Appendix B
New Risk and Protective Factor Scoring

Introduction

Starting in 2007, the *PAYS* will adopt a new risk and protective factor measurement and scoring model. While this new model uses the same survey data as the current model, it introduces a number of enhancements to the percentile scoring process. These enhancements create a more complete risk and protective factor profile for communities, allowing planners to more accurately identify problem areas in need of prevention intervention.

Tables B-1 and B-2 present 2005 risk and protective factor results for PAYS 2005 Statewide using the new scoring model. This enables communities to review the new methodology prior to its formal introduction in 2007. It also provides an opportunity to compare differences between the old and new models. This is important because scores generated with the new measurement and scoring model are not directly comparable to scores generated with the previous model. To address lack of comparability, future *PAYS* reports will recalculate historical risk and protective factor data with the new scoring model so communities can track changes over time.

The enhancements incorporated into the new risk and protective factor measurement and scoring model fall into three categories: (1) updates to several risk and protective factor scales, (2) the introduction of a new normative database, and (3) changes to grade-level scoring.

New Risk and Protective Factor Scales

1. The risk factor scale *Perceived Availability of Drugs and Handguns* has been divided into two independent scales: *Perceived Availability of Drugs* and *Perceived Availability of Handguns*. This change improves the utility of prevention data by creating separate measures for two distinct risk factors.

2. The risk factor scale *Laws and Norms Favorable to Drug Use and Handguns* has also been divided into two independent scales: *Laws and Norms Favorable to Drug Use* and *Laws and Norms Favorable to Handguns*. This change improves the utility of prevention data by creating separate measures for two distinct risk factors.

3. The other antisocial behavior components of the risk factor scale *Early Initiation (of Drug Use and Antisocial Behavior)* have been removed, and the scale has been renamed *Early Initiation of Drug Use*. This change improves both the reliability of the measure and its utility for prevention planning.

4. The risk factor scales *Poor Family Supervision* and *Poor Family Discipline* have been combined into a single scale called *Poor Family Management*. Analysis of *Communities That Care Youth Survey* data showed that the items that constitute the two scales are highly correlated across scales. This indicates that the items are more effective at representing a single dimension of family life.

5. The risk factor scale *Personal Transitions and Mobility* has been renamed *Transitions and Mobility*. The survey items constituting this scale remain unchanged.

6. The risk factor scale *Family Conflict* has been added.

7. The protective factor scale *Community Opportunities for Prosocial Involvement* has been added.

New Normative Data

As discussed in Section 5 of this report, percentile scores for each risk and protective factor scale are calculated by comparing survey responses to data in the *Communities That Care* normative database. The new scoring model utilizes the updated the *Communities That Care* normative database. This enhanced normative archive, which contains survey responses from over 280,000 students in grades 6 through 12, was compiled by combining the results of selected *Communities That Care Youth Survey* efforts conducted in 2000, 2001 and 2002. To enhance representativeness, statistical weights were applied to adjust the sample to exactly match the population of U.S. public school students on four key demographic variables: ethnicity, sex, socioeconomic status and urbanicity. Information on the U.S. public school student population was obtained from the Common Core of Data program at the U.S. Department of Education's National Center for Education Statistics.

Grade-Level Scoring

In previous *PAYS* efforts, risk and protective factor scale scores were calculated by comparing all respondents against a combined normative sample of students in grades 6, 8, 10, and 12. Because it contains a large number of respondents within each grade level, the new *Communities That Care* normative database allows the comparisons to be done on a grade-by-grade basis. This means that 6th graders who take the *PAYS* will only be compared with 6th grade responses in the normative database, 8th graders will only be compared with 8th grade responses, and so on. Grade-level comparisons improve the accuracy of norm-referenced scores.

Overall percentile scores for risk and protective factor scales are created by weighting the *Communities That Care* normative database to match the grade-level distribution of each survey sample.

Table B-1. New Protective Factor Scale Scores, PAYS 2005 Statewide 2005

		6th	7th	8th	9th	10th	11th	12th	Overall
Community Domain	Community Opportunities for Prosocial Involvement	59	--	63	--	63	--	59	61
	Community Rewards for Prosocial Involvement	55	--	54	--	53	--	49	53
Family Domain	Family Attachment	56	--	57	--	50	--	54	55
	Family Opportunities for Prosocial Involvement	56	--	56	--	50	--	52	54
	Family Rewards for Prosocial Involvement	54	--	58	--	53	--	52	54
School Domain	School Opportunities for Prosocial Involvement	56	--	58	--	56	--	48	55
	School Rewards for Prosocial Involvement	58	--	58	--	56	--	48	55
Peer and Individual Domain	Religiosity	49	--	48	--	46	--	49	48
	Belief in the Moral Order	63	--	65	--	59	--	53	60
Average		56	--	57	--	54	--	52	55

Table B-2. New Risk Factor Scale Scores, PAYS 2005 Statewide 2005

		6th	7th	8th	9th	10th	11th	12th	Overall
Community Domain	Low Neighborhood Attachment	41	--	44	--	45	--	48	44
	Community Disorganization	46	--	49	--	55	--	58	52
	Transitions and Mobility	55	--	53	--	49	--	49	52
	Laws and Norms Favorable to Drug Use	45	--	45	--	53	--	54	49
	Laws and Norms Favorable to Handguns	43	--	43	--	50	--	49	46
	Perceived Availability of Drugs	43	--	42	--	46	--	51	45
	Perceived Availability of Handguns	50	--	49	--	51	--	52	51
Family Domain	Poor Family Management	43	--	39	--	44	--	46	43
	Family Conflict	46	--	52	--	51	--	50	50
	Family History of Antisocial Behavior	45	--	44	--	45	--	45	45
	Parental Attitudes Favorable toward ATOD Use	45	--	45	--	51	--	53	49
	Parental Attitudes Favorable toward Antisocial Behavior	43	--	44	--	49	--	52	47
School Domain	Poor Academic Performance	44	--	42	--	44	--	47	44
	Lack of Commitment to School	46	--	42	--	45	--	53	46
Peer and Individual Domain	Rebelliousness	39	--	42	--	50	--	54	46
	Friends' Delinquent Behavior	42	--	44	--	45	--	50	45
	Friends' Use of Drugs	42	--	38	--	44	--	51	44
	Peer Rewards for Antisocial Behavior	43	--	45	--	55	--	60	51
	Favorable Attitudes toward Antisocial Behavior	36	--	37	--	42	--	47	40
	Favorable Attitudes toward ATOD Use	40	--	37	--	43	--	46	42
	Low Perceived Risks of Drug Use	46	--	41	--	44	--	51	45
	Early Initiation of Drug Use	40	--	39	--	45	--	47	43
	Sensation Seeking	41	--	40	--	44	--	47	43
Average		44	--	43	--	47	--	50	46