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**Truancy Interventions Pay Off in Jacksonville Florida:
A Cost-Benefit Analysis**

National Center for School Engagement

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Analysis

In Jacksonville, two program components were selected for cost benefit analysis: case management and Attendance Intervention Team Meetings. Since the benefits of education are generally not realized until after an individual completes his or her education and enters the workforce, the financial benefit assumed to result from successful intervention with a truant child is equated to that obtained by high school graduation. Assuming that the gender and racial composition of the 62 youth whose information was entered in the TRAIN database is representative of the population of children served by the Jacksonville program, the average benefit of providing the means for one child to graduate from high school is \$218,800 in current 1994 dollars¹.

A further benefit accrues directly to the schools. Florida schools are awarded state money based on average daily attendance, rather than enrollment during one day or week early in the year. Thus, every additional day a child attends school increases revenues received from the state. Such additional revenues were not included in this analysis because they do not accrue to society as a whole; instead, they represent a redistribution of resources. The additional funds are, however, quite meaningful to the schools.

¹ The data on the benefit of high school graduation were taken from Vernez, Krop and Rydell, Closing the Education Gap, RAND 2000. In their analysis they include the cost of social welfare programs and criminal justice expenditures that are incurred to a disproportionate degree by high school dropouts, and lost income tax contributions due to the combined effect of lower rates of employment and lower wages. Costs are tallied over the expected lifetime of the individual, from 18 to 80 years of age, and the resulting figure is discounted to the current value of the money. The undiscounted figure is over \$800,000 per dropout.

Case Management

Case management is a common component of many truancy reduction programs. Data used in the case management analysis were taken from FY 03/04, which roughly corresponds to the school year beginning in the fall of 2003 and continuing through the following summer. In Jacksonville, a budget of \$100,847 paid the salaries and benefits for two case managers, one supervisor, and a part-time support person in FY 03/04. During that time, the case managers provided services to 226 truant youth for a cost of \$446.23 per child.

The case managers make referrals to counselors and tutors; children and their families are allowed ten visits paid for by TRP funds (but not from the case management budget) when referrals are made. The benefits of counseling may reach well beyond improved school attendance, and for purposes of this study are not measurable, so the cost of providing tutoring and counseling services is not included in this analysis. (The total cost during the 2003/04 school year was just \$1,430, so adding that expense would not appreciably alter the results of this analysis.) It is worth noting, however, that of the 226 young people who received case management, 14 were referred to counseling, but only eight actually went. Those eight students were entitled to 80 visits, but made only 26. Therefore, the referrals made by case managers are severely underutilized.

Case management outcome data are obtained from the TRAIN database. Since sites use a sampling procedure for entering student information into TRAIN, data are available for 62 of these students. Thirty-six of those 62 students have exited the case management component of the program; the remaining 26 students were still receiving case management services at the time of this analysis. Of the 36 that exited, 20

completed the program successfully, ten were exited unsuccessfully and faced court action, and six left for another educational environment – two to a hospital/homebound program, three to homeschooling, and one moved out of the state.

Each student who graduates from high school as a result of the program will save \$218,800. From that figure must be subtracted the cost of the case management. The *best possible* outcome of the program would occur if all the students who successfully complete the program eventually graduate from high school *as a result of the program*. In this scenario, the success rate is estimated to be 20/36 or .556 – in other words 55.6%. When this rate is applied to all 226 students who received case management services, total savings may be expressed as follows:

$$\left(\begin{array}{l} \text{Per capita} \\ \text{benefit of} \\ \text{graduation} \end{array} \right) \times \begin{array}{l} \text{Total} \\ \text{students} \\ \text{served} \end{array} \times \begin{array}{l} \text{Rate} \\ \text{of} \\ \text{success} \end{array} \Bigg) - \begin{array}{l} \text{Cost} \\ \text{of} \\ \text{Program} \end{array} = \begin{array}{l} \text{Net} \\ \text{Savings} \end{array}$$

Plugging figures into this formula gives us a net savings of over \$27 million.

$$(\$218,800 \times 226 \times .556) - \$100,847 = \$27,392,685.80$$

Under this scenario, the return to each dollar invested in the program ($27,392,685.8 \div 100,847$) would equal almost \$272 – a stunning, and extremely unlikely, return for any type of social service.

Poor grades in elementary school have been found to be predictive of high school dropout. It is reasonable to assume case management is only likely to encourage high school graduation among students who successfully exit the case management program *and* improve their grades. (Grade improvement is not a program requirement, however, and students exit the program successfully even if their grades do not improve.)

Unfortunately, there is much missing grade information on the students served during the

2003/2004 school year. Of the 20 who completed the program and were exited as “successful,” 16 had letter grades entered at the time of exit, but only five of those 16 had letter grades at intake with which to compare. (Two kindergarten students had qualitative grades of “satisfactory” or “excellent” as well.) With data on only five students, we cannot make any assumptions about whether case management affects grades or not. However, it is of concern that only one of those five students improved his grades, while three students had averages that dropped by more than a full letter grade into the “D” range. Of the 16 “successfully” exited students, three were exited with less than a “D” average, seven in the “C” range, five in the “B” range, and one with a 3.8 GPA. Kindergarteners and first graders were the highest scoring of the group.

It should be noted that an analysis of all the students in the database shows that grades do improve under case management, with big improvements coming early in the program, and only a slight backsliding after the initial three-month period. However, the lack of grade information collected in 2003/2004, and the fact that a number of students failed to improve their grades, indicate that case managers might do well to pay closer attention to the academic accomplishment of the students they serve.

Nonetheless, even if only one quarter of successfully exited students graduate from high school, the program still produces the following pay-off:

$$(\$218,800 \times 226 \times .556 \times .25) - \$100,847 = \$6,772,536.20$$

Under this more restrictive scenario, the return to each dollar invested in the program would equal just over \$67 and the total saved in one year would be almost \$6.8 million. This would still be considered a remarkable achievement compared to other social investments.

Both scenarios presented above may overestimate program benefits for two reasons. First, being successfully exited from case management services, even with good grades, does not equate to high school graduation. Some of the program participants are still in elementary school, and despite having developed a better habit of school attendance, many things may yet occur to impede graduation. The grade information available is not encouraging. Second, whether all 20, or just five students graduate, we will not know with certainty that they would *not* have graduated without the case management. In order to really understand the impact of case management we would need to track the progress of these students, along with the progress of a comparison group who did not receive case management, until all students either graduate or drop out of high school. Such an endeavor is beyond our resources, and results would not be available for years to come.

Despite these uncertainties, it is reasonable to conclude based on this analysis that the case management program is a valuable investment of public resources. In fact, given the tremendous cost of high school failure, the case management program must provide the means for only one student to graduate from high school every two years in order to earn back its operating cost. The cost of operating for two years is \$100,847 times two, or \$201,697, which is still less than the \$218,800 cost of high school failure for one student. Given that poor attendance and performance in elementary school is a strong predictor of high school dropout, it is highly likely that without any intervention the majority of these children would not graduate.

Attendance Intervention Teams

In Jacksonville, Florida, schools whose students have been determined to have significant attendance problems are required to hold an Attendance Intervention Team (AIT) meeting for any student as soon as an attendance problem is discovered. This analysis relies on data from the 2005-2006 school year from those schools that are required to hold AIT meetings. Data on attendance during four blocks of time were used: 30 to 60 calendar days prior to the AIT, the 30 calendar days immediately prior to the AIT, the 30 calendar days immediately following the AIT, and 30 to 60 days following the AIT.² Math grades and reading grades for the first three quarters of the year were also available. Information on 28 students who had AIT meetings during the middle months of the 2005/2006 school year was available. Only students with AITs held during the middle months of the academic year were selected because we needed attendance data from 60 days before the AIT meeting, and 60 days after the meeting. Because we have no independent source of race or ethnic information, this analysis will assume the same monetary benefit from the graduation of an average student as the case management analysis, namely \$218,800.

AITs seem to be quite effective. Table 1 presents the median absence rates from before and after the AITs for all 28 students combined, and by grade level of the student. Comparing the first and last columns for the total sample, one can see that the overall rate of absence dropped by more than half. Predictably, the absence rate among elementary school children is not as high as that among middle school children in any time period.

² Note that because the time periods were counted in calendar days, they include different numbers of school days. These differences were accounted for in all calculations by using absence rates rather than the absolute number of absences.

Additionally, elementary school children continued to improve their attendance beyond the first 30 days after the AIT, while middle school children regressed slightly. The before-and-after AIT differences for the combined sample are statistically significant. Differences by grade level were not tested for statistical significance due to the small sample sizes.

| | All 60 days before AIT | 60-30 Days before AIT | 30 Days before AIT | 30 Days after AIT | 30-60 Days after AIT | All 60 days after AIT |
|------------------------|---------------------------|--------------------------|-----------------------|----------------------|-------------------------|--------------------------|
| Total sample N=29 | 31.06% | 35.48% | 23.84% | 13.54% | 17.52% | 14.76% |
| Elementary mean N=9 | 11.96% | 15.66% | 8.07% | 6.87% | 5.61% | 6.28% |
| Middle mean N=20 | 36.87% | 42.26% | 31.02% | 12.07% | 18.82% | 14.26% |
| 6th mean N=5 | 23.31% | 28.24% | 18.38% | 13.22% | 4.67% | 10.29% |
| 7th mean N=7 | 33.55% | 36.97% | 30.14% | 9.29% | 16.67% | 12.49% |
| 8th mean N=8 | 49.88% | 57.57% | 40.92% | 14.35% | 31.07% | 19.64% |

Most students contributed to the overall improvement of the group. Twenty-one students improved their attendance following the AIT. Three students' attendance remained unchanged, while three students' attendance worsened following the AIT. The remaining student, an 8th grader, was home schooled for forty days following the AIT and had missing data during that period, but improved his attendance after reenrollment during the last 20 days of the measurement period. Seven students had no unexcused absences in the 60 days following the AIT, but two of those had no unexcused absences in the 30 days prior to the AIT either, so it is hard to attribute their good progress to the AIT.

Changes in grades were not so readily apparent. Ten students improved their math and reading grades by at least .33 on a 4-point scale – enough to improve by half a

letter grade, from D to D+ for example – between the first and third semester. Twelve students' grades did not change appreciably, and five students' grades dropped by at least .33, or half a letter grade.

The cost-benefit analysis is based on the 28 students for whom we have complete attendance information. We will test two levels of program success. In the more lenient definition we will measure success as being absent less than 10% of the time during the 60 days following the AIT. Eighteen of 28 students meet this criterion, but since the attendance of two of them became perfect prior to the AIT, we cannot attribute the improvement to the AIT, and they will be subtracted, leaving 16 “successful” students out of the original 28. The success rate of the program based on this criteria is thus $16 \div 28$ or .57.

To use the formula presented above, we plug in the following figures. The per capita benefit of high school graduation remains the same at \$218,800. Total students served is 28, and the rate of success is .57. An average AIT meeting during the 2005-2006 school year cost \$92.31.³ The total cost of providing all 28 AITs is \$92.31 times 28, or \$2,584.68.

$$(\$218,800 \times 28 \times .57) - \$2,584.68 = \$3,489,463.32.$$

The formula shows that the net savings, *if all 16 of these students eventually graduate from high school as a result of the AIT*, will equal almost \$3.5 million. The return to each dollar spent will equal $\$3,489,463.32 \div \$2,584.68$, or \$1,350, an extremely high figure.

³ Data provided by Jacksonville Public Schools Board of Directors based on participation by a social worker, a vice principal, a guidance counselor and a data entry clerk.

Under a more restrictive definition of success, unexcused absences will be allowed no more than 5% of the time following the AIT (10 students qualify), and grades must improve or remain at or above a “C” level. Five students qualify under this definition of success. The new success rate is $5 \div 28$, or .18. The new formula reads

$$(\$218,800 \times 28 \times .18) - \$2,584.68 = \$1,100,167.32$$

Under this scenario, the return to each dollar invested is $\$1,100,167.32 \div \$2,584.68$, or \$425.49.

To anyone familiar with social service investments, even the more restrictive scenario yields such a high return as to invite skepticism. In fact, this analysis is only accurate if the following three assumptions prove to be true. First, each of these five students must eventually graduate from high school. Second, they must each graduate only as a result of the AIT without benefiting from any other special programs or services along the way. And third, graduation must be attributable to the AIT; in other words it must be true that none of them would graduate in the absence of the AIT. In order to verify these assumptions we would need to follow the progress of each of these students throughout their school careers until they either graduate or drop out of high school, and we would need to compare them to similar students who did not receive an AIT in order to ascertain whether or not they would likely have graduated anyway.

Common sense would indicate that for some students, some of these assumptions will turn out to be false, and program results will not prove to be as stunning as this analysis suggests. Nonetheless, this exercise serves to put the cost of the AIT program into perspective and to highlight the potential for effective intervention with youth on a pathway to school failure. Compared to the enormous cost of high school dropout, the

cost of holding AIT meetings is almost negligible; Attendance Intervention Team meetings are likely to be an excellent use of public funds.

For those who work to promote high school graduation, this analysis should also sound a warning bell. The fact that only five of the 16 students who improved their attendance also improved their grades indicates that getting students back into their seats in the classroom is necessary but not sufficient to ensure school success. Other research available on the National Center for School Engagement website at www.schoolengagement.org shows that school engagement – which includes behavioral, cognitive, and emotional engagement – parent involvement and school climate are all necessary for student success.

The National Center for School Engagement (NCSE) is an initiative of The Colorado Foundation for Families and Children (CFFC). NCSE strives to build a network of key stakeholders who share the belief that improving school attendance and school attachment promotes achievement and school success.



National Center for School Engagement

NCSE was established as a result of more than a decade of educational research about youth out of the educational mainstream conducted by CFFC. The impact of this work has been the development of significant investments of state funds to reduce suspensions expulsions and truancy. Over five years ago, CFFC began working with the OJJDP, US Department of Justice to assist in the planning and implementation of pilot demonstration projects across the country. As projects developed, CFFC became the national evaluator of this five-year truancy demonstration project.

The culmination of ten years of program experience and research has identified truancy and school engagement as the centerpiece of NCSE's work to improve outcomes for youth who are at the greatest risk of school failure and delinquency. We are national leaders in applying research to help communities prevent and reduce truancy.

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