. Reproductive Health and Family Planning Services*

In addition to curriculum-based interventions, reproductive health and family planning services represent another approach to helping teenagers avoid the negative consequences of sexual activity. Community-based family planning clinics and school-based health centers can provide physical and mental health care, health information, contraception education and supplies, and education on ways to avoid sexual risk-taking (including abstinence). These services aim to reduce unprotected sexual activity and thus reduce teenage pregnancy.

#### *iii) Family Planning Clinics*

Community-based family planning clinics provide an array of reproductive health services to both teenagers and adults. Services are typically provided through one-on-one patient-provider interactions. Many of these agencies conduct outreach and offer sex education programs to teenagers, including offering services in a group setting (e.g., mentoring, group counseling).

In 2001, nearly 7,700 publicly funded family planning clinics existed across the country. Almost one in three of the 7 million clients they served were teenagers.<sup>79</sup> A review of agencies operating publicly funded clinics found that two-thirds had at least one program dedicated to serving teenagers. More than 40 percent sponsored programs that encouraged delay of sexual activity (i.e., promoted abstinence).<sup>80</sup>

A 2006 report reviewing the availability of contraceptive services in states found mixed results for Hawaii compared with other states. Nationally, the study ranked Hawaii 47<sup>th</sup> in terms of the availability of contraceptive services. The report noted that Hawaii's 33 publicly funded family planning clinics served more than 4,000 sexually active teenagers – 27 percent of the teenagers in need.<sup>81</sup>

Few studies have evaluated rigorously the effect of publicly funded family planning services on adolescent pregnancy and birthrates. Some researchers have used national data sets to estimate the effect of family planning services on how many teenage pregnancies and births have been averted by making assumptions about teenage behavior in the absence of these services. For example, one study, using the National Survey of Family Growth, estimated that public family planning clinics prevent up to 377,000 teenage pregnancies annually in the U.S.<sup>82</sup> Additionally,

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<sup>78</sup> Kirby D., Korpi, M., Barth, R. P., & Cagampang, H. H. (1997).

<sup>79</sup> Frost, J. J. (2004). The availability and use of publicly funded family planning clinics: U.S. trends 1994–2001. *Perspectives in Sexual and Reproductive Health*, 36(5), 206–215.

<sup>80</sup> Frost, J. J., & Bolzan, M. (1997) The provision of public-sector services by family planning agencies in 1995. *Perspectives on Sexual and Reproductive Health*, 29(1), 6–14.

<sup>81</sup> Women need contraceptive services and supplies if they are sexually active (i.e., ever had sexual intercourse); they are fecund (i.e., neither partner is sterilized); and, during at least some part of the year, they are neither intentionally pregnant nor trying to become pregnant. Guttmacher Institute. (2006). *Contraception Counts: Hawaii State Profile*. Available online at [http://www.guttmacher.org/pubs/state\\_data/states/hawaii.pdf](http://www.guttmacher.org/pubs/state_data/states/hawaii.pdf).

<sup>82</sup> Forrest, J. D., & Samara, R. (1996). Impact of publicly funded contraceptive services on unintended pregnancies and implications for Medicaid expenditures. *Family Planning Perspectives*, 28(5), 188–195.

research indicates that, although the duration of the effects of these services on teenage pregnancy rates often are limited, clinics can increase contraceptive use among teenagers if they place a primary focus on reproductive health, discussing teenagers' sexual and contraceptive behavior; deliver a clear message promoting abstinence and effective and consistent use of contraception; and provide high quality educational materials.<sup>83</sup> **Box 6** describes one clinic approach found to be effective.

#### **Box 6: Emphasizing psychosocial needs of adolescent patients in family planning clinic protocols<sup>84</sup>**

*Program Setting:* Six non-metropolitan family planning clinics.

*Intervention:* The intervention developed specific clinic protocols to serve clients under 18 years of age. Protocol content reflected an attempt to shift the focus of family planning services from medical needs to a psychosocial model that recognized teenagers' need for information, social support, and counseling. The protocols mapped out a total service delivery system from initial contact through follow-up. The intervention involved:

- One-on-one reproductive health care counseling;
- Visual aids;
- Initial two-part visit (the first part focusing on counseling and education, the second part including the medical examination and contraception prescription);
- Six-week follow-up appointment;
- Encouragement to bring family members, partners, or both;
- Specific emphasis on resisting peer pressures; and
- Special staff training on adolescent care and psychosocial development.

*Methodology:* Researchers used a quasi-experimental evaluation to explore the program's effectiveness in three areas: (1) patient knowledge, (2) patient feelings toward the clinic, and (3) patient's family planning experiences (i.e., contraceptive use, clinic attendance, and unintended pregnancy). The six clinics were non-randomly assigned to either a treatment or a comparison group (three clinics each), the latter delivering the normal family planning services.<sup>85</sup> Researchers measured outcomes for 1,261 teenagers at baseline and six months following their first clinic visit.

*Results:* The evaluation found statistically significant effects on a number of measures related to contraceptive use. Among treatment group members using contraceptives at baseline, 92 percent were still using their initial method at the six-month follow-up, a statistically significant difference from the 85 percent in the comparison group. Evaluators also found statistically significant differences between the ease with which treatment and comparison group members dealt with contraceptive method-related problems. On a scale of 1 (greatest ease) to 4 (greatest difficulty), treatment group members reported an average of 1.7, compared with a score of 2.0 among the comparison group. Although

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<sup>83</sup> Kirby, D. (2001).

<sup>84</sup> Winter, L., & Breckenmaker, L. C. (1991). Tailoring family planning services to the needs of adolescents. *Family Planning Perspectives*, 23(1), 24-30.

<sup>85</sup> Although the clinics were not randomly assigned, researchers attempted to identify treatment and control sites with similar community characteristics (e.g., racial and age distribution, income, percentage of families below the poverty level). In addition, all six clinics used the same staffing patterns.



researchers found that fewer treatment group members became pregnant than comparison group members, the results had a lower level of statistical significance.<sup>86</sup>

#### iv) School-Based Health Centers

School-based health centers (SBHC) generally provide a combination of preventive health care and psychosocial services (e.g., education, counseling, and social support). In addition, they often facilitate school- or community-based health promotion initiatives.<sup>87</sup> Although most schools have some amount of onsite health care (e.g., nurse's office), only a small proportion of public schools (2 percent) had a full health center in 2001. The majority of public schools with an SBHC – 77 percent – served middle school- or high school-age students or both; the remainder were associated with elementary schools. SBHCs, located predominantly in schools in low-income neighborhoods, offer comprehensive health and mental health care services delivered by physicians or nurses. Most of the centers serving middle school- and high school-age youth reported providing some type of reproductive health care services: 76 percent provided pregnancy tests, 64 percent provided birth control counseling, 62 percent delivered HIV/AIDS counseling, 60 percent offered onsite treatment for STDs, and 24 percent provided contraceptives onsite.<sup>88</sup>

Limited evidence exists as to the effectiveness of SBHCs in preventing teenage pregnancies and births. Only a limited number of studies have explored these effects (fewer than 10 in peer-reviewed journals since 1980), and none used an experimental design. Findings have been mixed, in large part due to the difficulty of evaluating this type of intervention.<sup>89</sup> **Box 7** outlines an SBHC program.

#### Box 7: School-Based Adolescent Health Care Program<sup>90</sup>

*Program Setting:* Health centers established by the program in 24 urban schools across the U.S. in 1987 to serve youth with substantial unmet health care needs.

*Intervention:* Centers provided comprehensive primary health care and mental health care services, including physicals, immunizations, lab work, treatment and prevention of STDs or referrals to appropriate providers, and health education. Some centers provided contraception; the others referred students to offsite family planning facilities. On average, students visited the centers twice annually.

*Methodology:* Researchers did not use an experimental or quasi-experimental design to evaluate this initiative. The evaluation compared outcomes from participants to a national sample of urban youth (controlling for observed differences). Additionally, the evaluation compared outcomes of students within the sample based on differences in

<sup>86</sup> The p-value was >.05 but <.10.

<sup>87</sup> Guernsey, B., & Pastore, D. (1996). Comprehensive school-based health centers: Implementing the model. *Adolescent Medicine: STAR*, 7, 181-196.

<sup>88</sup> School-Based Health Centers: Scope of Services, fact sheet, National Assembly on School-Based Health Care, accessed on November 21, 2006, at <http://nasbhc.org/EQ/2001census/scope1.pdf>.

<sup>89</sup> Kirby, D. (2001).

<sup>90</sup> Kisker, E. E., & Brown, R. S. (1996). Do school-based health centers improve adolescents' access to health care, health status, and risk-taking behavior? *Journal of Adolescent Health*, 18, 335-343.

SBHC program characteristics. The evaluation was based on results from 19 of the schools.

*Results:* The study found that SBHCs improved students' access to health care and health knowledge. However, estimated effects on health status and risk-taking behavior were inconsistent. Students in center-based schools were less likely to have initiated sex but also were less likely to have used an effective method of contraception at last sexual intercourse. There were no effects on pregnancy rates, incidence of sex during the previous month, condom use during last intercourse, or consistent birth control use during the previous month. Overall, effects were too small to be detected consistently.

A 1986 quasi-experimental evaluation of a school-based pregnancy prevention effort in the Baltimore school system highlighted some of the difficulties in evaluating the effectiveness of SBHCs. The program provided teenagers with sexuality and contraceptive education, counseling, and medical and contraceptive services. Among individuals in the treatment group school, evaluators found greater increases in knowledge of contraceptives and risks of pregnancy. The research also found a delay in the initiation of sex and increased use of contraceptives within the intervention schools. However, the researchers underscored the methodological limitations of the study. In particular, they noted (1) high levels of student movement in and out of individual schools (e.g., graduation, student transfers), (2) difficulty in collecting data reflecting the students' pre- and post-intervention behavior, and (3) difficulty in making comparisons across schools because of differences in populations served.<sup>91</sup>

Finally, another evaluation suggested a link between SBHCs and pregnancy reductions. A pregnancy prevention initiative in South Carolina included a comprehensive school-based clinic in which the school nurse provided contraceptives. An evaluation found a decline of the teenage pregnancy rate in the intervention area. However, the provision of contraceptives at the clinic ended at the behest of state legislators.<sup>92</sup>

## **2. Positive Youth Development Approaches**

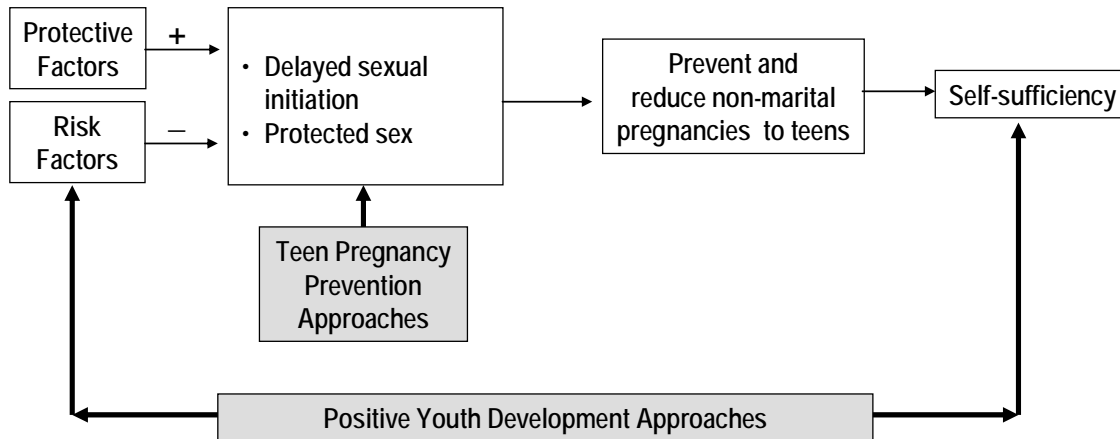
PYD programs typically have a broader goal than pregnancy prevention, although this goal might be one of many program goals. Programs generally aim to help teenagers make healthy decisions around a range of issues, including substance use, sexual activity, and academics. As *Exhibit III.4* shows, PYD programs target the risk and protective factors associated with teenage pregnancy. PYD programs also seek to foster self-sufficiency directly. The intersection of TPP and PYD approaches is reinforced by the theoretical underpinnings of PYD.

### **Exhibit III.4: Conceptual Model Illustrating Two Approaches to Teenage Pregnancy Prevention**

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<sup>91</sup> Zabin, L. S., Hirsch, M. B., Smith, E. A., Streett, R., & Hardy, J. B. (1986). Evaluation of a pregnancy prevention program for urban teenagers. *Family Planning Perspectives*, 18(3), 119-126.

<sup>92</sup> Koo, H. P., Dunteman, G. H., George, C., Green, Y., & Vincent, M. (1994). Reducing adolescent pregnancy through a school- and community-based intervention: Denmark, South Carolina, revisited. *Family Planning Perspectives*, 26(5), 206-217; A subsequent evaluation found that the decline in the pregnancy rate disappeared. Although the initial evaluation found a link between the provision of contraceptives and a lower teenage pregnancy rate, the authors note that the data fail to offer firm evidence.



The theory underlying PYD programs is that by helping youth develop positive personal goals and the means for achieving these goals, the programs motivate children and youth to avoid risky and negative behavior that will affect their transition to adulthood and self-sufficiency. PYD programs work both “ends” of the spectrum. They focus on bolstering protective factors and decreasing risk factors (left-side arrows). They also directly support self-sufficiency by helping instill academic or other skills associated with a successful transition to adulthood (right-side arrows). **Box 8** displays examples of program objectives.

#### Box 8: Positive Youth Development Program Objectives

Although no single definition of PYD exists, recent research outlined key objectives of PYD programs.<sup>93</sup> These programs generally aim to meet at least one of the following objectives:

- Promote bonding with supportive adults.
- Foster resilience.
- Promote social, emotional, cognitive, behavioral, and moral competence.
- Foster self-determination.
- Foster spirituality.
- Foster self-efficacy.
- Foster clear and positive identity.
- Foster belief in the future.
- Provide recognition for positive behavior and opportunities for prosocial involvement.
- Foster prosocial norms (healthy standards for behavior).

<sup>93</sup> Catalano, R. F., Berglund, M. L., Ryan, J. A. M., Lonczak, H. S., & Hawkins, J. D. (1998). *Positive Youth Development in the United States Research Findings on Evaluations of Positive Youth Development Programs*. Available online at <http://aspe.hhs.gov/hsp/PositiveYouthDev99>.

PYD programs generally occur in schools or other community settings. Examples of strategies include the following:<sup>94</sup>

- **Academic Support** to foster school engagement and achievement. This strategy could involve homework help and tutoring during after-school programs as well as providing literacy education and encouraging reading among young children and their parents.
- **Enrichment and Recreational Activities** to foster skill-building and a sense of accomplishment and efficacy from learning something new or mastering a new skill. This strategy could involve sports activities, recreational activities, and the visual or performing arts.
- **Goal-Setting and Positive Choices** to encourage youth to begin thinking about life goals and how those goals can be achieved through making positive choices. This strategy typically includes discussions of the consequences of engaging in risky behavior and the teaching of decision-making skills (often through a structured curriculum).
- **Relationship Strengthening** to foster effective parent-child communication and positive parent-child relationships. Mentoring programs also seek to support interaction with supportive adults.

Most PYD programs are designed to be delivered during after-school hours or during the summer. **Box 9** describes the findings of a 2004 study that reviewed four recent evaluations of after-school programs. The results highlight the difficulty in effectively engaging youth in PYD programs and the potential benefits of these programs.

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<sup>94</sup> Catalano, R. F., Berglund, M. L., Ryan, J. A. M., Lonczak, H. S., & Hawkins, J. D. (1998).

### Box 9: Findings from Evaluations of Four After-School Programs<sup>95</sup>

This 2004 study explored the results of four recent evaluations of after-school programs. One of the studies used an experimental design, two used quasi-experimental designs to control for differences in characteristics of participants and non-participants, and one used a non-experimental design (focusing more on participation and cost).

Overall, the review found mixed results. Findings from the studies suggest that student involvement in after-school programs might result in increased parental involvement with schools. Similarly, participation in these programs increased the likelihood that students “pursue their homework more diligently.” The review also noted that, “The impacts on students’ grade point averages were less consistent, but are also somewhat encouraging.” The well-designed experimental evaluation of the Extended-Service School Initiative found positive impacts on school attitudes and behavior, handling anger in socially appropriate ways, and program students were less likely than their control counterparts to have started drinking alcohol.<sup>96</sup>

In terms of program attendance, results from the four studies found student participation in these programs often is sporadic; students might attend programs only one or two days a week. In addition, the results suggest that “not all of the participating students would have been unsupervised by an adult in the absence of the program,” in many cases the students’ parents. As such, the review highlights the implication that, in addition to providing a safe environment for students, after-school programs “must also be more worthwhile than a couple of additional hours at home after school.” Similarly, these programs must focus their recruitment on youth who, during after-school hours, otherwise would be unsupervised by adults.

Given the connection between PYD and risk and protective factors, researchers are also interested in the effect of PYD programs on teenage sexual behavior and pregnancy. Whereas pregnancy prevention is generally the ultimate program goal of TPP programs, it might be a stated or implicit goal of a PYD program rather than the ultimate goal.

Recent reviews of the research have identified at least 13 evaluated PYD programs that measured teenage pregnancy or related outcomes. These reviews suggest the potential effectiveness of such programs but highlight the need for further research.<sup>97,98,99,100</sup>

The PYD programs evaluated to assess their effect on teenage pregnancy and related outcomes generally fall into one of two categories: (1) ones that focus on the non-sexual risk factors for pregnancy and (2) ones that address both non-sexual and sexual risk factors.

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<sup>95</sup> Kane, T. J. (2004). *The Impact of After-School Programs: Interpreting Results of Four Recent Evaluations*. Working paper of the William T. Grant Foundation.

<sup>96</sup> Grossman, J.B., Price, M.L., Fellerath, V., Jucovy, L.Z., Kotloff, L.J., Raley, R., and Walker, K.E. (2002). *Multiple Choices After School: Findings from the Extended-Service Schools Initiative*. P/PV and MDRC.

<sup>97</sup> Kirby, D. (2001).

<sup>98</sup> Advocates for Youth. (2003). *Science and Success: Sex Education and Other Programs That Work to Prevent Teen Pregnancy, HIV & Sexually Transmitted Infections*. Washington, DC: Author.

<sup>99</sup> Manlove, J., Franzetta, K., McKinney, K., Romano-Papillo, A., & Terry-Humen, E. (2003). *A Good Time: After-School Programs to Reduce Teen Pregnancy*. Washington, DC: National Campaign to Prevent Teen Pregnancy.

<sup>100</sup> Manlove, J., Franzetta, K., McKinney, K., Romano-Papillo, A., & Terry-Humen, E. (2004). *No Time to Waste: Programs to Reduce Teen Pregnancy among Middle School-Aged Youth*. Washington, DC: National Campaign to Prevent Teen Pregnancy.

Although the service delivery models and targeted audiences of the programs described below differ, common components are associated with effective interventions. Holding true to the underlying theory of PYD, each of the effective interventions sought to increase social ties and empower youth through a sense of self and responsibility to others. How to approach the issue of sex is only one of many decisions youth must make. PYD programs recognize that the skills needed to make good decisions about sexual behavior are similar to skills needed to make many of these other crucial life decisions. Below, evaluated programs are described in greater detail.

*a. Programs Focusing on Non-Sexual Risk Factors*

A recent review of after-school programs found these “programs can have a positive influence on teens’ pregnancy risk even if they do not have a strong sex education focus.”<sup>101</sup> The programs also exert positive effects on other outcomes of interest, including access to health care, educational attainment (e.g., graduation rates, enrollment in post-secondary schools), and civic and social attitudes.

PYD programs aimed at the non-sexual antecedents of teenage pregnancy have an array of target populations – most target adolescents, but a few target younger children. Recent evaluations explored the effects of two multiyear interventions, the Seattle Social Development Project (SSDP) and the Abecedarian Project described in **Box 10**. In both cases, the interventions focused on the developmental needs of the participants at an early age. The decrease in teenage pregnancy and parenthood was one of a number of positive outcomes.

**Box 10: Abecedarian Project** <sup>102</sup>

*Program Setting:* Childcare and school-family liaisons for healthy low-income children in North Carolina.

*Intervention:* The program involved two phases. The first, for infants through age five, sought to support the children’s intellectual and cognitive development and their school performance through early childhood enrichment and support. Infants were enrolled in full-day, year-round childcare that included special emphasis on cognitive development and learning. The second phase, beginning when children enrolled in elementary school, focused on supporting improved learning through greater parent involvement and appropriate individualization of classroom activities. Families were assigned Home School Resource Teachers who served as liaisons between them and their children’s schools.

*Methodology:* Researchers randomly assigned the program’s 111 infants to treatment and control groups in both the preschool and school-age phases of the intervention. This methodology allowed evaluators to make comparisons across four subgroups. Evaluators examined outcomes following both the preschool and school-age phases. They conducted subsequent follow-ups at ages 12, 15, and 21.

*Results:* The evaluation found statistically significant differences between the likelihood of program and control group participants being a teenage parent. Of the 53 participants in the preschool treatment group, 26 percent became parents before age 20; 45 percent of participants in the preschool control group became parents before age 20.

Evaluators found similarly positive effects on other outcomes. Treatment group members were less likely to engage in unhealthy behaviors. They were significantly less likely to have used marijuana within the past month (18 percent

<sup>101</sup> Manlove, J., Franzetta, K., McKinney, K., Romano-Papillo, A., & Terry-Humen, E. (2003).

<sup>102</sup> Campbell, F. A., Ramey, C. T., Pungello, E., Starling, J., & Miller-Johnson, S. (2002). Early childhood education: Young adult outcomes from the Abecedarian Project. *Applied Developmental Science*, 6(1), 42-57.

compared with 39 percent of control group members) or to have smoked tobacco in the past month (39 percent in the treatment group, 55 percent in the control group). Treatment group members were also more likely to excel in school. They earned significantly higher scores on tests of reading and math skills and were significantly more likely to attend four-year colleges.

Although lacking the experimental design of the Abecedarian evaluation, the quasi-experimental evaluation of SSDP also found encouraging results. A multiyear project, *SSDP* targeted students in 18 public elementary schools located in high-crime areas of Seattle. The intervention included three primary components: (1) teacher training in classroom management and instruction, (2) child social and emotional skill development, and (3) parent training. As a social development model, the program aimed to build and reinforce strong bonds between the participants and their schools and families, in essence, addressing many of the non-sexual antecedents to teenage pregnancy. Evaluators measured outcomes for participants at ages 18 and 21. The study group as a whole had significantly fewer sexual partners and was more likely to have delayed initiation of sexual intercourse than the comparison group. Evaluators also found that female participants in the treatment group were less likely to become pregnant.<sup>103</sup>

An earlier evaluation of the intervention also found significant differences in other key outcomes between participant and control groups. Those in the participant group were significantly less likely than those in the control group to report involvement in violent delinquent acts and heavy drinking. Similarly, members of the participant group were more likely than their counterparts in the control group to report commitment and attachment to school, better academic achievement, and less school misbehavior.<sup>104</sup> However, the *SSDP* evaluation used random assignment, and recent reviews of the literature have questioned the strength of the evaluation designs.<sup>105,106</sup>

Findings from *SSDP* and the Abecedarian Project support the hypothesis that PYD programs focusing exclusively on non-sexual risk factors can nevertheless affect teenage sexual behavior, along with a range of other behaviors. Furthermore, they might suggest the importance of initiating such interventions at an early age and continuing them over time. As demonstrated by the Abecedarian evaluation, early intervention PYD programs can exert strong, positive effects on an array of behaviors.

PYD programs targeting adolescents have shown mixed results. For example, a quasi-experimental evaluation of Learn and Serve America found that the program had limited effects on teenage pregnancy. A service-learning program for adolescents, Learn and Serve America sought to address a number of social and personal development outcomes in addition to teenage pregnancy (e.g., academics, involvement in service learning, criminal behavior). Despite short-term positive effects related to childbearing (i.e., ever pregnant or made someone pregnant), the evaluation found no effect one year later. The evaluation did find positive

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<sup>103</sup> Lonczak, H. S., Abbott, R. D., Hawkins, J. D., et al. (2002). Effects of the Seattle Social Development Project on sexual behavior, pregnancy, birth, and sexually transmitted disease outcomes by age 21 years. *Archives of Pediatrics & Adolescent Medicine*, 156, 438–447.

<sup>104</sup> Hawkins, J. D., Catalano, R. F., Kosterman, R., Abbott, R., & Hill, K. G. (1999). Preventing adolescent health-risk behaviors by strengthening protection during childhood. *Archives of Pediatrics & Adolescent Medicine*, 153, 226–234.

<sup>105</sup> Kirby, D. (2001).

<sup>106</sup> Advocates for Youth. (2003).



statistically significant impacts on service leadership (participating in roughly twice as many hours as comparison group members) and science grades (approximately 15 percent higher) for high school students at the one-year follow-up.<sup>107</sup>

Similarly, a review of several vocational education programs found no long-term effects on teenage pregnancy or other outcomes related to sexual activity.<sup>108</sup>

*b. Programs Focusing on Both Sexual and Non-Sexual Risk Factors*

More evaluations of PYD approaches include curriculum content that more directly addresses sexual behavior as opposed to those interventions focusing exclusively on non-sexual risk factors. The 2006 review (Scher et al.) assessed the evaluations of seven multi-component PYD programs; promoting abstinence or responsible sexual behavior is one of many program goals. The review found that PYD programs can reduce risky sexual behavior and pregnancy, specifically:

- **Sexual Experience.** One program decreased sexual experience rates by 12 percentage points, from 66 percent to 54 percent.<sup>109</sup> However, pooling the results across studies found that participants in PYD programs were not significantly less likely to engage in sex.<sup>110</sup>
- **Risky Sexual Behaviors.** With regard to risky behavior (i.e., unprotected sex), all three program evaluations that included this measure found significantly lower levels of risky behavior among PYD program participants. Pooling the findings across evaluations found that program group participants were six percentage points less likely to engage in pregnancy risk behaviors.
- **Pregnancy Rates.** Three of the five programs that included measures of pregnancy rates found that participants in the program groups were significantly less likely to, at follow-up, report a pregnancy. Pooling the results across studies, however, found no impact on pregnancy rates.<sup>111</sup>

The Children's Aid Society–Carrera Program is one of the more frequently cited examples of TPP efforts that combine a comprehensive PYD approach with curriculum-based sex education. A rigorous experimental evaluation showed positive results, but only for females, as described in *Box 11*.

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<sup>107</sup> Melchoir, A. (1998). *National Evaluation of Learn and Serve America: Final Report*. Waltham, MA: Center for Human Resources, Brandeis University.

<sup>108</sup> Kirby, D. (2001).

<sup>109</sup> Philliber et al. (2001); These effects were found for female participants in the evaluation of Children's Aid Society–Carrera Program.

<sup>110</sup> Scher, L., Maynard, R., & Stagner, M. (2006).

<sup>111</sup> Scher, L., Maynard, R., & Stagner, M. (2006).



### Box 11: Children's Aid Society–Carrera Program, a community-based intervention<sup>112</sup>

*Program Setting:* Year-round program run through local community centers, which operated in six New York City sites between 1997 and 2000.

*Intervention:* The program, which sought to improve health outcomes for high-risk teenagers between 13 and 15 years of age, included five activity components and two service components. Activities included work-related intervention, academic assistance, comprehensive family life and sexuality education, arts, and individual sports. In addition, the program sought to increase the availability of mental health care and medical care.

*Methodology:* The evaluation was based on a random assignment experimental design to measure four primary outcomes: (1) receipt of designated health care services, (2) whether participants had ever experienced sexual intercourse, (3) use of contraception in most recent sexual encounter, (4) and pregnancy. Researchers measured outcomes for 484 adolescents at a three-year follow-up.

*Results:* Using a multivariate analysis, the evaluation found significant impacts among female participants. Girls in the treatment group were significantly less likely to become pregnant than girls in the control group (10 percent and 22 percent, respectively). Similarly, girls in the treatment group were less likely to have been sexually active after three years of program exposure than girls in the control group (54 percent and 66 percent, respectively). Among sexually experienced girls, use of condoms and a hormonal method of birth control at last sexual encounter was more common within the treatment group.

The evaluation also found statistically significant differences between participants and control group members on measures of access to health care. This finding included likelihood of receiving health care in a non-emergency room setting, receiving a social assessment at last checkup, and getting a hepatitis B vaccination. For each of these measures, at least a 10 percentage point difference occurred between the two groups.

Unlike the mixed findings from the Learn and Serve America program (which focused solely on non-sexual risk factors), two other service-learning oriented approaches have proven more successful in addressing both non-sexual and sexual risk factors relating to teenage sexual activity.

Reach for Health Community Service (RFH) was a school-sponsored intervention targeting seventh and eighth graders in two Brooklyn schools in the mid-1990s. The program aimed to reduce risky sexual behavior among participants by combining service learning programs and classroom health lessons. The classroom component presented age and culturally appropriate lessons on reproductive health that emphasized developing the skills to avoid risky behaviors and the negative consequences of these behaviors. Students were randomly assigned, by classroom, to treatment and control groups. A two-year follow-up evaluation found that program participants were significantly less likely to report sexual initiation through the 10th grade than participants in the control group.<sup>113</sup>

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<sup>112</sup> Philliber, S., Williams Kaye, J., Herrling, S., & West, E. (2002). Preventing pregnancy and improving health care access among teenagers: An evaluation of the Children's Aid Society–Carrera Program. *Perspectives of Sexual and Reproductive Health*, 34(5), 244–251.

<sup>113</sup> O'Donnell, L., Stueve, A., O'Donnell, C., Duran, R., San Doval, A., Wilson, et al. (2002). Long-term reductions in sexual initiation and sexual activity among urban middle schoolers in the Reach for Health Service Learning Program. *Journal of Adolescent Health*, 31(1), 93–100.

The Teen Outreach Program (TOP) sought to combine service-learning with in-classroom activities to reduce the likelihood of sexual risk-taking among teenagers. A school-based program, TOP targeted 9th through 12th graders in 25 high schools across several states. An experimental evaluation found that program participants were significantly less likely than control group participants to cause or experience a pregnancy. In addition, the evaluation also found that intervention had statistically significant positive impacts on participants' education-related outcomes (e.g., suspension from school, failing classes).<sup>114</sup> A review of cost-effective interventions explains that researchers evaluating TOP noted that these impacts were achieved despite the fact that the program does not explicitly focus on preventing teen pregnancy but rather, focuses on "enhancing participants' competence in decisions-making, in interacting with peers and adults, and in recognizing and handling their own emotions."<sup>115</sup>

In addition to school-based PYD interventions addressing both non-sexual and sexual risk factors, research shows the effectiveness of community-based PYD interventions. One such example is the Quantum Opportunity Program (QOP), outlined in **Box 12**. The evaluation found effects on childbearing, graduation rates, college entrance, and academic honors.

#### Box 12: Quantum Opportunities Program, a community-based intervention<sup>116</sup>

*Program Setting:* Piloted in four cities between 1989 and 1993.

*Intervention:* A community-based intervention for high school students (beginning in ninth grade), QOP sought to stimulate positive development through meaningful long-term relationships between youth and adults in a community setting. Primarily targeting low-income youth from welfare backgrounds, the intervention relied heavily on case management that supported educational advancement, life skills, and health education.

*Methodology:* Students were randomly assigned to treatment and control groups in each site (25 students per group). Participants were randomly selected from lists of students whose families were receiving public assistance. The evaluation measured outcomes while the program participants were in high school as well as following their graduation.

*Results:* During the high school years, no statistically significant difference occurred between the treatment and control groups in terms of likelihood of having children, knowledge of contraceptives, and knowledge of AIDS. However, the evaluation did find statistically significant program effects when examining net outcomes after high school. Treatment group members were less likely than control group members to have children in the post-program period (24 percent compared with 38 percent). The evaluation found similarly encouraging impacts for educational outcomes. More than 60 percent of treatment group members graduated from high school compared with 42 percent of control group members. Large disparities exist for post-secondary enrollment (42 percent and 16 percent, respectively) and receipt of school honors and awards, a 22 percentage point difference.

<sup>114</sup> Allen, J. P., Philliber, S., Herrling, S., & Kuperminc, G. P. (1997). Preventing teen pregnancy and academic failure: Experimental evaluation of a developmentally based approach. *Child Development*, 68(4), 729-742.

<sup>115</sup> Isaacs, J. (2007). Cost-effective investments in children. Washington DC: The Brookings Institution.

<sup>116</sup> Hahn, A. (1999). Extending the time of learning. Besharov, D. J. (Ed.) *America's Disconnected Youth*. Washington, D.C: Child Welfare League of America.

## C. Conclusion

A scan of the literature found that TPP programs (i.e., abstinence-only education, comprehensive sex education, access to reproductive health and family planning services) and PYD programs (i.e., academic support, enrichment and recreational activities, decision-making and positive choices, service learning/job preparation, family strengthening) target the antecedents of teenage pregnancy, including both risk factors and protective factors. Moreover, program evaluations find that these programs can exert positive effects on a number of youth outcomes. Strong evidence exists that programs can change knowledge and behavioral intentions. Evidence that TPP and PYD programs change risk-taking behaviors—such as delay in sexual initiation, consistent use of condoms or other contraceptives, decrease in the number of partners, reduction in use of alcohol and other drugs—is less clear.

The absence of strong program outcomes or impacts on behaviors does not necessarily indicate failure of a particular approach. Rather, findings should be considered within the context of the overall evaluation field, specifically:

- **Evidence is limited.** Few rigorous evaluations of some approaches have been conducted, notably abstinence education and PYD programs. The 2006 Kirby assessment found only six evaluations of abstinence programs that met strict criteria for inclusion in the review; of those programs, none was abstinence only. The Scher review (adopting stricter criteria) found only three evaluations that met the authors' criteria. Similarly, the Kirby review identified only 13 PYD programs; Scher found only 7.
- **Evidence is mixed.** More evaluations of comprehensive sex education programs have occurred; Kirby identified 50 and Scher, 18. The more rigorous evaluations found that, although many programs had positive impacts on the behaviors assessed, others had no statistically significant outcomes, and a few had negative outcomes. This finding held true for the abstinence education and PYD programs, as well. Failure to find an effect could be due to multiple factors—for example, the program was implemented incorrectly, the research design was flawed (e.g., contamination between the treatment and control or comparison groups), or the basic logic or theory on which the program was based was unsound.

In sum, the TPP and PYD approaches described above can be reasonably calculated to prevent teenage pregnancy and other outcomes that can derail a successful transition to adulthood. However, no “silver bullet” exists. Although a number of approaches show promise—evaluations have replicated the positive outcomes of the “Reducing the Risk” curriculum, for example—more research is needed to determine model programs. Finally, it is important to note that while none of the programs evaluated focused on Hawaiian youth in general or native Hawaiians in particular, most programs included disadvantaged populations and other ethnic minorities that face similar challenges to attaining self-sufficiency.

## IV. PROGRAM LOGIC AND PERFORMANCE MEASURES

This section presents the overall logic of DHS' approach to using TANF Purpose #3 funds to support TPP and PYD programs and proposes measures that would allow DHS to track the

performance of its contractors. The primary guiding principle in developing the performance measures was that fewer, more broadly applicable performance measures are preferred to many narrowly applicable performance measures. That is, performance measures should be applicable regardless of specific program activities or curricula used and should diverge only as necessary to reflect the unique features of the eight major intervention components identified through the literature review and site visits:

- Abstinence-only education
- Comprehensive sex education
- Access to reproductive health and family planning services
- Academic support
- Enrichment and recreational activities
- Family strengthening
- Decision-making and positive choices
- Service learning/job preparation

Reflecting all eight program components, Subsection A presents an initiative-wide logic model that portrays the major programmatic approaches that DHS-funded providers currently offer – either alone or in combination with other components – to address TPP and PYD in their communities. This subsection also presents the underlying logic of each of the eight intervention components.

Subsection B proposes performance measures relating to program outputs. Recall, outputs measure what the program actually produced – that is, the amount of work accomplished. Because program outputs pertain to units of service delivery and do not depend on program content, a generic set of performance measures could be used to assess outputs regardless of the intervention component.

Subsection C proposes performance measures relating to outcomes targeted by each particular intervention component. Specifically, we propose performance measures tapping immediate outcomes, or outcomes obtained immediately on completion and as a direct result of participation in this kind of program.

Subsection D offers an example of how performance measures could be operationalized for a hypothetical program.

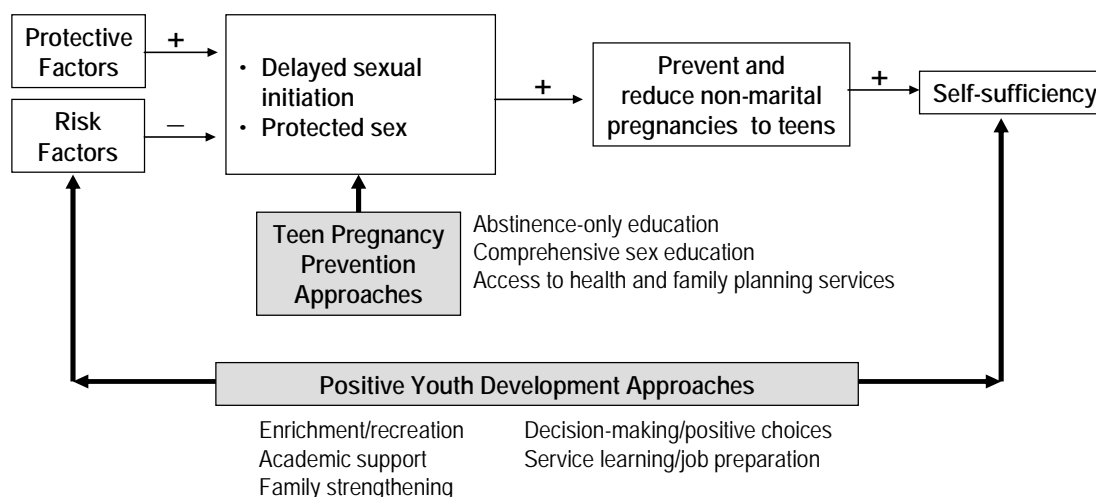
Noting the absence of measures related to subsequent outcomes and our reasoning is important. Performance measures should reflect what the program is producing (outputs) and outcomes directly targeted by the intervention (immediate outcomes). Subsequent outcomes – although reflecting outcomes of ultimate interest – are poorly suited to serve as performance measures, given that these longer-term outcomes are affected by many intervening circumstances and

events out of a program's control. Linking subsequent outcomes causally to a given program requires a rigorous evaluation design. Thus, performance measures should reflect what the program can reasonably be expected to achieve and demonstrate – that is, what it should be accountable for – without a rigorous evaluation. As such, the set of outcome performance measures is limited to measures that each program should be held accountable for achieving: immediate outcomes.

## A. Program Logic

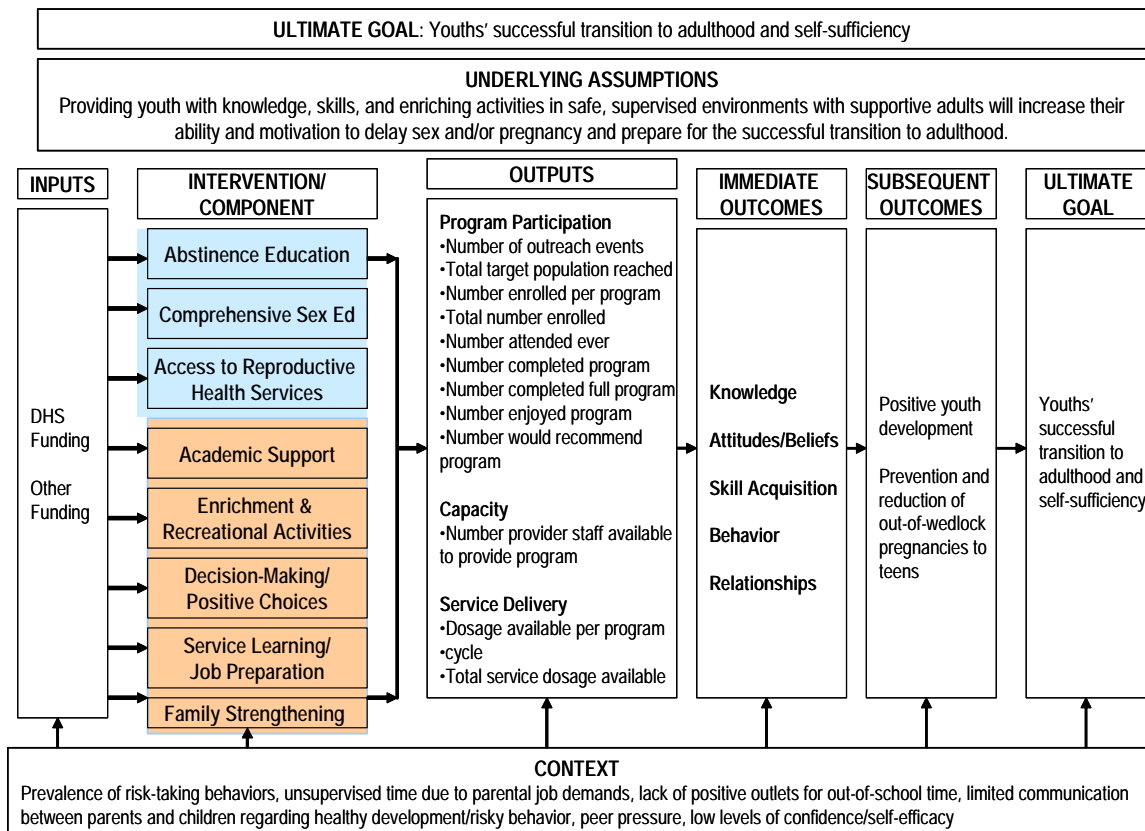
As **Section III** noted, programs seeking to prevent teenage pregnancy – either as the ultimate outcome or as a means of promoting healthy decisions among youth in general and fostering trajectories toward self-sufficiency – typically adopt one of two program approaches: TPP or PYD. *Exhibit IV.1* overlays the eight intervention components on the conceptual model.

**Exhibit IV.1: Conceptual TPP and PYD Model with Intervention Components**



Programs adopting a TPP approach seek to prevent teenage pregnancy by encouraging youth to delay engaging in sexual activity, to use contraception correctly and consistently, or both. They address the direct, sex-related antecedents of teenage pregnancy and self-sufficiency. PYD programs typically have a broader goal than pregnancy prevention, although this goal is often one of many program goals. PYD programs address the underlying non-sex-related antecedents of teenage pregnancy and, in addition, aim to help teenagers make healthy decisions around a range of issues, including substance use, sexual activity, and academics. *Exhibit IV.2* summarizes the logic of DHS' initiative.

## Exhibit IV.2: Logic Model for DHS TTP and PYD Initiative



The ultimate goal of DHS' TTP and PYD initiative is youths' successful transition to adulthood and self-sufficiency. The underlying logic to DHS' multifaceted approach is that providing youth with knowledge, skills, and enriching activities in safe, supervised environments with supportive adults will increase their ability and motivation to delay sex, pregnancy, or both and prepare for successful transition to adulthood. To achieve the overarching goal, DHS awards TANF funds to contractors (i.e., other government agencies and program providers) to implement a set of activities reflecting one or more of the eight major program components. Through its unique program logic, demonstrated in *Exhibit IV.3*, each intervention component seeks to achieve the initiative's ultimate goal by targeting one or more sex-related or non-sex-related antecedents.

### Exhibit IV.3: Underlying Logic of the Eight Major Intervention Approaches

Component	Component Logic
<b>Teenage Pregnancy Prevention Approaches</b>	
Abstinence-Only Education	By promoting abstinence as the best way to prevent pregnancy and STDs and by providing youth with the necessary information and skills to choose abstinence, this approach motivates youth and equips them to remain abstinent or to discontinue sexual activity.
Comprehensive Sex Education	By increasing knowledge about reproductive health, benefits of abstinence, use of condoms and other contraceptives, and avoidance of STDs, by instilling self-respect and building self-efficacy, and by promoting pregnancy prevention as a key component of self-sufficiency, this approach motivates youth and equips them to make good choices regarding avoiding pregnancy.
Access to Reproductive Health and Family Planning Services	By informing youth of available family planning services in their community, by providing counseling and family planning services directly, or both, this approach gives youth access to the resources needed to avoid pregnancy.
<b>Positive Youth Development Approaches</b>	
Academic Support	By helping students achieve in school and by instilling the importance of education for achieving longer-term goals, this approach better prepares youth for—and makes them less likely to engage in risky behaviors that might derail their pathway toward—self-sufficiency.
Enrichment and Recreational Activities	By engaging youth in safe, supervised, constructive (often cultural) activities with peers and supportive adults during out-of-school hours, this approach means youth have less opportunity for and are less motivated to engage in risky behaviors; they feel a greater connection to their heritage, community, and each other; and they feel more supported in their pathway to self-sufficiency.
Decision-Making and Positive Choices	By increasing youths' awareness of the consequences of risky behavior, by improving their decision-making skills, and by helping them identify goals, this approach motivates youth and better equips them to make positive choices about their health and behavior and to avoid risky behavior.
Service Learning/Job Preparation	By providing job skills and instilling the importance of responsibility and fulfilling commitments, this approach better prepares youth for—and makes them less likely to engage in risky behaviors that might derail their pathway toward—self-sufficiency.
Family Strengthening	By educating parents on the risks and challenges facing their adolescents, by reinforcing messages regarding teenage pregnancy and healthy lifestyles, and by providing family activities, this approach strengthens youths' family relationships, and youth feel more supported in their pathway to self-sufficiency.

### B. Performance Measures: Program Outputs

The outputs below are informed by observations of DHS-funded programs, the literature review, and research team recommendations. For example, all providers visited as part of the field research task currently collect some type of output information, including, at a minimum, attendance records and number of events or program cycles held. Some providers collect outreach information, such as number of flyers distributed and number of information

presentations made. Some collect more detailed information on proportion of participants who complete the program, referrals to other service providers, creation of service plans, and administration of pretests and posttests. OYS, one of the MOA holders, developed detailed outputs (performance targets and milestones) and a reporting form for its contractors, an example of which is shown in *Appendix C*.

Recommended outputs are organized into three areas: (1) program participation, (2) capacity, and (3) service delivery. Outputs should be expressed in terms of *targets* and *actual*. Performance measures relating to program outputs are relevant to any service delivery program, regardless of the specific approach or intervention component implemented.

## 1. Program Participation

When measuring participation, the unit of analysis is the individual participant. Depending on the component and specific activity, the unit of analysis could be youth, parents or adults, or both. Participation-related outputs are grouped into four categories: (1) outreach, (2) enrollment, (3) attendance, and (4) customer service. For each category, we list the recommended performance measures. Each measure includes a definition and examples of how it could be operationalized (bulleted and *in italics*).

### a. Outreach

Outreach involves systematically and proactively reaching out to potential program participants to inform them of and encourage their participation in program activities. Outputs pertaining to outreach measure the extent to which potential participants were made aware of the program, or intervention and were given the opportunity to enroll. Outreach venues include program orientations (e.g., open houses), school assemblies, flyers sent home or distributed in school, and Ohana (family) nights. *Exhibit IV.4* shows recommended outreach measures.

**Exhibit IV.4: Recommended Outreach Measures**

Performance Measure	Definition ( <i>examples</i> )
Number of outreach "events"	<p># events held over specified period of time</p> <ul style="list-style-type: none"> <li><i>Program staff described program to junior high school students at one school assembly per academic quarter; four times in calendar year.</i></li> <li><i>Program flyers were distributed each month at local community-based organization.</i></li> <li><i>One family night was held every six months.</i></li> </ul>
Target population reached	<p># target population reached through outreach events per specified period (e.g., quarter, year)</p> <ul style="list-style-type: none"> <li><i>One hundred fifty students were reached per assembly; four assemblies per year; 600 students total annually.</i></li> <li><i>One hundred flyers were distributed each month; 1,200 annually.</i></li> <li><i>Twenty families attended family night; 40 families annually.</i></li> </ul>



**b. Enrollment**

Enrollment refers to the number of people from the target population who sign up for a class, activity, or service. Outputs pertaining to enrollment capture information beyond the number attending an orientation or general information session; they capture information on the number who *intend* to participate in the program. *Exhibit IV.5* shows recommended enrollment measures.

**Exhibit IV.5: Recommended Enrollment Measures**

Performance Measure	Definition ( <i>examples</i> )
Number enrolled per program	# target population who signed up for a specific class, activity, or service NOTE: "Signing up," although program and provider specific, should refer to some action step, such as filling out an enrollment form, getting parental permission to attend, etc. <ul style="list-style-type: none"><li><i>Fifteen students filled out a registration form to enroll in the class.</i></li></ul>
Total number enrolled	# target population who signed up for a specific class, activity, or service over a specified period (e.g., quarter, academic year, calendar year, contract period) <ul style="list-style-type: none"><li><i>Fifteen students enrolled for the class during the first quarter, 20 during the second quarter, 8 during the third quarter, and 12 during the fourth quarter. Total annual enrollment for the program was 55.</i></li></ul>

**c. Attendance**

To attend is to be present at a given class, activity, or service. Indicating the number of enrollees who actually participated in the program or intervention, attendance is expressed in terms of the number of the enrollees who were present at the class, activity, or service at least once and the frequency with which enrollees were present. *Exhibit IV.6* shows recommended attendance measures.

**Exhibit IV.6: Recommended Attendance Measures**

Performance Measure	Definition ( <i>examples</i> )
Ever attended program or intervention	% of enrollees who attended at least one session of the class, activity, or service <ul style="list-style-type: none"><li><i>Eighty percent of enrollees attended at least one program session.</i></li></ul>
Completed program or intervention <sup>117</sup>	% of enrollees who attended the specified number of sessions deemed necessary to complete the program <ul style="list-style-type: none"><li><i>Fifty percent of enrollees attended 75 percent of the sessions offered.</i></li></ul>
Completed full program or intervention	% of enrollees who attended all sessions of the class, activity, or service <ul style="list-style-type: none"><li><i>Fifteen percent of enrollees attended 100 percent of the 10-session program.</i></li></ul>

<sup>117</sup> Programs with rolling enrollment or "drop in" policies might not have a completion rate, per se, but could still track the number of times over a given period that a youth participates (i.e., the dosage of the intervention).

#### d. Customer Satisfaction

Another product of service delivery is a satisfied customer. Although customer satisfaction is not in and of itself an indicator of program effectiveness, it is an important marker of whether the customer (i.e., student, youth, parent) enjoyed the program. In other words, although customer satisfaction does not reflect or guarantee program effectiveness, *lack* of customer satisfaction almost certainly dampens or thwarts program effectiveness. *Exhibit IV.7* shows recommended customer satisfaction measures.

**Exhibit IV.7: Recommended Customer Satisfaction Measures**

Performance Measure	Definition ( <i>examples</i> )
Enjoyed program	% of participants who report having enjoyed the program <ul style="list-style-type: none"><li><i>Eighty percent of enrollees agreed with the statement: "I enjoyed the program."</i></li></ul>
Would recommend program to others	% of participants who say they would refer a friend to the program <ul style="list-style-type: none"><li><i>Eighty percent of enrollees agreed with the statement: "I would encourage a friend to attend this program."</i></li></ul>

## 2. Capacity

Capacity measures the provider's ability to deliver a program, or intervention. In the context of TPP and PYD programs, this ability means the number of staff, or, in some cases youth, who are qualified to provide services. Depending on the provider, capacity could mean formal training to provide a curriculum, or it could be the number of staff available to facilitate groups, tutor students, or provide referrals to other services. *Exhibit IV.8* shows the recommended capacity measure.

**Exhibit IV.8: Recommended Capacity Measure**

Performance Measure	Definition ( <i>examples</i> )
Provider staff qualified to provide services	# staff trained and available to provide a service <ul style="list-style-type: none"><li><i>Four teachers were trained in a curriculum and are available to provide sessions after school.</i></li><li><i>One staff person at a community-based organization is trained to facilitate youth discussion groups.</i></li><li><i>Ten volunteers are trained to be mentors and tutors.</i></li></ul>

## 3. Service Delivery

Rather than measuring the number of individuals who receive services, the service delivery performance measures assess the amount (dosage) of the service provided over a specified period—in essence, how much was available to the community or potential participants. *Exhibit IV.9* shows recommended service delivery measures.

### Exhibit IV.9: Recommended Service Delivery Measures

Performance Measure	Definition ( <i>examples</i> )
Service dosage available per program cycle	<p># hours per session*, # sessions per week*, # weeks per program cycle</p> <p>NOTE: The service dosage is the intended dosage; that is, the maximum hours a participant could be exposed to the program, or intervention.</p> <ul style="list-style-type: none"> <li>• <i>One two-hour class was held per week for 12 weeks: total dosage is 24 hours per program cycle.</i></li> <li>• <i>One hour of curriculum followed by two hours of recreational activities were held twice per week for 16 weeks: total dosage is 96 hours per program cycle.</i></li> </ul>
Total service dosage available	<p># program cycles or participant cohorts during a specified period (e.g., one year, contract period)</p> <p># total hours program or intervention operates</p> <ul style="list-style-type: none"> <li>• <i>The intervention—one two-hour class per week for 12 week—was offered six times during the year. Total program availability is 144 hours.</i></li> </ul>

### C. Performance Measures: Immediate Program Outcomes

This subsection describes recommended performance measures that providers could use to indicate whether they are achieving program outcomes. As with outputs, the measures presented combine observations in the field, descriptions in the literature, and project team ideas. For example, a number of providers currently administer pretests and posttests to participants to determine changes in knowledge and behaviors. Often these surveys are tied to a specific curriculum or developed for a particular intervention. In some instances, the MOA holder determines specific measures or benchmarks.

The recommended set of performance measures pertains to a program's immediate outcomes, or outcomes obtained *immediately* and as a *direct result* of program participation. Clearly, programs seek to prevent teenage pregnancy (subsequent outcome) and foster youths' successful transition to adulthood and self-sufficiency (ultimate goal). However, attributing these longer-term outcomes to any given program is difficult, given the range of intervening circumstances outside the program's control and absent a strong evaluation design that controls for these confounding factors. Thus, outcome performance measures should focus on the *immediate* outcomes that each program should be held accountable for achieving.

Unlike *outputs* – which do not depend on program content – *immediate outcomes* necessarily depend on the general program approach. Thus, performance measures pertaining to immediate outcomes must align with the given intervention component adopted by providers. Although outcome performance measures are component specific, some categories are largely common across the components:

- Knowledge
- Attitudes and beliefs
- Skills

- Behavior
- Relationships

In thinking about examples of actual data that providers could collect to allow them to report on the proposed performance measures, the project team considered a number of data sources: administrative data, pre- and post-intervention surveys, and post-intervention-only surveys. Each has advantages and disadvantages.

*Administrative data* (e.g., report cards, school attendance) are not subject to response bias in which a participant answers questions the perceived “right” way rather than the “truthful” way. Some amount of data is also available regardless of whether the participant fills out a survey, thus making tracking participants who leave the program possible. (The type and amount of data available will depend on the provider. A school likely will have more data than a small community-based organization.) The disadvantages of administrative data are that collection and analysis can be time consuming, and this data might or might not be more accurate than self-report data. Data can also be difficult to access due to privacy concerns. Additionally, some areas of performance cannot be measured with administrative data (e.g., knowledge gained, skills acquired, parent-child communication, abstinence from sexual activity or other risky behaviors). Administrative data might be better suited to assessing subsequent outcomes (e.g., grades, grade completion, truancy), as long as these longer-term outcomes can be tracked for program participants.

*Pre- and post-intervention surveys* can measure changes in knowledge, skills, attitudes, and behaviors before and after exposure to the program. This method’s downside is that the survey must be administered at two time points, and providers must develop a way to link respondents’ answers from the pre- and post-intervention surveys (e.g., through names or other unique identifiers). In addition to administrative challenges, participants might be less forthcoming in their responses if they think the survey is not truly anonymous, if they think their privacy, or confidentiality, will be breached, or both. Finally, attrition that is natural to most programs means that pre- and post-intervention data will be unavailable for some participants.

A *post-intervention-only* design is the simplest way to measure self-reported changes in knowledge, attitudes, skills, and behaviors. It has to be administered only once, and staff will not have to analyze the changes over time. The downside is that it is administered at the end of the program and, thus, will fail to capture information about participants who drop out.

The data examples provided in *Exhibits IV.10 through IV.18* reflect our recommendation for obtaining information on immediate outcome performance measures using the post-intervention-only data collection method. We believe this approach puts the least burden on providers in terms of administering the survey and analyzing the results. That said, we caution that the resulting data should be interpreted as respondents’ *perceptions* of how the program affected them; how the program *actually* impacted them is best ascertained by rigorous evaluation designs that control for self-report bias and other methodological limitations inherent in the simpler data collection methods needed to report on performance. However, we think this approach is still useful for monitoring ongoing program performance.

In *Exhibits IV. 10 through IV.18*, column one (left side) lists the proposed performance measure, and column two (right side) provides an operational definition of the measure, complete with one or more examples of questions or items that could be included on a post-intervention survey of participants. Unless otherwise specified, the questions or items measure self-reported attainment of knowledge and skills as well as changes in attitudes and behaviors. They ask participants to rate changes on a scale of 1 (“Strongly Disagree”) to 5 (“Strongly Agree”).<sup>118</sup>

1	2	3	4	5
Strongly Disagree	Disagree	Unsure	Agree	Strongly Agree

In some instances, a measure is used across multiple components. These measures are marked with an asterisk (\*). On the other hand, categories of performance measures that are inapplicable to a particular component are noted with an “NA.”

Finally, because the performance measures are component specific, rather than program specific, an individual provider could operate a program that has multiple components (e.g., an abstinence education curriculum combined with recreational activities). The outcome-related performance measures are designed so they can be combined as needed, depending on the nature of the specific program. Subsection D shows an example of a hypothetical provider.

### 1. *Abstinence-Only Education*

Abstinence-only education programs aim to prevent pregnancy and STDs by providing youth with the necessary information and skills to choose abstinence. DHS-funded abstinence-only programs target youth ages 10 to 17 and typically use well-established curricula such as “Choosing the Best,” “Smart Start/Stay Smart” (with supplemental abstinence content), “Making the Right Choices,” and “Teen Choices.” These educational curricula include sessions on puberty, background on abstinence, external messages (e.g., media) about sex, making healthy choices, benefits to choosing abstinence, friendship and peer pressure, and assertiveness or ways of saying no. Curricula aimed at older youth (ages 13 through 17) also include sessions on decision-making, communication skills, goal-setting, and dating. These curricula-based programs typically are provided in one-hour sessions for 6 weeks to 12 weeks, in school as well as after school (in both school-based and community-based settings). One DHS-funded provider had youth produce a DVD called *Abstinence is Right* to show during school assemblies and on the local cable access channel. *Exhibit IV.10* lists the recommended outcome measures for abstinence-only education programs.

<sup>118</sup> Some providers might request or require parental approval before participants fill out post-intervention surveys.

**Exhibit IV.10: Recommended Outcome Measures for Abstinence-Only  
Education Programs**

Performance Measure	Definition (examples)
<b>Knowledge</b>	
Sexuality and healthy adolescent development	% of participants who report a gain in knowledge as a result of the program <ul style="list-style-type: none"> <li>On a scale of 1 to 5, "I gained new knowledge about sexuality and healthy adolescent development as a result of this program."</li> </ul>
Benefits of abstinence*	% of participants who report a gain in knowledge related to the benefits of abstinence as a result of the program <ul style="list-style-type: none"> <li>On a scale of 1 to 5, "I learned the medical and psychological benefits of abstaining from sexual activity."</li> </ul>
<b>Attitudes and Beliefs</b>	
Confidence and self-efficacy in choosing abstinence	% of participants who report feeling more confident they can and will delay sexual activity as a result of the program <ul style="list-style-type: none"> <li>On a scale of 1 to 5, "I have confidence I can abstain from sexual activity."</li> <li>On a scale of 1 to 5, "I think it is ok to say 'no' to sex, even if I think others are sexually active."</li> </ul>
Value abstinence*	% of participants who report valuing abstinence because of the program <ul style="list-style-type: none"> <li>On a scale of 1 to 5, "As a result of this program, I believe that abstaining from sexual activity is important."</li> </ul>
<b>Skills</b>	
Communication skills*	% of participants who report attaining communication skills as a result of the program <ul style="list-style-type: none"> <li>On a scale of 1 to 5, "I learned how to effectively communicate my intentions and wishes" (e.g., "I am not ready for sex," "I think sex entails many dangers," "I want to wait until I am older to have sex").</li> </ul>
Resistance and refusal skills*	% of participants who report attaining refusal skills as a result of the program <ul style="list-style-type: none"> <li>On a scale of 1 to 5, "I learned how to say no to sex."</li> </ul>
<b>Behavior</b>	
Delay or discontinuation of sexual activity*	% of participants who report abstaining from sex either by remaining abstinent or ceasing sexual activity since completing the program <ul style="list-style-type: none"> <li>"Because of this program, I have stopped sexual activity" (Yes, No, Not Applicable).</li> </ul>
Parent-child communication about sexual activity*	% of participants reporting they discussed sexual activity with their parents or trusted adults because of the program <ul style="list-style-type: none"> <li>"As a result of this program, I have spoken to my parents or a trusted adult about sexual activity" (Never, Once or Twice, Often).</li> </ul>
<b>Relationships</b>	
Staff-youth relationships*	% of participants who report a supportive adult in the program <ul style="list-style-type: none"> <li>On a scale of 1 to 5, "I felt supported by the adults in this program."</li> </ul>
Peer relationships*	% participants who report positive peer relationships <ul style="list-style-type: none"> <li>On a scale of 1 to 5, "The friends I made during this program will help me make positive choices in the future."</li> </ul>

## 2. Comprehensive Sex Education

Comprehensive sex education programs aim to increase knowledge about reproductive health, the benefits of abstinence, use of condoms and other contraceptives, and avoidance of STDs; instill self-respect and build self-efficacy; and promote pregnancy prevention as a key component of self-sufficiency. DHS-funded comprehensive sex education programs target middle school and high school youth. Providers use a variety of curricula (e.g., “Making Proud Choices,” “Reducing the Risk,” “Health Smart,” “Health Facts,” “Wise Guys”) that generally describe abstinence as the best way to prevent STDs and pregnancies, but they also cover use of condoms and other contraceptives as well as HIV and other STDs. The dosage of these programs varies, from eight classes to a year-long peer education class. *Exhibit IV.11* lists recommended outcome measures for comprehensive sex education programs.

**Exhibit IV.11: Recommended Outcome Measures  
for Comprehensive Sex Education Programs**

Performance Measure	Definition ( <i>examples</i> )
<b>Knowledge</b>	
Sexuality and healthy adolescent development*	% of participants who reported gaining knowledge about healthy development as a result of the program <ul style="list-style-type: none"> <li>On a scale of 1 to 5, “I gained new knowledge about sexuality and healthy adolescent development as a result of this program.”</li> </ul>
Benefits of abstinence*	% of participants who report a gain in knowledge related to the benefits of abstinence as a result of the program <ul style="list-style-type: none"> <li>On a scale of 1 to 5, “I learned the medical and psychological benefits of abstaining from sexual activity.”</li> </ul>
Use of condoms and other contraceptives	% of participants who reported gaining knowledge about the use of condoms and other contraceptives as a result of the program <ul style="list-style-type: none"> <li>On a scale of 1 to 5, “I know how to prevent pregnancy as a result of the program.”</li> <li>On a scale of 1 to 5, “I know how to use a condom or other method of contraception as a result of the program.”</li> </ul>
<b>Attitudes and Beliefs</b>	
Confidence and self-efficacy in avoiding risky sexual behavior	% of participants who report feeling more confident they can and will avoid risky sexual activity <ul style="list-style-type: none"> <li>On a scale of 1 to 5, “I have confidence I can avoid risky sexual behavior by abstaining or using condoms or other contraceptives consistently and correctly as a result of the program.”</li> <li>On a scale of 1 to 5, “I can prevent getting pregnant or making someone pregnant as a result of the program.”</li> </ul>
Value abstinence*	% of participants who report valuing abstinence because of the program On a scale of 1 to 5, “As a result of this program, I believe that abstaining from sexual activity is important.”
Value contraception	% of participants who report valuing abstinence, protected sexual activity, or both because of the program

Performance Measure	Definition (examples)
	<i>On a scale of 1 to 5, "As a result of this program, I believe that it is important to avoid pregnancy by using contraception consistently and correctly."</i>
<b>Skills</b>	
Communication skills*	% of participants who report attaining communication skills <ul style="list-style-type: none"> <li><i>On a scale of 1 to 5, "I learned how to effectively communicate my intentions and wishes (e.g., "I am not ready for sex," "I will not have unprotected sex") as a result of the program."</i></li> </ul>
Resistance and refusal skills*	% of participants who reported attaining refusal skills <ul style="list-style-type: none"> <li><i>On a scale of 1 to 5, "I learned how to say 'no' to sex as a result of the program."</i></li> <li><i>On a scale of 1 to 5, "I learned how to say 'no' to unprotected sex as a result of the program."</i></li> </ul>
Condom and other contraceptive use skills	% of participants who reported attaining condom and other contraceptive use skills <ul style="list-style-type: none"> <li><i>On a scale of 1 to 5, "I learned how to effectively use condoms, other contraceptives, or both as a result of the program."</i></li> </ul>
<b>Behavior</b>	
Delay or discontinuation of sexual activity*	% of participants who report abstaining from sex either by remaining abstinent or ceasing sexual activity <ul style="list-style-type: none"> <li><i>"Because of this program, I have stopped sexual activity" (Yes, No, Not Applicable).</i></li> </ul>
Avoidance of risky sexual behaviors	% of sexually active participants who use condoms, other contraceptives, or both consistently and correctly <ul style="list-style-type: none"> <li><i>On a scale of 1 to 5, "Because of the program, I use condoms or other contraception consistently and correctly."</i></li> </ul>
Parent-child communication about sexual activity*	% of participants who report they discussed sexual activity with their parents or trusted adults <ul style="list-style-type: none"> <li><i>"As a result of this program, I have spoken to my parents or a trusted adult about sexual activity" (Never, Once or Twice, Often).</i></li> </ul>
<b>Relationships</b>	
Staff-youth relationships*	% of participants who report a supportive adult in the program <ul style="list-style-type: none"> <li><i>On a scale of 1 to 5, "I felt supported by the adults in the program."</i></li> </ul>
Peer relationships*	% participants reporting positive peer relationships <ul style="list-style-type: none"> <li><i>On a scale of 1 to 5, "The friends I made during this program will help me make positive choices in the future."</i></li> </ul>

### 3. Access to Reproductive Health and Family Planning Services

By informing youth of available family planning services in their community, reproductive health and family planning services programs aim to ensure that youth have access to the resources needed to avoid pregnancy. Adolescents in several DHS-funded programs receive access or referral to reproductive health care. Such connections can be made during in-school



comprehensive sex education classes, after-school programs, or community-setting programming. Referrals to reproductive health care can occur through various opportunities, such as direct staff referral, provision of clinic brochures, staff referral to a school counselor, informal discussions during program intake, and personal presentations by clinic staff to enrolled children. Referrals are more likely to be offered to older children (ages 14 through 17). *Exhibit IV.12* lists recommended outcome measures for reproductive health and family planning services.

#### **Exhibit IV.12: Recommended Outcome Measures for Reproductive Health and Family Planning Services**

Performance Measure	Definition ( <i>examples</i> )
<b>Knowledge</b>	
Accessing reproductive health and family planning services	% of participants who know how to access services <ul style="list-style-type: none"> <li>On a scale of 1 to 5, “As a result of this program, I know how to access family planning and other medical services if I need them.”</li> <li>On a scale of 1 to 5, “The program gave me helpful information and resources should I need to access medical or family planning services.”</li> </ul>
<b>Attitudes and Beliefs</b>	
Confidence and self-efficacy in obtaining needed services	% of participants who report feeling more confident they can and will obtain family planning and medical services as needed. <ul style="list-style-type: none"> <li>On a scale of 1 to 5, “As a result of this program, I have confidence I can obtain family planning or other medical services as needed.”</li> </ul>
<b>Behavior</b>	
Visits to family planning clinic or medical office	% of sexually active participants who had a medical or family planning visit <ul style="list-style-type: none"> <li>“I made and kept a medical or family planning appointment at some time during the program” (Yes, No).</li> </ul> % of participants who are not sexually active who plan to make a medical or family planning visit <ul style="list-style-type: none"> <li>On a scale of 1 to 5, “As a result of this program, I plan to make a medical or family planning appointment before I have sex.”</li> </ul>

#### **4. Academic Support**

Academic support programs aim to help students achieve in school and instill the importance of education for achieving goals. The focus on goal attainment can help encourage youth to avoid risky behaviors that might derail their pathway toward self-sufficiency. DHS-funded academic support usually takes one of two forms: (1) academic tutoring specifically designed to enhance participants’ cognitive abilities and (2) more informal drop-in homework help. Academic tutoring might focus on building one area of ability, such as reading cognition or mathematical reasoning, or might change subject areas regularly. Such tutoring is usually offered for a specific amount of time daily or on certain days in conjunction with other after-school activities. Drop-in homework help can be accessed as needed or as a “way station” to ensure that participants complete their school work before participating in recreational

activities. Tutoring and drop-in homework help follow the same dosage as the after-school programs with which they usually are linked, ranging from eight weeks to a yearlong program. Both forms of academic support are provided to youth ages 10 through 17. **Exhibit IV.13** lists recommended outcome measures for academic support programs.

#### IV.13: Recommended Outcome Measures for Academic Support Programs

Performance Measure	Definition (examples)
<b>Attitudes and Beliefs</b>	
Confidence and self-efficacy in school success	% of participants who report feeling more confident they can and will do well in school because of the program <ul style="list-style-type: none"> <li>On a scale of 1 to 5, "As a result of this program, I have confidence that if I apply myself, I can do well in school."</li> <li>On a scale of 1 to 5, "As a result of this program, I believe that if I study hard, I will get better grades."</li> </ul>
Value education	% of participants who report valuing education because of the program <ul style="list-style-type: none"> <li>On a scale of 1 to 5, "As a result of this program, I believe that education is important."</li> </ul>
<b>Skills</b>	
Study skills	% of participants who report they learned study skills in the program <ul style="list-style-type: none"> <li>On a scale of 1 to 5, "As a result of this program, I learned skills that will help me complete my homework on time."</li> <li>On a scale of 1 to 5, "As a result of this program, I learned to ask for help when I need it."</li> </ul>
<b>Behavior</b>	
Homework completion	% of participants who report completing their homework more regularly since the program began <ul style="list-style-type: none"> <li>On a scale of 1 to 5, "Because of this program, I complete my homework on time more often."</li> </ul>
Time spent studying	% of participants who report increasing the time they study since the program began <ul style="list-style-type: none"> <li>On a scale of 1 to 5, "I spend more hours doing homework or school work since completing the program."</li> </ul>
<b>Relationships</b>	
Staff-youth relationships *	% of participants who report a supportive adult in the program <ul style="list-style-type: none"> <li>On a scale of 1 to 5, "I felt supported by the adults in the program."</li> </ul>
Youth-school relationship*	% of participants who feel "connected" to their school due to program. <ul style="list-style-type: none"> <li>On a scale of 1 to 5, "Because of this program I feel proud to belong to my school."</li> </ul>

## 5. Enrichment and Recreational Activities

Enrichment and recreational activities programs engage youth in safe, supervised, constructive (often cultural) activities with peers and supportive adults during out-of-school hours, thus giving youth less opportunity and less motivation to engage in risky behaviors that can interfere with their pathway to self-sufficiency. DHS-funded enrichment and recreational activities programming primarily targets youth ages 10 to 14. These activities occur in schools and community center settings. Examples of activities in this category include team sports, art and dance classes, informal physical activities and games, and cooking classes. Spontaneous or unstructured recreation, such as ping-pong, video games, or pick-up basketball, is also offered. Program structures vary widely, from single session events to drop-in programming to classes or practices that meet several times a week for multiple weeks. **Exhibit IV.14** lists recommended outcome measures for enrichment and recreational activities programs.

**Exhibit IV.14: Recommended Outcome Measures  
for Enrichment and Recreational Activities Programs**

Performance Measure	Definition ( <i>examples</i> )
<b>Attitudes and Beliefs</b>	
Confidence and self-efficacy in learning something new	% of participants who report feeling more confident they can and will learn a new skill or craft <ul style="list-style-type: none"> <li>On a scale of 1 to 5, "Because of this program, I am confident that I can learn something new" (i.e., a skill, sport, craft).</li> </ul>
Value learning something new	% of participants who report because of the program they value learning new things <ul style="list-style-type: none"> <li>On a scale of 1 to 5, "As a result of this program, I believe that learning new things is important."</li> </ul>
Value cultural heritage	% of participants who report because of the program they value their cultural heritage more <ul style="list-style-type: none"> <li>On a scale of 1 to 5, "As a result of this program, I have an increased appreciation of my culture"</li> <li>On a scale of 1 to 5, "As a result of this program, I have an increased appreciation of my culture."</li> </ul>
<b>Skills</b>	
Learned a new skill	% of participants who report learning a new skill during the program <ul style="list-style-type: none"> <li>On a scale of 1 to 5, "Because of this program, I learned a new skill."</li> </ul>
<b>Behavior</b>	
Participated in recreational activities	% of participants who report increasing the time they participate in recreational activities since the program began <ul style="list-style-type: none"> <li>On a scale of 1 to 5, "I spend more hours participating in organized recreational activities because of this program."</li> </ul>
Participated in cultural activities	% of participants who report increasing the time they participate in cultural activities since the program began

Performance Measure	Definition (examples)
	<ul style="list-style-type: none"> <li>On a scale of 1 to 5, "Because of this program, I spend more hours participating in cultural activities because of this program."</li> </ul>
<b>Relationships</b>	
Staff-youth relationships*	% of participants who report a supportive adult in the program <ul style="list-style-type: none"> <li>On a scale of 1 to 5, "I felt supported by the adults in the program."</li> </ul>
Peer relationships*	% participants reporting positive peer relationships <ul style="list-style-type: none"> <li>On a scale of 1 to 5, "The friends I made during this program will help me make positive choices in the future."</li> </ul>
Youth-school relationship*	% of participants who feel "connected" to their school due to program. <ul style="list-style-type: none"> <li>On a scale of 1 to 5, "Because of this program, I feel proud to belong to my school."</li> </ul>

## 6. Decision-Making and Positive Choices

Decision-making and positive choices programs increase youths' awareness of the consequences of risky behavior, improve their decision-making skills, and help them identify goals in an effort to better equip them to make positive choices about their behavior. DHS-funded decision-making and positive choices programs target middle school and high school students. Providers use a variety of curricula (e.g., "Breathe Easy," "You Can Be Fit," "Making Proud Choices") that cover topics such as alcohol, drug, and tobacco awareness; life and career planning; community service; critical thinking; and interpersonal relationships. In addition to curricula delivery, some programs provide life goal and health counseling and informal physical activity opportunities, and they might involve participants in creative activities (e.g., development of a video public service announcement) that center on making decisions. These programs typically are offered as a drop-in service or in a more structured format for two to three hours several days a week. *Exhibit IV.15* lists recommended outcome measures for decision-making and positive choices programs.

**Exhibit IV.15: Recommended Outcome Measures  
for Decision-Making and Positive Choices Programs**

Performance Measure	Definition (examples)
<b>Knowledge</b>	
Effect of risky behavior on goal attainment	% of participants who report that risky behavior can affect goal attainment <ul style="list-style-type: none"> <li>On a scale of 1 to 5, "As a result of this program, I understand better how risk-taking behaviors (e.g., drinking, drug use, sexual activity) can affect my long-term goals."</li> </ul>
<b>Attitudes and Beliefs</b>	
Confidence and self-efficacy in making healthy decisions	% of participants who report feeling more confident they can and will make good decisions <ul style="list-style-type: none"> <li>On a scale of 1 to 5, "Because of this program, I am confident that I can make healthy decisions that will contribute to goals and success."</li> </ul>

Performance Measure	Definition (examples)
<b>Skills</b>	
Decision-making skills	% of participants reporting acquisition of decision-making skills <ul style="list-style-type: none"> <li>On a scale of 1 to 5, "Because of this program, I know how to weigh various options and make good decisions that will contribute to my goals and success."</li> </ul>
Resistance and refusal skills*	% of participants who report attaining refusal skills <ul style="list-style-type: none"> <li>On a scale of 1 to 5, "Because of this program, I learned how to say 'no' to behaviors that can derail my goals" (e.g., drug and alcohol use, sexual activity).</li> </ul>
<b>Behavior</b>	
Goal-setting	% of participants who report they set goals <ul style="list-style-type: none"> <li>On a scale of 1 to 5, "Because of this program, I developed goals for my future."</li> </ul>
Avoidance of risky behaviors	% of participants who report abstaining from risky behaviors (e.g., drug and alcohol use, sexual activity or unprotected sexual activity) <ul style="list-style-type: none"> <li>On a scale of 1 to 5, "Because of this program, I currently abstain from using alcohol, tobacco, and other drugs."</li> <li>On a scale of 1 to 5, "Because of this program, I avoid risky sexual behavior, either by abstaining from sex or using condoms or other contraception consistently and correctly."</li> </ul>
<b>Relationships</b>	
Staff-youth relationships*	% of participants who report a supportive adult in the program <ul style="list-style-type: none"> <li>On a scale of 1 to 5, "I felt supported by the adults in the program."</li> </ul>
Peer relationships*	% of participants who report positive peer relationships <ul style="list-style-type: none"> <li>On a scale of 1 to 5, "The friends I made during this program will help me make positive choices in the future."</li> </ul>
Youth-school relationship*	% of participants who feel "connected" to their school due to program. <ul style="list-style-type: none"> <li>On a scale of 1 to 5, "Because of this program, I feel proud to belong to my school."</li> </ul>

## 7. Service Learning/Job Preparation

Service learning/job preparation programs provide job skills and instill the importance of responsibility and fulfilling commitments so youth are better prepared for – and are less likely to engage in risky behaviors that might derail their pathway toward – self-sufficiency.

DHS-funded service learning/job preparation activities use specific curricula (e.g., "About Face," "Community All-Stars") and also provide opportunities for career exploration, such as volunteering, internships, job shadowing, and job placement. Middle school and high school students in service learning/job preparation programs typically learn computer literacy skills, job application skills, basic business math, and job search skills through activities like business

simulation and community service. These programs meet several times a week or every day after school and might also provide as-needed informal job counseling. *Exhibit IV.16* lists recommended outcome measures for service learning/job preparation programs.

**Exhibit IV.16: Recommended Outcome Measures for Service Learning/Job Preparation Programs**

Performance Measure	Definition ( <i>examples</i> )
<b>Knowledge</b>	
Understanding of the workplace environment	% of participants who report they understand workplace norms and expectations <ul style="list-style-type: none"> <li>On a scale of 1 to 5, "Because of this program, I know what it takes to do a job well."</li> </ul>
<b>Attitudes and Beliefs</b>	
Confidence and self-efficacy in getting and keeping a job	% of participants who report feeling more confident they can get a job and retain employment <ul style="list-style-type: none"> <li>On a scale of 1 to 5, "Because of this program, I am confident that I know what it takes to get a job and to keep a job once I am hired."</li> <li>On a scale of 1 to 5, "Because of this program, I know I can succeed at work."</li> </ul>
<b>Skills</b>	
New job-related skills	% of participants who report they attained new job-related skills <ul style="list-style-type: none"> <li>On a scale of 1 to 5, "Because of this program, I know how to find a job."</li> <li>On a scale of 1 to 5, "Because of this program, I learned skills that will be useful in whatever work environment I choose."</li> <li>On a scale of 1 to 5, "Because of this program, I have the skills to do a job well."</li> </ul>
Communication skills	% of participants who report they attained communication skills <ul style="list-style-type: none"> <li>On a scale of 1 to 5, "Because of this program, I learned how to communicate effectively with my work peers and supervisors."</li> </ul>
<b>Behavior</b>	
Practice job skills	% of participants who report practicing job skills, either on the job or in a work-like setting <ul style="list-style-type: none"> <li>On a scale of 1 to 5, "Since the program began, I have practiced job-related skills in a 'real life' setting."</li> </ul>
Participation in community service	% of participants who report participating in community service <ul style="list-style-type: none"> <li>On a scale of 1 to 5, "Because of this program I participated in one or more community service projects"</li> </ul>

Performance Measure	Definition (examples)
<b>Relationships</b>	
Staff-youth relationships*	% of participants who report a supportive adult in the program <ul style="list-style-type: none"> <li>On a scale of 1 to 5, "I felt supported by the adults in the program."</li> </ul>
Peer relationships*	% of participants who reported positive peer relationships <ul style="list-style-type: none"> <li>On a scale of 1 to 5, "The friends I made during this program will help me make positive choices in the future."</li> </ul>

## 8. Family Strengthening

Family-strengthening programs educate parents on the risks and challenges facing their adolescents, reinforce messages regarding teenage pregnancy and healthy lifestyles, and provide family activities in an effort to strengthen family relationships. Family-strengthening activities usually occur in conjunction with another component and target the family members of the participating youth. The programs provide family-strengthening opportunities in a wide variety of formats, from one-time events to ongoing, regularly scheduled programming. Examples of family-strengthening activities include family nights, weekend barbecues, homework designed to guide parent-child communication, and parent-child reading. In addition, some DHS-funded programs use curricula such as "Can We Talk" or "SMART Parents" to foster parent-child relationships. During family-strengthening events, parents are exposed to the program in which their children are participating and might learn general parenting concepts and skills to help prevent negative behaviors, like drug use and sexual activity. *Exhibit IV.17* lists recommended outcome measures for family-strengthening programs.

### Exhibit IV. 17: Recommended Outcome Measures for Family-Strengthening Programs

Performance Measure	Definition (examples)
<b>Knowledge</b>	
Youth: Parents and adult family members viewed as a resource	% of youth participants who report increased knowledge that parents and adult family members are an important resource <ul style="list-style-type: none"> <li>On a scale of 1 to 5, "Because of this program, I learned that my parents or other adult family members are a good resource if I have important questions about school, work, risky behaviors, and my goals."</li> </ul>
Adults: Parents and other adult relatives see themselves as a resource	% of parents and adult family members who as a result of the program understand they are an important resource to their children [if applicable] <ul style="list-style-type: none"> <li>On a scale of 1 to 5, "If my child has important questions about school, work, risky behaviors, and goals, he or she should talk to me or another adult relative."</li> </ul>
Adults: Effect of parents and families on school success	% of parents and adult family members who understand as a result of the program how to help children succeed in school

Performance Measure	Definition (examples)
	<ul style="list-style-type: none"> <li>On a scale of 1 to 5, "I know there are actions I can take to help my child succeed in school."</li> </ul>
<b>Attitudes and Beliefs</b>	
Youth: Confidence and self-efficacy in talking to a parent or other adult family member	<p>% of participants who report feeling more confident they can talk to a parent or other adult relative</p> <ul style="list-style-type: none"> <li>On a scale of 1 to 5, "Because of this program, I am confident that I can talk to a parent or other adult family member about whatever is on my mind."</li> </ul>
Adults: Confidence and self-efficacy in talking to a child	<p>% of parent or other adult family members who report because of the program they are able to talk to their children</p> <ul style="list-style-type: none"> <li>On a scale of 1 to 5, "I am comfortable talking to my child about whatever is on his or her mind."</li> </ul>
<b>Skills</b>	
Youth: Communication skills	<p>% of participants who report attaining communication skills</p> <ul style="list-style-type: none"> <li>On a scale of 1 to 5, "Because of this program, I learned how to communicate effectively with my parents and other family members."</li> <li>On a scale of 1 to 5, "Because of this program, I learned how to talk to my parents or a trusted adult about whatever is on my mind."</li> </ul>
Adults: Communication skills	<p>% of adult participants who report attaining communication skills</p> <ul style="list-style-type: none"> <li>On a scale of 1 to 5, "Because of this program, I learned how to communicate effectively with my child."</li> <li>On a scale of 1 to 5, "Because of this program, I learned how to listen to my child and discuss whatever is on his or her mind."</li> </ul>
<b>Behavior</b>	
Communication with parents and other family members	<p>% of participants who talked with their parents or other family members as a result of the program since the program began</p> <ul style="list-style-type: none"> <li>On a scale of 1 to 5, "Since completing the program, I have talked with a parent or another trusted family member about an issue that was important to me."</li> </ul>
Family time	<p>% of participants who report spending more time as a family as a result of the program</p> <ul style="list-style-type: none"> <li>On a scale of 1 to 5, "Since I completed this program, my family spends more time together."</li> <li>On a scale of 1 to 5, "Since I completed this program, my family participates in more social activities together."</li> </ul>
Parent or adult involved in school-related activities	<p>% of participants who report their parents or other adults are involved in school work as a result of the program</p> <ul style="list-style-type: none"> <li>On a scale of 1 to 5, "My parents or other adult relatives often ask whether my homework is complete."</li> <li>On a scale of 1 to 5, "My parents or other adult relatives attended a school event."</li> </ul>



Performance Measure	Definition ( <i>examples</i> )
<b>Relationships</b>	
Parent-child relationship	% of participants who reported a supportive relationship with a parent or other adult relative <ul style="list-style-type: none"> <li>On a scale of 1 to 5, "I feel supported by my parents and the other adults in my life."</li> </ul>
Parent-school relationship	% of parents or other adult relatives who feel "connected" to their child's school. <ul style="list-style-type: none"> <li>On a scale of 1 to 5, "Because of this program, I feel more welcomed at my child's school."</li> </ul>
Youth-school relationship*	% of participants who feel "connected" to their school due to program. <ul style="list-style-type: none"> <li>On a scale of 1 to 5, "Because of this program, I feel proud to belong to my school."</li> </ul>

## D. Example of Hypothetical Provider

Considerable variation exists in the content of DHS-funded TPP and PYD programs. Some providers operate a program with one discrete component, such as a comprehensive sex education or service learning/job preparation. For these providers, selecting performance measures is straightforward. Each component has, essentially, a "slate" of measures.

Other providers operate programs with several components. For example, a provider might combine an abstinence-only education curriculum with sports or other recreational activities. For this provider, performance measures would be drawn from multiple slates.

This subsection describes how a hypothetical provider would report outcomes. (Outputs are the same regardless of the nature of the program.)

This provider runs a program with the following program components:

- Academic Support** in the form of a twice-weekly after-school study hall
- Enrichment and Recreation** in the form of cultural and recreational after-school activities
- Decision-making and Positive Choices** in the form of a curriculum that focuses on dangers of risky behaviors (e.g., alcohol, tobacco, and other drugs; sexual activity) as well as goal-setting

*Exhibit IV.18* lists the academic support and decision-making and positive choices measures for this provider. The exhibit combines the measures for academic support and decision-making and positive choices components, while eliminating redundancies (indicated by an asterisk).

**Exhibit IV. 18: Recommended Outcome Measures  
for a Hypothetical Provider's Multiple Components**

Performance Measure	Definition (examples)
<b>Knowledge:</b> There is one measure, from the decision-making and positive choices slate.	
Effect of risky behavior on goal attainment	% of participants who report that risky behavior can affect attainment of goals <ul style="list-style-type: none"> <li>On a scale of 1 to 5, "As a result of this program, I understand better how risk-taking behaviors (e.g., drinking, drug use, sexual activity) can affect my long-term goals."</li> </ul>
<b>Attitudes and Beliefs:</b> There are seven measures. Three are related to academic support, one is related to decision-making and positive choices, and three are related to enrichment and recreation.	
Confidence and self-efficacy in school success	% of participants who report feeling more confident they can and will do well in school <ul style="list-style-type: none"> <li>On a scale of 1 to 5, "As a result of this program, I have confidence that if I apply myself, I can do well in school."</li> <li>On a scale of 1 to 5, "As a result of this program, I believe that if I study hard, I will get better grades."</li> </ul>
Value education	% of participants who report valuing education because of the program <ul style="list-style-type: none"> <li>On a scale of 1 to 5, "As a result of this program, I believe that education is important."</li> </ul>
Confidence and self-efficacy in making healthy decisions	% of participants who report feeling more confident they can and will make good decisions <ul style="list-style-type: none"> <li>On a scale of 1 to 5, "As a result of this program, I am confident that I can and will make healthy decisions that will contribute to goals and success."</li> </ul>
Confidence and self-efficacy in learning something new	% of participants who report feeling more confident they can and will learn a new skill or craft <ul style="list-style-type: none"> <li>On a scale of 1 to 5, "Because of this program, I am confident that I can learn something new" (i.e., a skill, sport, craft).</li> </ul>
Value learning something new	% of participants who report because of the program they value learning new things <ul style="list-style-type: none"> <li>On a scale of 1 to 5, "As a result of this program, I believe that learning new things is important."</li> </ul>
Value cultural heritage	% of participants who report because of the program they value their cultural heritage more <ul style="list-style-type: none"> <li>On a scale of 1 to 5, "As a result of this program, I have an increased appreciation of my culture"</li> </ul>
<b>Skills:</b> There are five measures. Two are related to decision-making and positive choices, two are related to academic support, and one is related to enrichment and recreation.	
Study skills	% of participants who report they learned studying skills <ul style="list-style-type: none"> <li>On a scale of 1 to 5, "Because of this program, I learned skills that will help me complete my homework on time."</li> <li>On a scale of 1 to 5, "Because of this program, I learned to ask for help</li> </ul>

Performance Measure	Definition (examples)
	<i>when I need it."</i>
Learned a new skill	% of participants who report learning a new skill during the program <ul style="list-style-type: none"> <li>On a scale of 1 to 5, "Because of this program, I learned a new skill."</li> </ul>
Decision-making skills	% of participants reporting acquisition of decision-making skills <ul style="list-style-type: none"> <li>On a scale of 1 to 5, "Because of this program, I know how to weigh various options and make a good decision that will contribute to my goals and success."</li> </ul>
Resistance and refusal skills	% of participants who report attaining refusal skills <ul style="list-style-type: none"> <li>On a scale of 1 to 5, "Because of this program, I learned how to say 'no' to behaviors that can derail my goals" (e.g., drug and alcohol use, sexual activity).</li> </ul>
<b>Behavior:</b> There are seven measures, two from the academic support slate, three decision-making and positive choices, and two from enrichment and recreation.	
Homework completion	% of participants who report completing their homework regularly <ul style="list-style-type: none"> <li>On a scale of 1 to 5, "Because of this program, I complete my homework on time more often."</li> </ul>
Time spent studying	% of participants who report increasing the time they study since the program began <ul style="list-style-type: none"> <li>On a scale of 1 to 5, "I spend more hours doing homework or school work since completing the program."</li> </ul>
Participated in recreational activities	% of participants who report increasing the time they participate in recreational activities since the program began <ul style="list-style-type: none"> <li>On a scale of 1 to 5, "I spend more hours participating in organized recreational activities because of this program."</li> </ul>
Participated in cultural activities	% of participants who report increasing the time they participate in cultural activities since the program began <ul style="list-style-type: none"> <li>On a scale of 1 to 5, "I spend more hours participating in cultural activities because of this program."</li> </ul>
Goal-setting	% of participants who report they set goals <ul style="list-style-type: none"> <li>On a scale of 1 to 5, "Because of this program, I developed goals for my future."</li> </ul>
Avoidance of risky behaviors	% of participants who report abstaining from risky behaviors (e.g., drug and alcohol use, sexual activity or unprotected sexual activity) <ul style="list-style-type: none"> <li>On a scale of 1 to 5, "Because of this program, I currently abstain from using alcohol, tobacco, and other drugs."</li> <li>On a scale of 1 to 5, "Because of this program, I avoid risky sexual behavior, either by abstaining from sex or using condoms or other contraception consistently and correctly."</li> </ul>

Performance Measure	Definition ( <i>examples</i> )
<b>Relationships:</b> There are three measures. They are included on all three slates of performance measures (academic support, decision-making and positive choices, and enrichment and recreation). The measures are included only once.	
Staff-youth relationships*	% of participants who report a supportive adult in the program <ul style="list-style-type: none"> <li>On a scale of 1 to 5, "I felt supported by the adults in the program."</li> </ul>
Peer relationships*	% of participants who report positive peer relationships <ul style="list-style-type: none"> <li>On a scale of 1 to 5, "The friends I made during this program will help me make positive choices in the future."</li> </ul>
Youth-school relationship*	% of participants who feel "connected" to their school due to program. <ul style="list-style-type: none"> <li>On a scale of 1 to 5, "Because of this program, I feel proud to belong to my school."</li> </ul>

## V. CONCLUSION

Many youth in Hawaii are at risk of negative outcomes due to risky behavior, such as unprotected sexual activity and substance abuse. Although trends are moving in a positive direction for most behaviors—rates of sexual activity, teenage pregnancy, and births are declining, as are rates of alcohol, tobacco, and other drug use—a sizable minority of youth are still at risk. Research suggests that these outcomes can have negative implications for youth and society. Teenage parenthood, for example, has implications for the educational attainment and subsequent economic wellbeing of the teenage mother, teenage father, and the children born to teenage parents.

Because of the link between non-marital childbearing and welfare receipt, decreasing non-marital pregnancies is an explicit goal of the TANF program (Purpose #3). In recent years, DHS, which administers the TANF program in Hawaii, has dedicated funds to this prevention-related goal in an effort to decrease entry into the welfare system. In some instances, DHS contracts directly with providers. In most cases, however, DHS has an MOA with other state departments or agencies to identify and contract with providers.

DHS identified a PYD approach as the mechanism for decreasing teenage pregnancies as well as other risky behaviors that can derail a successful transition to adulthood and self-sufficiency, thus putting the youth at risk of dependence. DHS adopted this approach because (1) a broader PYD approach is expected to be more cost effective than a narrower TPP approach and (2) a PYD approach yields numerous other social benefits related to fostering self-sufficiency.

### A. Findings

Our literature review identified key antecedents of teenage pregnancy and examined the programmatic approaches that address these risk and protective factors. We found eight general program approaches to preventing teenage pregnancy. Abstinence-only education, comprehensive sex education, and access to reproductive health and family planning services

constitute the three main approaches aimed at the main sex-related antecedent of teenage pregnancy — unprotected sex. The other five approaches — academic support, recreation and enrichment, family strengthening, decision-making and positive choices, and service learning/job preparation — address the underlying non-sex-related antecedents of teenage pregnancy as well as factors directly associated with a delay in transition to self-sufficiency. Though the quality of evidence varies across studies, strong evidence exists that these programs can change knowledge and behavioral intentions, and more limited evidence indicates that these programs change risk-taking behaviors — such as delay in sexual initiation, consistent use of condoms or other contraceptives, decrease in the number of partners, and reduction in use of alcohol and other drugs. In short, despite the need for additional research, evidence suggests that each of these approaches holds promise for preventing and reducing teenage pregnancy.

Through site visits to a sample of 27 providers receiving DHS funds under its TPP and PYD initiative, we ascertained that DHS-funded providers implement one or more of these eight program approaches. Thus, DHS' initiative appears grounded in the literature on program approaches reasonably calculated to lead to prevention and reduction of out-of-wedlock pregnancy and PYD.

The site visits also allowed us to identify performance data being collected and reported to funders (which might be DHS or might be an MOA intermediary). Virtually all providers reported an interest in collecting data that can be used for program management, and they look forward to hearing about the findings from our study. All providers we visited were collecting some type of information on program performance. At a minimum, providers collected attendance information. Many also assessed program completion rates among participants. Some tracked referrals to other service providers, development of service plans, or enrollment in case management or counseling services. Many used pretests and posttests to measure changes in knowledge, behavior, and attitudes among participants. Some attempted to track longer-term outcomes, such as declines in dropout rates and pregnancy rates.

We also found variation in contractor reporting requirements. Some MOA holders, such as the OYS, developed detailed performance targets and milestones for contractors. Others are in the process of developing measures. Some require contractors to respond to a specific question in quarterly reports (e.g., the number served with DHS funds). Still others give contractors much latitude in reporting performance.

Distilling information on provider MOAs, requests for proposals (RFP) and scopes of work, our literature review, and performance measures from our site visits, we were able to come up with a “core” set of performance measures that capture what programs produce (outputs) as well as a set of performance measures — one set for each of the eight major intervention components — that capture the benefits to participants on program completion (immediate outcomes). In the end, we found that few measures are necessary to capture program performance, despite the variety of program curricula and services offered by individual providers.

## **B. Implications for DHS Program Management**

DHS is interested in using performance measures for future TANF TPP-related contracts. Although DHS ultimately will determine how to implement the recommended performance measures, we offer the following options:

- At the RFP stage, DHS could require or recommend that applicants for TANF TPP-related funds identify which of the eight intervention components it plans to implement. DHS could also require applicants to propose how they will collect information that will enable them to report on the recommended output performance measures and the immediate outcome measures germane to the proposed program approach.
- As part of the contract award, DHS could require the contractor to report on the output performance measures and relevant outcome performance measures.

DHS can facilitate this process for contractors by providing:

- At the RFP stage, a list and brief description of each of the eight major intervention components to help applicants identify and categorize the strategies they propose to implement.
- After contract award, guidance to contractors – or MOA holders, who in turn will guide contractors – on how to collect the information necessary to document performance and to report the performance measures to DHS or another department (i.e., MOA holder) , as appropriate. The nature of this guidance could involve the following:
  - Description of the source and mode of data collection (i.e., post-participation surveys)
  - Content of the post-participation survey (i.e., component-specific questions)
  - Method for calculating output performance measures (i.e., program participation rates, capacity, service delivery) and desired output thresholds (e.g., 80 percent of enrollees complete the program).
  - Desired reporting format, to facilitate contractors’ consistent reporting of performance, to enable DHS and its MOA holders to track what contractors are achieving with program funds, and to compare and contrast performance across contractors.

In sum, this study found that DHS is implementing a wide variety of programs that address research-based risk and protective factors for teenage pregnancy; these programs adopt one or more research-based intervention components focusing on the narrower goal of TPP, the broader goal of PYD, or both. We propose a relatively small set of performance measures that providers could use to track and report performance to DHS and options for implementing these measures to ensure the providers’ consistent reporting of performance. With a common set of performance measures implemented consistently, DHS will be able to track what providers are achieving with program funds and report these achievements to key stakeholders.

## **APPENDIX A: DHS TEEN PREGNANCY PREVENTION AND POSITIVE YOUTH DEVELOPMENT CONTRACTS**

### Exhibit A.1: Program Providers

Vendor	Contract Area	Number of Contracts	Number of Program Sites	Locations	Number of Sites Visited
Department of Defense	About Face!	1	5	Waimea, Kauai Waianae, Oahu Pahoa, Hawaii Kapa'a, Kauai Keeau, Hawaii	2 (These sites are also DoD Healthy Lifestyles sites.)
Department of Defense	Healthy Lifestyles	1	12	Maui Lana'i Kapa'a, Kauai Papakolea, Oahu Waianae, Oahu Kauai Honoka'a, Hawaii Waimea, Kauai Nanakuli/Waianae, Oahu Pahoa, Hawaii Wailuku/Kahului, Maui	6 (Two are also DoD About Face! sites.)
Department of Education	UPLINK (Uniting Peer Learning, Integrating New Knowledge)	2 (Molokai and statewide)	9	Molokai Honolulu, Oahu (3) Waimanalo, Oahu Hilo, Hawaii Lihue, Kauai Kahalui, Maui Wailuku, Maui	4 (One is also an OYS-funded program.)
KALO	Teen Pregnancy Prevention	1	10	Keaukaha, Hawaii Pahoa, Hawaii Waimea, Kauai Kane'ohe, Oahu (2) Kalihi, Oahu Anahola, Kauai Kekaha, Kauai Manoa/Papakolea/Maunaloa, Oahu Wai'anae/Makaha, Oahu	3
DHS Office of Youth Services	Teen Pregnancy Prevention and Family Strengthening	12	12	Kalihi, Oahu (3) Honolulu, Oahu (2) Nanakuli, Oahu Ewa Beach, Oahu Waimea, Kauai Pahoa, Hawaii Hilo, Hawaii Keeau, Hawaii Wailuku, Maui	7 (One is also an UPLINK program.)



Vendor	Contract Area	Number of Contracts	Number of Program Sites	Locations	Number of Sites Visited
State Foundation for Culture and the Arts	Teen Pregnancy Prevention through Culture and the Arts	1	35	Honolulu, Oahu (17) Kaneohe, Oahu Hilo, Hawaii (3) Kamuela, Hawaii Naalehu, Hawaii (2) Honaunau, Hawaii Kailua-Kona, Hawaii Lihue, Kauai (2) Makawao, Maui (2) Lahaina, Maui Wailuku, Maui (2) Kahului, Maui Lanai City, Lanai	1
Department of Education	Teen Pregnancy Prevention through Peer Education Program (PEP) and GRADS Training ("Reducing the Risk" and "Making a Difference" curricula)	1	10	Honolulu, Oahu (3) Pahoa Hawaii Kahului, Maui Waimanalo, Oahu Hilo, Hawaii Lihue, Kauai Kahului, Maui Wailuku, Maui	2
Read Aloud America	Teen Pregnancy Prevention through Literacy Training and Family Strengthening	1	6	Waipahu, Oahu Mililani, Oahu Nanakuli, Oahu Kalihi, Oahu Kaunakakai, Oahu Molokai	1
Kapiolani Medical Center	Parent and Child Education Program (PACE)	1	1	Honolulu, Oahu	1
<b>TOTAL</b>		21	100	(NA)	26

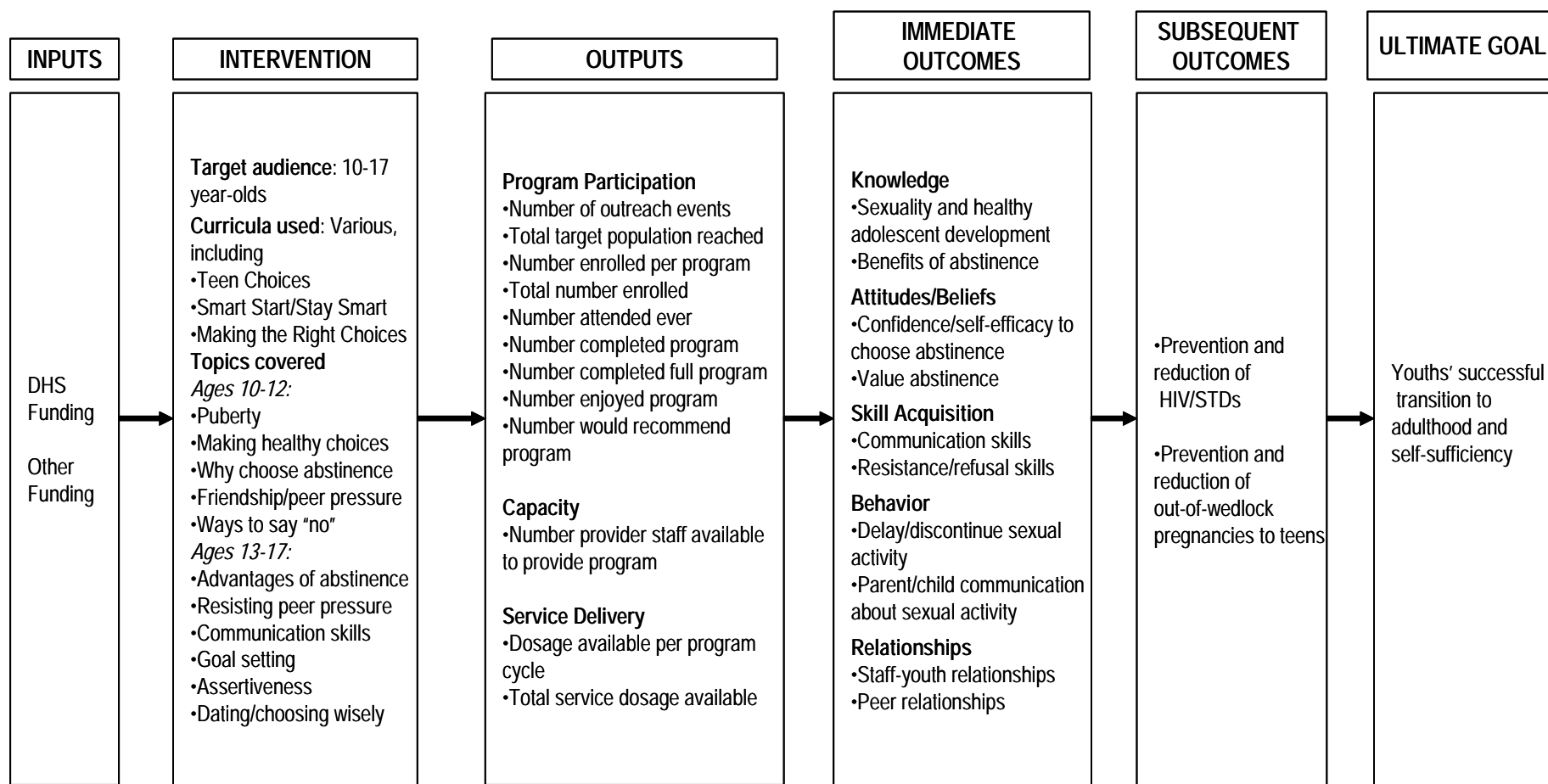
## APPENDIX B: COMPONENT-SPECIFIC LOGIC MODELS

## Exhibit B.1: Abstinence-Only Education

**ULTIMATE GOAL:** Youths' successful transition to adulthood and self-sufficiency

### UNDERLYING ASSUMPTIONS

By promoting abstinence as the best way to prevent pregnancy and STDs and providing youth with the necessary information and skills to choose abstinence, youth are motivated and equipped to remain abstinent or discontinue sexual activity



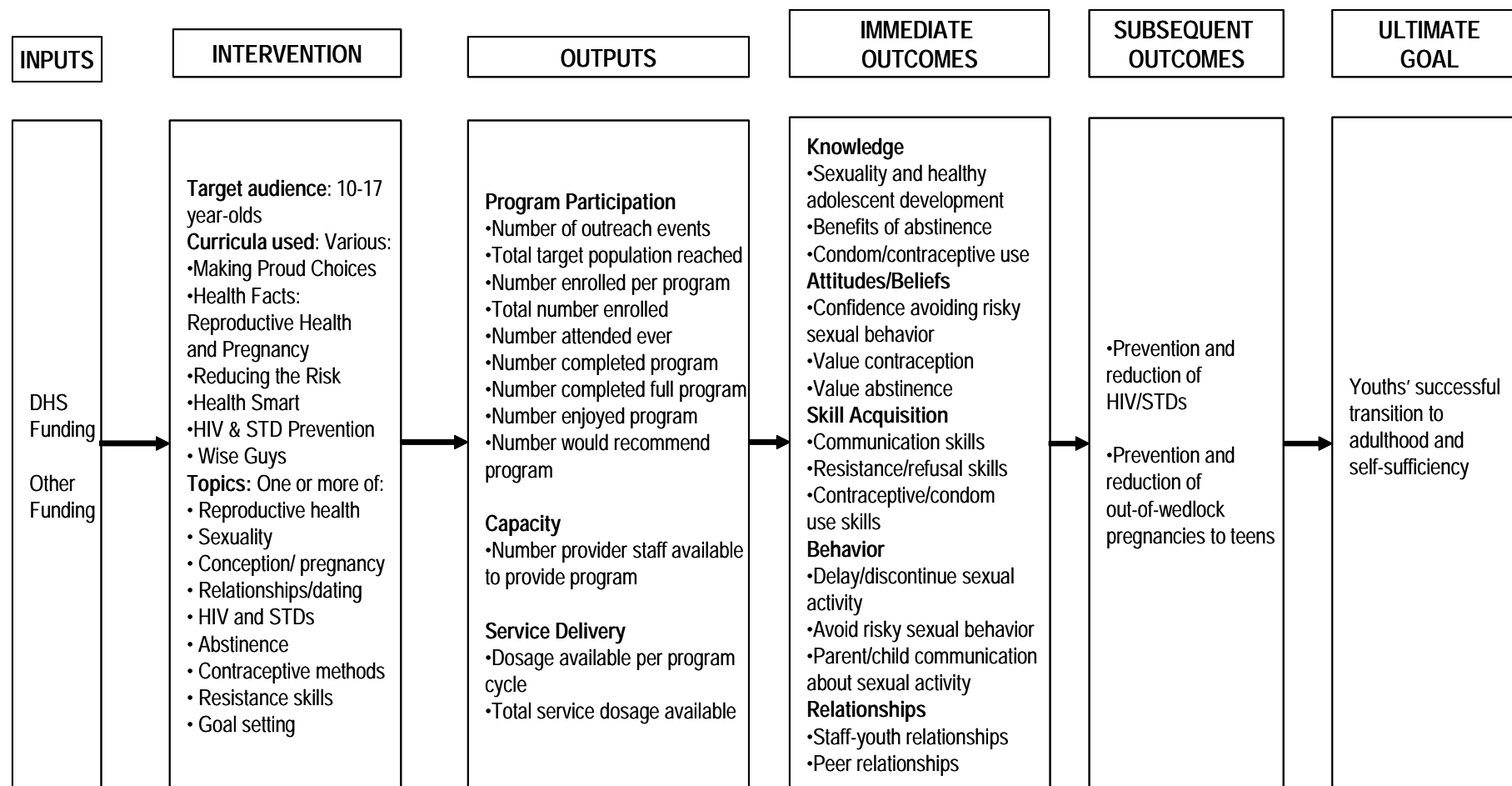
### CONTEXT

Prevalence of risk-taking behaviors, unsupervised time due to parental job demands, lack of positive outlets for out-of-school time, limited communication between parents and children regarding healthy development/risky behavior, peer pressure, low levels of confidence/self-efficacy

**Exhibit B.2: Comprehensive Sex Education**  
**ULTIMATE GOAL:** Youths' successful transition to adulthood and self-sufficiency

**UNDERLYING ASSUMPTIONS**

By increasing knowledge about reproductive health, benefits of abstinence, contraception and condom use, and avoidance of STDs; instilling self-respect and building self-efficacy; and by promoting pregnancy prevention; youth are motivated and equipped to avoid pregnancy.



**CONTEXT**

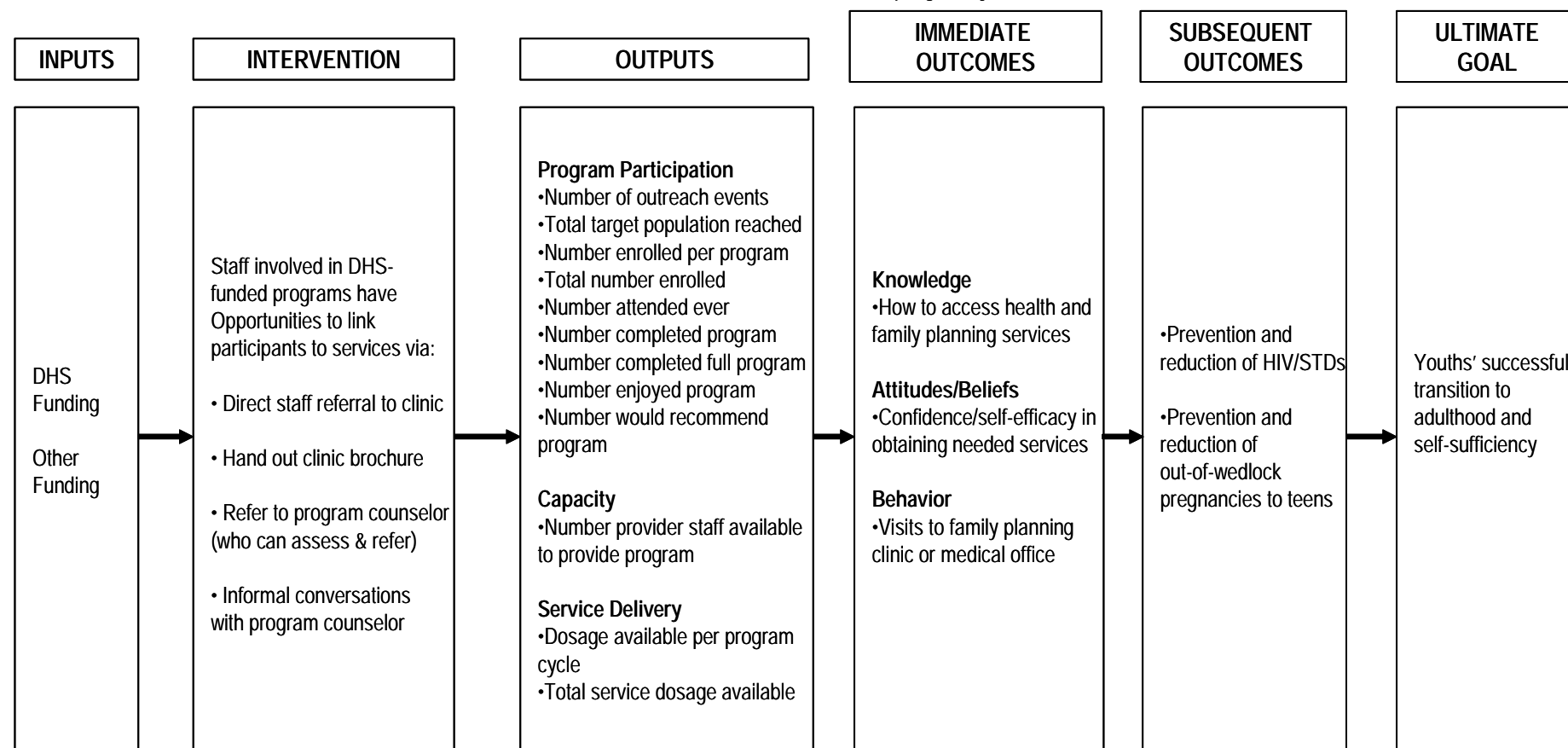
Prevalence of risk-taking behaviors, unsupervised time due to parental job demands, lack of positive outlets for out-of-school time, limited communication between parents and children regarding healthy development/risky behavior, peer pressure, low levels of confidence/self-efficacy

## Exhibit B.3: Access to Reproductive Health and Family Planning Services

**ULTIMATE GOAL:** Youths' successful transition to adulthood and self-sufficiency

### UNDERLYING ASSUMPTIONS

By informing youth of available family planning services in their community and/or providing counseling and family planning services directly, youth have access to the resources needed to avoid pregnancy.



### CONTEXT

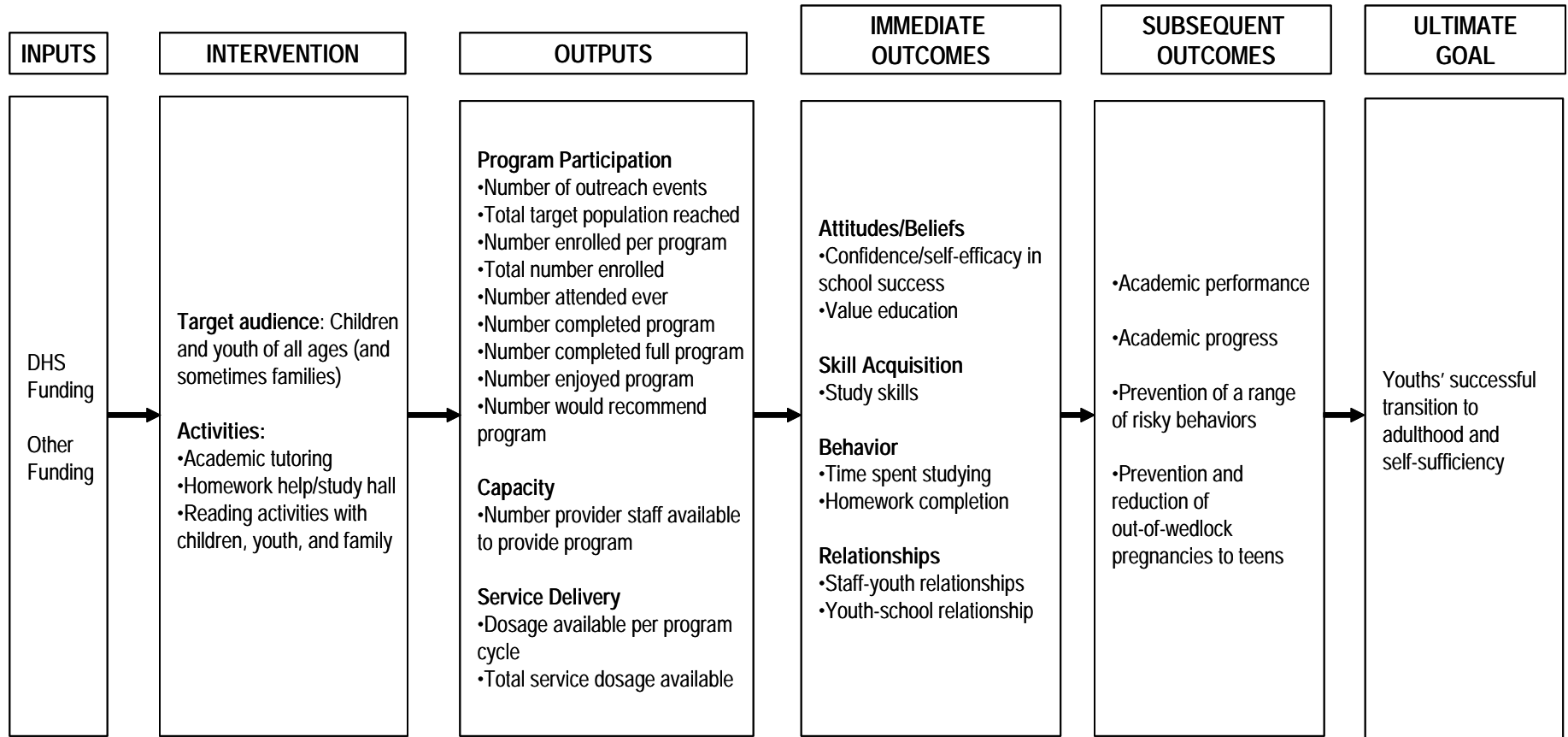
Prevalence of risk-taking behaviors, unsupervised time due to parental job demands, lack of positive outlets for out-of-school time, limited communication between parents and children regarding healthy development/risky behavior, peer pressure, low levels of confidence/self-efficacy

## Exhibit B.4: Academic Support

**ULTIMATE GOAL:** Youths' successful transition to adulthood and self-sufficiency

### UNDERLYING ASSUMPTIONS

By helping students achieve in school and instilling the importance of education for achieving future goals, youth are better prepared for—and are less likely to engage in risky behaviors that may derail their pathway toward—self-sufficiency.



### CONTEXT

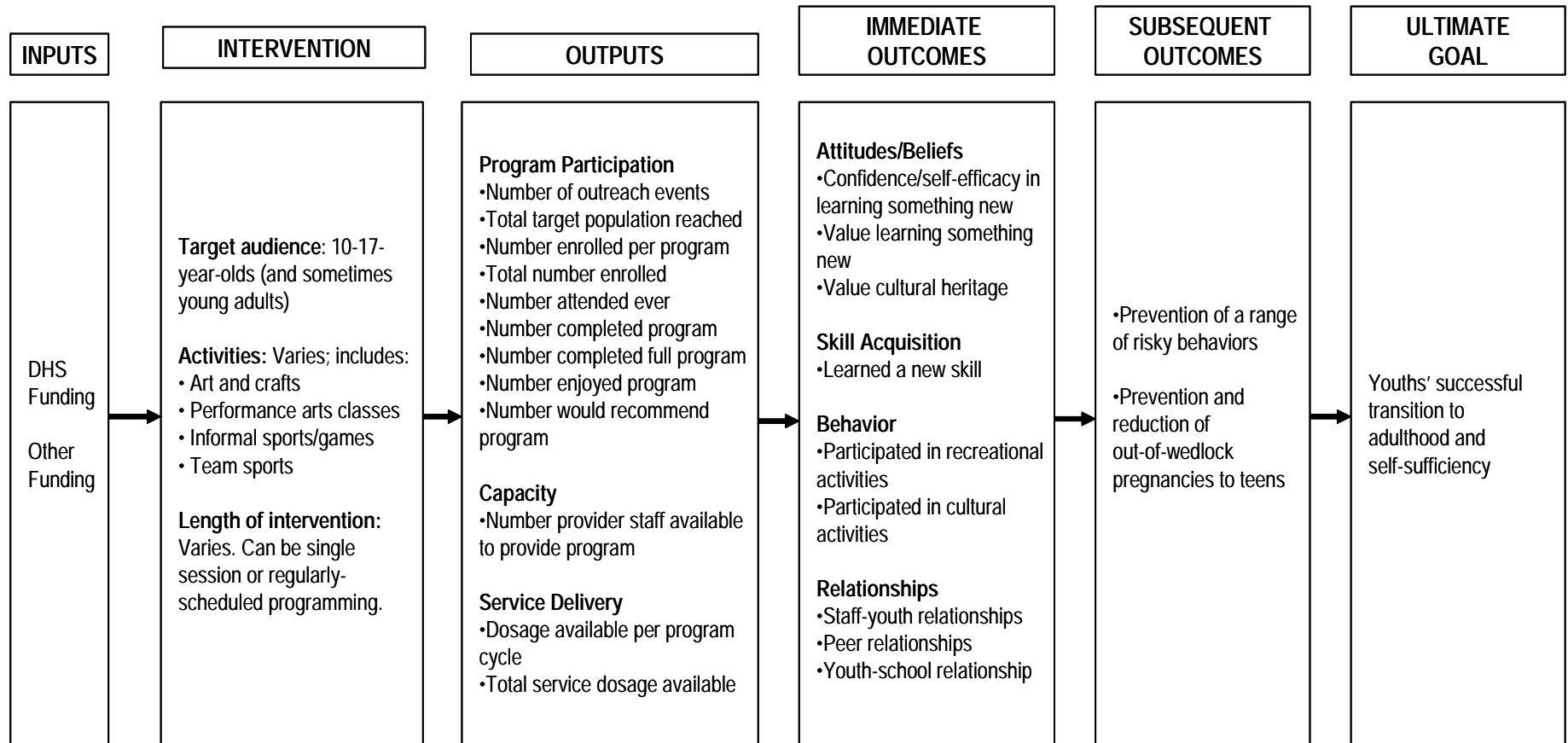
Prevalence of risk-taking behaviors, unsupervised time due to parental job demands, lack of positive outlets for out-of-school time, limited communication between parents and children regarding healthy development/risky behavior, peer pressure, low levels of confidence/self-efficacy

## Exhibit B.5: Enrichment and Recreational Activities

**ULTIMATE GOAL:** Youths' successful transition to adulthood and self-sufficiency

### UNDERLYING ASSUMPTIONS

By engaging youth in safe, supervised, constructive (often cultural) activities with peers and supportive adults during out-of-school hours, youth have less opportunity and are less motivated to engage in risky behaviors, they feel a greater connection to their heritage, community, and each other, and they feel more supported in their pathway to self-sufficiency.



### CONTEXT

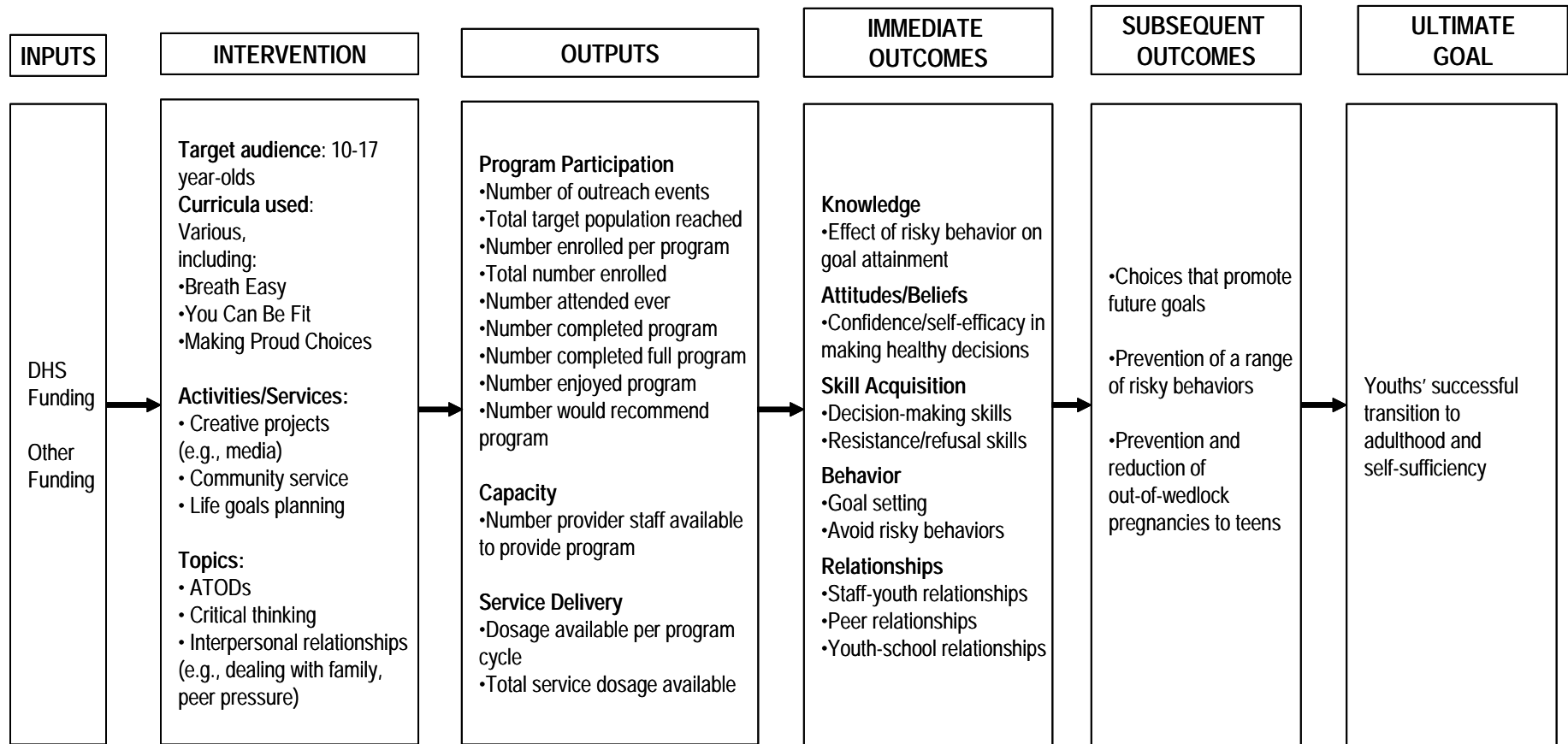
Prevalence of risk-taking behaviors, unsupervised time due to parental job demands, lack of positive outlets for out-of-school time, limited communication between parents and children regarding healthy development/risky behavior, peer pressure, low levels of confidence/self-efficacy

## Exhibit B.6: Decision-making Skills/Positive Choices

**ULTIMATE GOAL:** Youths' successful transition to adulthood and self-sufficiency

### UNDERLYING ASSUMPTIONS

By increasing youth's awareness of the consequences of risky behavior, improving their decision-making skills, and helping them identify future goals, youth are motivated and better-equipped to make positive choices about their health and behavior and avoid risky behavior.



### CONTEXT

Prevalence of risk-taking behaviors, unsupervised time due to parental job demands, lack of positive outlets for out-of-school time, limited communication between parents and children regarding healthy development/risky behavior, peer pressure, low levels of confidence/self-efficacy

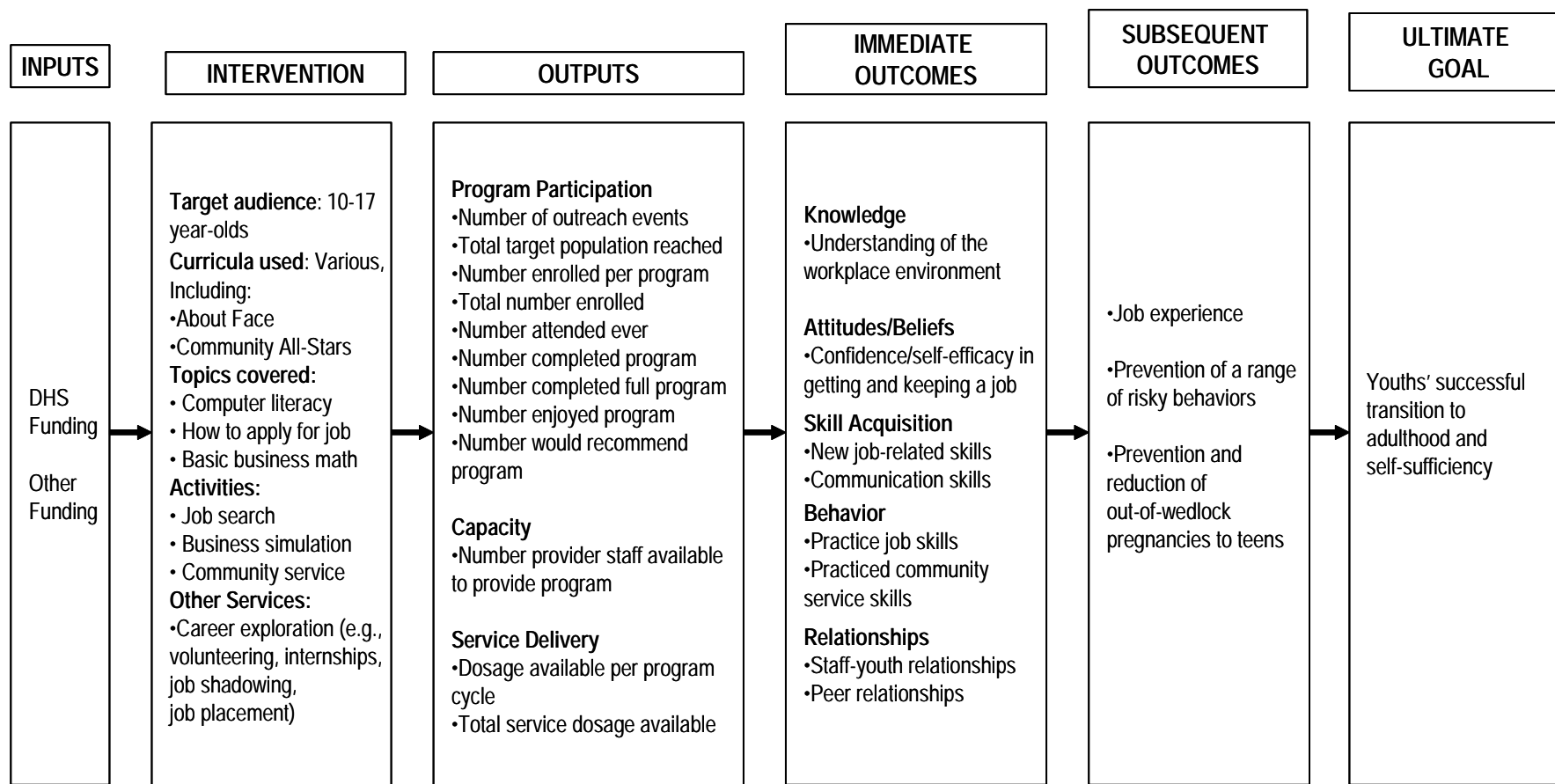


## Exhibit B.7: Service Learning/Job Preparation Skills

**ULTIMATE GOAL:** Youths' successful transition to adulthood and self-sufficiency

### UNDERLYING ASSUMPTIONS

By providing job skills and instilling the importance of responsibility and fulfilling commitments, youth are better prepared for—and are less likely to engage in risky behaviors that may derail their pathway toward—self-sufficiency.



### CONTEXT

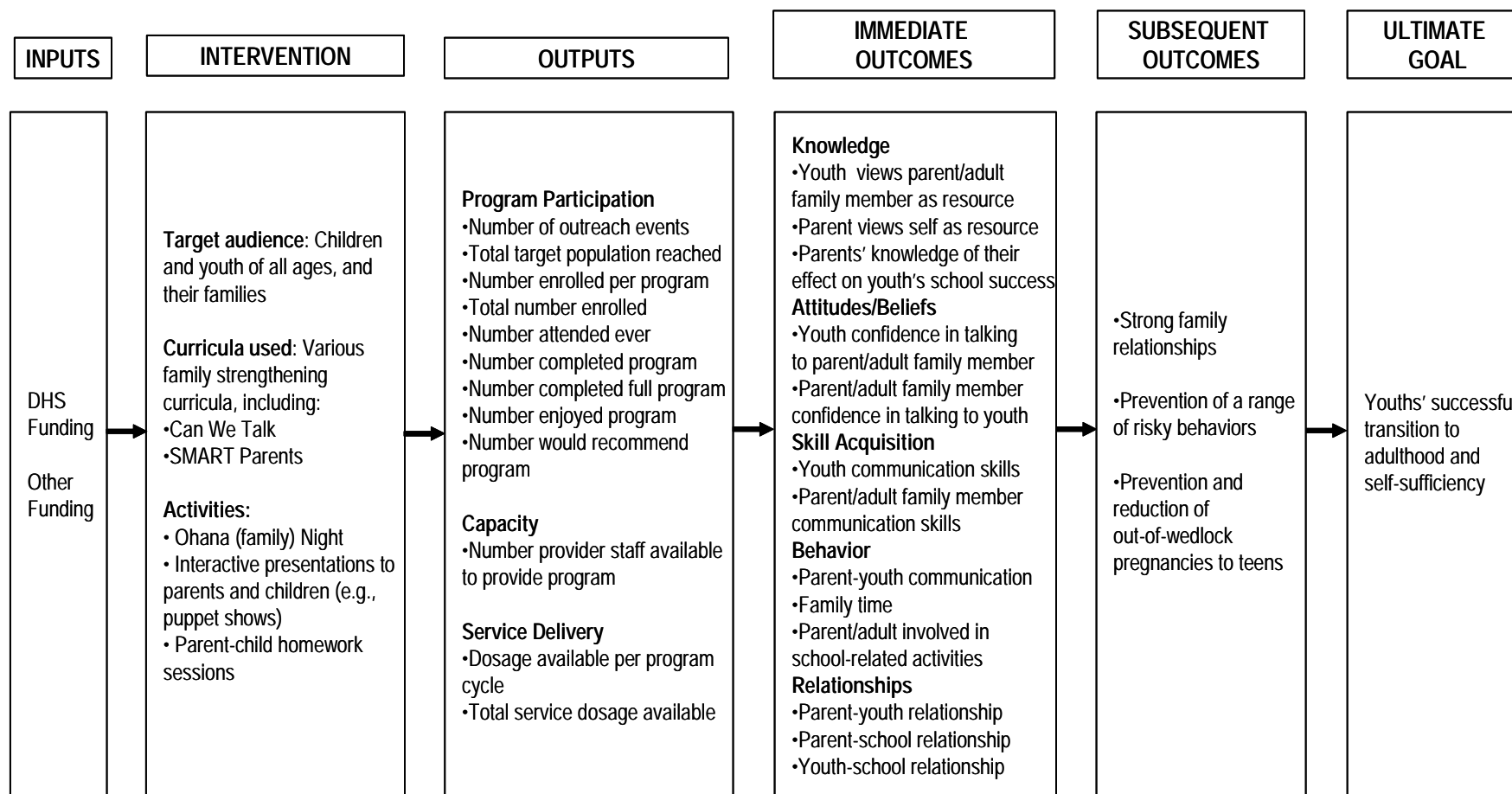
Prevalence of risk-taking behaviors, unsupervised time due to parental job demands, lack of positive outlets for out-of-school time, limited communication between parents and children regarding healthy development/risky behavior, peer pressure, low levels of confidence/self-efficacy

## Exhibit B.8: Family Strengthening

**ULTIMATE GOAL:** Youths' successful transition to adulthood and self-sufficiency

### UNDERLYING ASSUMPTIONS

By educating parents on the risks and challenges facing their adolescents, reinforcing messages regarding teen pregnancy and healthy lifestyles, and by providing family activities, youth's family relationships are strengthened and they feel more supported in their pathway to self-sufficiency.



### CONTEXT

Prevalence of risk-taking behaviors, unsupervised time due to parental job demands, lack of positive outlets for out-of-school time, limited communication between parents and children regarding healthy development/risky behavior, peer pressure, low levels of confidence/self-efficacy

## **APPENDIX C: OFFICE OF YOUTH SERVICES OUTPUT MEASURES**

The Office of Youth Services (OYS) developed a form for its contractors that reports performance targets and milestones. Each OYS contract has slightly different targets and milestones. The following is one example.

- **Performance Target:** Of 300 at risk youth contacted/referred, 20 percent will register for intervention and maintain participation/contact with intervention to completion or for 6 months beyond registration date.
  - Milestone: Complete registration/enrollment forms
  - Milestone: Youth participates in first activity in the current program year
  - Milestone: Youth participates in at least three activities per quarter
  - Milestone: Youth attends 80% of sessions of a age/gender appropriate sex education curriculum
  - Milestone: Last milestone is the same as the overall performance target
  - Goals are tracked using: Enrollment forms, Attendance Log, Exit Completion Survey
- **Performance Target:** Of the 30 youth referred to or selected for the case management system, 15% will receive or be referred to an appropriate service based on an assessment and 12 of the youth receiving services will complete an individual service plan, remain arrest free, postpone sexual involvement, and document improvement in school performance within nine months of initiating the service plan and maintain the improvement for three months after completing the plan
  - Milestone: Youth are referred to case management
  - Milestone: Youth/family agree to enroll in case management services
  - Milestone: Youth/family attend assessment session and complete all required forms
  - Milestone: Youth develop ISP
  - Milestone: Youth attend 3 more sessions and/or complete one step toward meeting educational goal
  - Milestone: Youth attend 3 more sessions and/or complete a second step toward meeting educational goal
  - Milestone: Youth attend 3 more sessions and/or complete a third step toward meeting educational goal
  - Milestone: Youth continues to show progress in completing the ISP 6 months after the implementation date
  - Milestone: Youth will reach self-identified goals and complete ISP within 9 months
  - Milestone: Last milestone is the same as the overall performance target
  - Goals are tracked using: Referral logs, Screening form, Assessment documentation, ISP, Case record, Quarterly supervisory case review, Self report, Contacts with Family Court or PO (parole/probation officer), Family Evaluation, Report cards

- **Performance Target:** Of the 300 youth registered, 20% will participate in intervention and shall, after 6 months demonstrate achievement of minimum standards of social and academic performance (using SAP scale) and maintain that increase or achievement 6 months after completing the intervention
  - Milestone: Youth/family completes registration/enrollment forms
  - Milestone: Youth will complete homework assignments in at least 20% of study hall sessions offered
  - Milestone: Youth will average 5 or fewer absences at school per quarter
  - Milestone: Youth will successfully complete at least 1 seasonal activity within 6 months of starting program
  - Milestone: Youth will achieve/maintain 2.0 or better GPA
  - Milestone: Youth will participate in 3 community service activities within a year
  - Milestone: Last milestone is the same as the overall performance target
  - Goals are tracked using: Enrollment forms, Attendance logs, Report cards, SAP chart
- **Performance Target:** Of the 200 parents or significant adults with registered youth, 15% will demonstrate the ability to communicate effectively with and support adolescents dealing with pressures related to sexuality, sexual development, and sexual activity as reported by youth and adults and maintain that ability for 6 months beyond the completion of the program
  - Milestone: Parent/significant adult completes registration/enrollment packets that allow their children to participate
  - Milestone: Parent/significant adult will participate in 1 activity
  - Milestone: Parent/significant adult will participate in one skill-building, family strengthening activity related to communication issues and/or pregnancy issues within 6 months
  - Milestone: Parent/significant adult will participate in two skill-building, family strengthening activity related to communication issues and/or pregnancy issues within 6 months
  - Milestone: After completing above milestone, parent/significant adult will demonstrate ability to communicate effectively with and support adolescents dealing with pressures related to sexuality, sexual development, and sexual activity
  - Milestone: Last milestone is the same as the overall performance target
  - Goals are tracked using: Enrollment forms, Attendance logs, Pre/Post tests, Interviews, Self report