A Social Return on Investment (SROI) Analysis
360 Communities - Partners for Success Program (PFS)

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Executive Summary

Community organizations provide a valuable service in the development of strong societies through partnerships with faith organizations, police departments, schools, businesses and other professional groups. The 360 Communities organization in Burnsville, MN is well into its fourth decade of serving people living in Minneapolis' southern metro area. The staff and volunteers at 360 Communities strive to improve lives by engaging with communities to prevent sexual and domestic violence, ensure school success, and promote long-term self-sufficiency. This study focuses on the accomplishments of 360 Communities' Partners for Success Program (PFS) and uses the social return-on-investment (SROI) approach to explore the value of its benefits compared to the costs of the program.

Findings

- The actual return for a program depends on its outcomes and expenses. We believe the returns discussed in this study fairly represent the returns that are achievable for community programs, such as PFS.

- Based on a review of previous evaluations conducted on PFS, and extant research, studies suggest that programs such as PFS can produce some or all of the following outcomes that can be quantified:

  Increased Parental Involvement – resulting in parents' increased expectations and encouragement, students' improved attendance at school, improved academic achievement, increased graduation rates and future earnings, increased tax revenues, and reductions in public health and criminal justice costs;

  Reduced Food Insecurity - a reduction in hunger and health costs for communities and families; and

  Reduced Housing Instability – resulting in reduced incidences of homeless and mobility, and reduced risk of negative academic outcomes for children.

- Based on data collected by PFS on its program activities, and conservative assumptions about outcomes, we estimate that a similar program costing $968,150 in total or $370 per participant per year returns benefits of $4.35 to $5.07 for every dollar of cost, depending on estimates of program effectiveness. Relaxing the most conservative assumptions generates estimates of the benefit-cost ratio that may be as high as $14.29 or above. Preventing even 4 students from dropping out of high school per year generates social benefits that far exceed costs.

- Recommendations for collecting additional data are suggested to help facilitate more detailed and accurate SROI calculations for PFS. Some of these data are already being collected, however additional information on program activities and outcomes will allow for more precise measurements of program impact.

Introduction

The 360 Communities organization contracted with the Center for Applied Research and Educational Improvement (CAREI) at the University of Minnesota to determine the social return on investment (SROI) of its Partners for Success (PFS) program. A collaboration between CAREI and the Department of Applied Economics in the College of Human Development was initiated to generate an SROI calculation by applying benefit-cost analyses to delineate and compare the societal benefits of PFS to the cost of operating the program. The team members included, Delia Kundin, Ph.D., Associate Director for Evaluation Services at CAREI, and Professor Judy Temple, Ph.D. and Calvin Trombley, M.S. in the Department of Applied Economics. The SROI approach was used to generate an estimate of the organization's social value in monetary terms.

The purposes of this study are threefold:

- To show how an SROI for the Partners for Success (PFS) program can be done;
- To provide conservative, yet realistic, estimates of outcomes and costs for an SROI for the program; and
- To recommend additional data collection strategies that can be implemented to calculate a more precise SROI in the future.

Methodology

Many programs are interested in conducting a Social Return on Investment (SROI) to assess program benefits given another dollar of investment. While many researchers have studied the impact and effectiveness of community programs, few rigorous SROI analyses have been conducted on such programs. Some of the first examples of using SROI in the area of social service, health or education programming were in the areas of preschool education (Barnett, 1993; Rolnick and Grunewald, 2003). In recent years, a number of SROI analyses have been performed in a wide range of areas, especially for preventative interventions that have the potential to generate significant government cost savings by reducing the need for costly remediation of social problems after they have already occurred. This is a form of cost-benefit analysis that is used to evaluate program effectiveness. However, one difficulty with conducting SORIs is that often outcomes of interest are difficult to express in monetary values. For example, what is the dollar value of scoring higher on a test, or reducing the number of absences? Researchers attempt to monetize these outcomes by conducting extensive literature searches to connect outcomes with indicators such as higher wages, lower criminal activity, reduction in special education spending, and other monetary values. This information can be helpful in explaining how money is being spent and how effective spending is at achieving program goals.

In the sections that follow in this report, we provide a description of the program including its demographics, and a review of previous evaluations conducted on the PFS program. Next, we discuss previous SROI analyses conducted on community programs to survey the return on investment that other programs have reported. We then discuss literature on the impact of community programs on students' educational outcomes, food insecurity, and housing instability to approximate the effect of PFS on similar outcomes. Next we review studies on how these outcomes are monetized to estimate the dollar value of possible impacts provided by PFS. These approximated benefits are then compared with program costs that we collected from the PFS organizational databases to provide conservative estimates of the social return on investment for the program. Finally, we make recommendations about the collection of additional data that could result in a more precise estimate of the social return of the program.

360 Communities - Partners for Success Program Description

The 360 Communities organization was formed in 1970 by church volunteers as a nonprofit human services agency to assist families in need. The organization works with community partners on crisis prevention to minimize the effects of poverty and to improve the overall quality of life for families. The PFS portion of 360 Communities was created in the early 1990s to help link students and their families to basic needs resources (e.g., food, housing, safety, clothing, community resources).

In 2008, PFS expanded its foci to include assisting parents to become more involved with their children's education. Currently PFS provides services to elementary, middle, and high school students and their families through the work of Family Support Workers (FSWs) across several school districts. The FSWs work to interact with families, teachers, and school administration to help families address their basic needs (e.g. food, clothing, stable housing) and school related challenges. FSWs also work to improve communication between schools and families. For example, FSWs frequently communicate with parents and teachers in person and by phone to develop and monitor family learning plans (FLPs) designed to help students succeed in school. In elementary schools students are referred to PFS due to problems with academics, homework completion, or family struggles. The FSWs also link families with community resources and provide ongoing support to ensure that recommended strategies are implemented. If progress is not made, then learning plans are modified to address students' challenges. In the middle and high schools, FSWs inform families about the importance of academic success and they collaborate with schools to help students make adequate progress toward graduation.

Program Demographics

During the 2013-2014 [1]year, PFS served 2,615 unique individuals across more than 31 different schools. Individuals served included school age children and their families. Fifty-nine percent (59%) of those served were female. Sixty-one percent (61%) of individuals were younger than 25 years old and their average age was 12 years. Thirty-three (33%) of individuals were under 13 years old. An average individual in PFS came from a household with a total of four people, while the average household income was $16,400. Thirty-eight (38%) of PFS clients served

[1] The most recent PFS data available at the time of the SROI analysis.

were Caucasian, twenty-two percent (22%) were Hispanic or Latino, and twelve percent (12%) were African American.

Also during that time, there were 23 Family Support Workers providing services, with the average support worker assisting 110 different individuals. Out of 2,810 services provided, 1,790 were reported for students and 1,020 were reported for parents. Each account of these services were recorded one time in PFS databases and represented key area(s) of service provided by FSWs for individuals or families on family learning plans. The services and frequency of services reported by PFS are shown in the tables below. Table 1 shows that the three most common student services provided were assistance with improving grades (33%), help with homework (26%), and efforts to improve attendance (20%).

Table 1. *Student Services Provided by Family Support Workers*

Services	**Frequency**	**Percentage**
Attendance	360	20%
Behavior	241	13.5%
Grades	585	33%
Graduation	135	7.5%
Homework	469	26%
Total Student Services	**1,790**	**100%**

Table 2 shows the services provided to parents by FSWs. Forty-five percent (45%) of the services were focused on improving communication between parents, students, and/or schools.

Table 2. *Parental Services Provided by Family Support Workers*

Services	**Frequency**	**Percentage**
Child Discipline	150	15%
Communication	460	45%
Stable Housing	208	20%
School Participation	202	20%
Total Parental Services	**1,020**	**100%**

One important aspect of family service programs is how often FSWs interact with clients. Table 3 shows how often FSWs made contact with parents, students, teachers, or made home visits to talk with families. These figures also include the average number of times that FSWs communicated with families between 2013 and 2014.

Table 3: *Family Support Workers Follow-Up Communications*

Communication With...	**Frequency**	**Average Contacts Per Family Support Worker**
Parent	1,744	75.8
Student	2,065	89.8
Teacher	1,808	78.6
Home Visit	343	14.9
Total Communication Contacts	**5,960**	

PFS also provided emergency referrals and services to families. The number and type of referrals and services are listed in Table 4. The most common referral reported was for food or financial assistance. PFS provided referrals to multiple programs through 360 Communities which helped families resolve food insecurity and temporary financial instability. The organization also provided access to school supplies, financial assistance, donated items, and access to food shelves to some families that have gone through the referral process. Financial assistance was given to families that needed temporary assistance to keep their housing on a case by case basis.

Table 4. *Emergency Referrals and Services*

Referrals	**Frequency**	**Percentage**
Domestic Violence	140	3%
Chemical Dependency	45	1%
Food/Financial	3,422	76%
Mental Health	491	11%
Emergency Shelter	395	9%
Total Referrals	**4,493**	**100%**
Services		
School Supplies	322	14%
Financial Aid	70	3%
Donations	339	15%
Food Shelf	1,595	68%
Total Services	**2,326**	**100%**

Based on the services accessed most by PFS clients, we will focus on the program impacts that may affect student outcomes, food security, and housing stability. This is because most student services are focused on improving academic success, and a large number of referrals are for access to financial aid and food shelves.

In the next section, we describe previous program evaluations conducted for PFS that focused on program activities with children and families in schools.

Previous Evaluations Conducted for Partners for Success

In 2009, 360 Communities contracted with CAREI to conduct an evaluation of PFS over a two year period. The purposes of the evaluations were to provide PFS with information to help guide program decisions, evaluate the extent to which PFS impacted students, families and teachers, and to study how FSWs worked with parents and guardians to improve students' educational performance (Kundin, 2010, 2011). The following evaluation findings provide information to help focus the SROI on some of the benefits of PFS as experienced by its staff and participants.

First Year Evaluation (2009-2010) - Summary of the Findings

CAREI's evaluators studied the formative aspects of the program by gathering information about how well the program's goals were met with regard to FSWs in-service trainings, program

implementation, and program impacts on students, families and schools. The evaluation activities were carried out in Burnsville elementary schools, and focused on the perspectives of family support workers, principals, teachers, and parents regarding PFS. The sections below describe the major evaluation findings in the first year, and their implications for program planning at that time. The following information is organized by the three evaluation components that guided the year one study.

I. Professional Development Training

What are family support workers' reactions to in-service sessions? How confident are family support workers in using their knowledge and in-service information?

FSWs relied on their previous experiences and on information shared during in-service training sessions to conduct their work. They were confident that they knew what was expected of them, and they believed their work had an impact on students. On average, the top five areas where FSWs rated their knowledge as "good" to "excellent" included (1) family violence, (2) listening, (3) referral processes, (4) violence prevention, and (5) child care resources.
FSWs rated their knowledge in areas pertaining to academic support for students (e.g., language and comprehension skills, standardized tests, ELL strategies) as "fair" to "good." FSWs' suggested that future training sessions include more information on family learning plans and data tracking, and financial assistance available through 360 Communities. Aside from increased communication, suggestions were made to increase FSWs' hours at schools to full time status.

II. Transfer of Programming

In what ways did FSWs use their knowledge and skills to implement the program? What are the effective processes that family support workers use when working with teachers, parents and students? In what ways does the organization support the work of FSWs?
Study results showed that principals and teachers found FSWs most effective when they were connecting families to basic needs resources. The two benefits cited most often in favor of FSWs' academic support role included providing translation for non-English speaking students and families, and following up with teachers. Respondents' hesitations about the program focused on vague communication, services already provided in schools to help students, handouts used to suggest strategies for parents to use at home, and FSWs' non-education background.

One important aspect of FSWs' academic support work was to facilitate communication between teachers and parents. While some teachers worked with FSWs regularly to communicate school-related information to parents, other teachers had little or no knowledge about the work, even though a family learning plan was in place. An explanation for this variation may be that school personnel were in the practice of communicating students' needs informally. However, family learning plans involved structure. Students' test scores were reported on the forms and strategies to help students improve academically were suggested by FSWs. In addition, commitment statements from students, parents and FSWs were also part of the forms. Overall, teachers were more aware of family learning plans, when they referred students to a FSW for academic support.

When asked how PFS could better support FSWs, the most common recommendation for improvement in 2010 was increasing communication in schools regarding FSWs' work. In particular, principals noted that more communication was needed between the classroom teachers, support staff, and FSWs. Teachers and principals wanted more information, and specifically they wanted more transparency about what FSWs were working on with students and families. It was suggested that this increased awareness and helped teachers understand how the work was performed. It was also suggested that bi-annual or annual reports be disseminated to schools to communicate PFS' accomplishments.

III. Impact on Students, Families, Schools

To what extent are parents involved with school activities? To what extent are parents, teachers, and principals satisfied with their experiences with family support workers? What changes have occurred for students since working with a family support worker?

Parents reported a variety of ways that they worked with FSWs regarding school activities including attending conferences, using FSWs' suggestions at home, receiving updates on students' progress, and working on family learning plans.

Parents were most involved with parent/teacher conferences, talking to their children about school, reading materials sent home, assisting with homework, and listening to their children read. Parents were less involved with helping their child prepare for tests, attending open houses, reading to their child, talking with a FSW about materials sent home, attending grade level programs, communicating with their child's teacher, and going to the library with their child.

Parents who reported positive changes in their own behavior after working with a FSW cited improved communication with their children, improved discipline practices, and increased understanding about their child's school work. Areas where parents observed improvements in their child included improved behavior, completion of planners and homework, and increased reading scores. In addition, teachers observed increases in students' abilities to focus during school hours, while principals and teachers commented that families who worked with FSWs seemed to be more engaged with the school. Teachers also observed improvements in student' reading scores, while others observed no changes in this area. Principals, teachers, and parents commented that it was difficult to attribute academic changes to FSWs, since struggling students already received additional services through schools. This challenge was confirmed with a comparison of MAP test scores of students working with FSWs and students not working with FSWs from fall 2009 to spring 2010. Independent *t* tests confirmed that the two groups of students did not differ with respect to reading achievement progress. As mentioned above, it was challenging to identify FSWs unique activities that could be linked to changes in students' educational progress.

It was noted, however that a comparison of students' percent of target RIT, rather than raw test scores, allowed the determination of the degree of progress students made. For example, several students met 93% of the target score for their group. This approach was suggested in the second year evaluation to explore FSWs communications with teachers regarding goals for students. For

instance, depending on a student's needs, it may be "excellent progress" for a student to increase his/her reading score based on a pre-determined goal agreed upon by the teacher. In another case, it may be appropriate to expect a student to increase their scores beyond a preset goal. This type of goal setting requires collaboration with teachers to identify specific targets for each student, and to identify how FSWs can facilitate activities for students and families in meeting these goals.

Second Year Evaluation (2010-2011) - Summary of the Findings

In the second year of the study, CAREI's evaluators focused on three specific goals: 1) Determine the extent to which FSWs communicated and collaborated with parents/guardians and teachers to build relationships and improve students' educational performance; 2) Continue to monitor PFS professional development processes and determine how 360 Communities can continue to support and strengthen program activities; and 3) Identify how the program impacts students, families and teachers by focusing on observed changes from the perspectives of teachers, parents/guardians, FSWs, and from analysis of student data.

The evaluation followed PFS activities across six school districts and included findings from 10 elementary schools located in Farmington, Lakeville, West St. Paul, South St. Paul, Hastings, and Burnsville, MN. The evaluators conducted interviews with teachers, parents and FSWs regarding their experiences with the PFS program. The evaluators also analyzed parents' pre-post questionnaires, FLP documents, PFS databases, and students' test scores. Together analyses showed how FSWs worked with teachers and parents to keep families connected to schools.

Evaluation results showed that FSWs helped to facilitate more use of educational materials at home, and because of this interaction, parents had a better understanding of their child's homework needs. Parents also spent one-on-one time with their child practicing reading, spelling, and math. Also, students whose parents were involved with a FSW had improved reading, were more focused in class, returned school materials, and increased engagement. There was also a benefit in providing translation for non-English families and allowing easier follow-up with teachers on students' progress.

Evaluation Goal 1: Communication and Collaboration

Determine the extent to which FSWs communicate and collaborate with parents/guardians and teachers with the goal of building relationships and improving students' educational performance.

Evaluation results showed that parents communicated with teachers infrequently (3-4 times per year) compared to how often they communicated with FSWs (weekly or bi-weekly). FSWs followed up with teachers and parents approximately 19 times per FLP. The high frequency of parent contacts may be one reason why teachers valued FSWs as "life links" between schools and parents, especially when working to connect families with resources. Teachers also recognized that FSWs supported parents in their efforts to help their children with school work at home. When working with parents, FSWs placed a priority on in-person meetings with parents and teachers versus phone calls and emails, although these were often used.

A second practice followed by FSWs involved attending parent/teacher conferences. FSWs considered these conferences opportune times to connect with parents and to introduce strategies that parents used at home to help with their child's school work.

Another practice followed by FSWs was their approach to developing FLPs: 1) FSWs met with parents to identify problems at home; 2) They asked for teachers' input about what they expected students to complete at home; 3) They worked with parents to organize after school activities (e.g. time spent on homework) based on teachers' recommendations; 4) They met with parents regularly to review and modify FLPs, based on families' changing schedules and challenges; and 5) They followed up with teachers regarding students' progress.

Teachers and parents alike had very positive relationships with FSWs. For both groups, FSWs were considered open and honest, non-judgmental, and considerate of others' capabilities. They also encouraged parents to focus on the positive aspects of their families, and they respected families' time and privacy.

Evaluation Goal 2: Organizational Support
Continue to monitor PFS professional development processes and determine how 360 Communities can continue to support and strengthen program activities.

Evaluation results showed that FSWs continued to view in-service training sessions as informative. Suggestions for improving training sessions included meeting every other month, rather than monthly, to reduce the amount of time FSWs are away from schools, and including more program information about secondary schools.

Areas where FSWs requested additional support included updating databases and computers, balancing workloads to accommodate both FLPs and basic needs assistance, and providing additional materials to share with families (e.g., books, phonics practice sheets, and workbooks). A request was made that PFS staff members attend at least one teacher staff meeting at the beginning of the school year to assist with explaining the program.

Evaluation Goal 3: Impact on Schools, Families, and Students
Identify how the program impacts students, families and teachers by focusing on observed changes from the perspectives of teachers, parents/guardians, and student data.

Evaluation results showed that FSWs reported students' reading improvements most often, followed by class improvements, homework, and math. FSWs also reported no improvements, in some cases. These results were mixed, as might be expected given the diversity of students' needs and abilities.

Teachers observed similar student improvements in classrooms. Conditional statements ("when", "and", "then") were used in the evaluation to express teachers' observations. Overall, teachers noticed that "when" FSWs worked with parents, "and" parents followed through on school related activities at home (such as reading with their child on a regular basis, or holding their child accountable), "then" students showed improvements in classrooms in areas such as reading,

spelling, math, attitude, and confidence. When parents were less consistent with helping with their child, teachers still noticed improvements such as students being involved or more confident. In other cases, teachers noticed that FSWs helped connect parents with additional resources such as counseling or medical attention, and teachers noticed that students made some progress even if it was not recognized as academic improvement.

The results from parents' pre-post questionnaires showed that working with a FSW did have an effect on parents. A clear fall to spring increase was shown for two activities. Parents' use of educational materials sent home with their child in spring 2011 (M = 3.46 SD = .674) was significantly higher compared to their use of materials in fall 2010 (M = 3.10, SD = .995; t = -2.246, p = .030). Similarly, parents reported a significant increase in how often they talked with a FSW about their child's educational progress from fall 2010 (M = 3.11, SD = .900) to spring 2011 (M = 3.54 SD = .741; t = -2.868, p = .007). These differences showed small (d =.42; d =.36) effect sizes. In all other areas, no differences between fall and spring activities were statistically significant.

The percent of reading growth target met for each student between fall 2010 and spring 2011 was also calculated. These figures were based on each student's overall growth points divided by his/her individual expected growth target. Half of the students in the evaluation met or exceeded their growth targets. The other half made progress toward their targets and several were close to their targets (i.e., 75% or more). Only one student showed negative growth with a decrease of 11 points.

Superintendents', principals', teachers', and parents' views on the benefits of PFS
The statements below were made by superintendents, principals, teachers, and parents regarding their experiences with PFS.

Superintendents
"Prior to 360 Communities, we didn't have good outreach to families."

"Teachers are good at what they do in the classroom, but it is a lot to ask a teacher to make a home visit. Contractually, they can't be asked to do that."

"The importance of health insurance for families, etc. – things we take for granted as a society but in fact it's really hard to navigate those areas that the school does see (like paperwork for insurance, housing). There is story after story of behind the scenes work."

"FSWs speak Spanish and will come up and interpret, so we have a welcoming front office as far as schools go and that's an important measure."

Principals
"Our focus as a staff is to work on relationships and an emphasis on standards, meeting academic standards. I'm not saying we couldn't do those things, but it wouldn't be in timely fashion. We just don't have that time and don't know about resources."

"For a lot of parents, they want that confidentiality piece; it is hard to build that with a teacher. But one person can be a contact person that will have a relationship with that person and will continue to use that resource."

"Often times a situation in a family may be contributing to the difficulties and teachers/principals don't have time to build deeper relationships to identify what the barriers might be."

"The family support workers that we have, our families really relate to them. They are doing a great job hiring and the majority are bilingual which is really helpful. And they allow wrap-around services to occur."

Teachers

"I don't know if I can put a price on it. Especially with me this year, it's been beneficial and having that communication piece and making sure they have the things they need. A lot of times it's things that I can't provide. It's not just providing a notebook, but getting that kid glasses and for example, I had a student who didn't have glasses and she helped set up appointments and get a voucher for the parent to use and she kept in contact with me to see if the student had gotten the glasses yet and follow-ups like that."

"Erick's attendance has improved. He's doing great now and [child's mother] doesn't have any trouble getting him to school. He is more excited about school and homework has improved."

"I think it's been a real valuable asset to these families that don't always understand the educational goals that we have or the needs. Whether it's a language barrier or possibly a young single parent, they don't have those resources. It's been wonderful for the families she has dealt with."

"My expectations are not as academic. That was an issue a year ago because she really didn't have the expertise in the academic piece so there are some things she just doesn't know. I really find she is a great partner to work with parents and staff in those needs that families have now a days that they can't keep up, whether it's finding the correct place to get them help. Sometimes picking them up and just being there for extra support for these children is really marvelous."

"I think it's the best thing we've had. I hope this can continue. There is something about the relationship that is built when the social worker, for lack of a better word that's what she is, on site. She is able to connect with kids. The kids trust her. The families get to know her. They are able to get the support services they need to get from point A to point B and all of that helps kids. It's so good and wonderful. We love her! She has been a life link for these families and it's nice to be able to have somebody beyond myself to make those connections. She is connecting the dots whether it's getting food to a family, she has that accessibility. That's not something that I do. If it's a matter of getting a gas card to someone because they can't drive. She's able to pull that together. She has those resources. No one has ever come to me and said, I don't have food or I don't have gas for my car. It's a different level of support. For these families, it's exactly what's needed. The home visits have been so good. She is able to assess the situation. She lets me know that and what I can do to help."

Parents

"I think it's really important. The teachers are too busy sometimes to kind of do the extra steps, to kind of help the kids and the families out. The teachers are kind of, I know they're busy with a lot of kids."

"Specific changes include increased one on one time, checking to see if homework came home and has changed James' diet. After increased one on one time and still having difficulty retaining information, Jaimie is now following up with a possible diagnosis."

"We were trying to do too much. We were staying up too late trying to get everything done. We were getting overwhelmed and this wasn't very helpful. Jennifer helped write out the goals for homework. This has helped us not get overwhelmed and has put things in perspective."

"Test scores have increased. Test scores aren't up to where they should be, but they have gone up 'tremendously'. Bethany is happier about going to school. She continues to be sick a lot, has asthma and that can cause problems."

"Noah's reading and confidence have improved. He does his homework including reading."

SROI for Partners for Success

To build a practical SROI framework for the PFS program, we put the analysis in context with studies of other community programs, then we enumerated the list of likely benefits produced by the program. These two steps were followed by an analysis of existing research to see which outcomes could be valued with sufficient precision to be included in a benefits calculation. Then we measured the actual costs of operating the program. Finally, we compared the estimated value of the benefits with the costs of the program.

Previous SROI's of Community Programs

A survey of SROI analyses done previously can be compared to PFS's cost-benefit approximations. While many researchers have studied the impact and effectiveness of community programs, few rigorous SROI analyses have been conducted on such programs. This is often due to a lack of complete data on program outcomes that makes estimating the impact of a program very difficult. However, during our survey of the literature, we were able to find programs that conducted thorough SROI analyses and are thought to be similar to the PFS program and the outcomes of interest.

One SROI analysis conducted for the Children's Aid Society (Martinez and Hayes, 2013) calculated the return of investing in community schools. The Children's Aid Society provided various types of services to over 70,000 families every year across 45 sites in New York City. These services varied by location, but included academic enrichment programs, access to health services, and adult education programs. Outcomes evaluations of the Children's Aid Society found children in the program had gains in reading and math scores, improved attendance, and higher parental involvement than comparison schools. Cost and outcome data for the SROI analysis was collected from two participating sites and compared to five peer schools. The

authors found the largest benefits were attributed to students in the program and came in the form of cost savings to society for reduced juvenile crime and cost savings from reduced dropout rates. They then estimated a cost-benefit ratio of 10.3 for the first site and 14.8 for the second site. This means for every dollar invested in the Children's Aid Society for these two sites, we would expect a $10.30-$14.80 return to society.

Another study conducted by the Council of Economic Advisers (2014), presents the social return of several early childhood development and educational programs, such as maternal home visiting and educational programs for toddlers. By examining the benefits found in previous studies, the authors estimated that for every additional dollar invested in early childhood educational programs, there was an $8.60 benefit to society. Almost half the benefit was in the form of future higher earnings for children. Additionally, they find benefits for increased parental employment, reduced parental stress, reduction in crime and reduction in health care spending.

Similarly, a third study by Aos, Lieb, Mayfield, Miller, and Pennucci (2003) also provided a thorough analysis of several different youth intervention programs. These programs included Pre-K educational programs, home visitations, youth development, mentoring programs, substance abuse prevention programs, teen pregnancy prevention, and juvenile offender programs. From this list, the youth development programs were the most similar to the PFS program. These programs are the Seattle Social Development Project, Guiding Good Choices, Strengthening Families Program for Parents and Youth 10-14, Child Development Project, Good Behavior Game, and CASASTART. These programs target at risk children in an attempt to improve academic achievement, increase parental involvement, and promote the idea of a school community. The programs with a positive cost-benefit ratio range from a social return of $3.14 to $28.42 per additional dollar invested. However, the authors note that the two programs with the highest social return did not include the costs teacher incurred by taking time away from other teaching activities to participate in the program.

The following sections will discuss some of the likely benefits of the PFS program, along with the operational costs in order to estimate an approximate social return on investment for the program.

Benefits of Parental Involvement

Improved Attendance at School. A potential benefit of increased parental involvement in children's education is improved student attendance. This is because involved parents are more likely to be aware of their child's school attendance and understand the importance of attendance for success in school.

Attendance issues across all grade levels have been shown to reduce academic achievement and contribute to higher high school dropout rates. One important factor contributing to dropout rates in high school is high levels of absences. Because we cannot randomly assign various levels of absences for students, it is difficult to estimate the impact truancy has on outcomes. However, Ou and Reynolds (2006) using data from the Chicago Longitudinal Study found that one

additional day of absences was associated with a 1.8 percentage point decrease in the probability of high school graduation. Rouse (2005) estimated the lifetime earning differences between high school graduates and those who dropout using present discounted value techniques. She assumed a 2 percent productivity growth and a 3.5 percent discount rate, and estimates the present value of completing high school to be $263,000 in 2005 dollars or $318,800 in 2014 dollars.

While finding programs similar to PFS that track attendance proved difficult, there was one program, Communities in School of Miami, Inc. (Dryfoos, 2000), that tracked the mean days absent of students before and after the program. "CIS of Miami is a non-profit organization providing stay-in-school services to approximately 2,200 students in 20 schools and one community agency (the NFL Youth Education Town Center). Three types of school-based programs are offered: corporate academies, in-school programs, and "comet" (elementary school) programs. Support services include case management, referral, mentoring, counseling, parent contacts, work-place tours, guest speakers, incentives, curriculum enhancements, and provision of supplies such as books and videos" (Dryfoos, 2000, pg. 13). Because this description of the program included many elements that are similar to PFS, we assumed PFS could achieve similar outcomes. Dryfoos (2000) found that students in the elementary school program portion of CIS of Miami had their mean days absent decrease from 9.40 to 8.85.

Using the .55 reduction in mean days absent from the CIS of Miami study and the 1.8 percentage point decrease in the probability of high school graduation from the Chicago Longitudinal Study, we can assign a monetary value to the benefit of reducing absences. We multiply the present value earning gains of $263,000 by .018 and then again by .55 for a benefit of $2,603.70 in 2005 dollars. Using the Consumer Price Index (CPI), this benefit is equal to approximately $3,156 in 2014 dollars.

Improved Academic Achievement and Increased Future Earnings. In addition to improving attendance, another goal of increasing parental involvement is to improve academic achievement. Previous studies examining the link between parental involvement and student achievement found mixed evidence dependent on the type of involvement being studied and children's ages. The largest impacts come from high parental expectations, monitoring homework, and parental participation in learning activities at home (Baker and Soden, 1997; Fan and Chen 2001). As children age and begin to enter high school, the effect of additional parental involvement begins to lessen. However, parental expectations and encouragement still have a positive effect on passing classes and achieving higher test scores for children (Catsambis, 1998). In this section, we examine how parental involvement impacts students' grade point average (GPA) and the social benefit gained from an increase in GPA.

Several studies have been conducted to estimate the impact of an increase in a student's GPA on future earnings. For example, Rose and Betts (2004) used a nationally representative data set called High School and Beyond and found that a one point increase in GPA was associated with a 4 to 7 percent increase in annual earnings ten years after high school, regardless of whether the student attended college. However, the GPA they used for the study was only for mathematics. In a dollar value, this effect is an annual earnings increase of $800 to $1,400. A similar study by Crawford, Johnson, and Summers (1997), using the same data set, found a one point increase in

GPA leading to an $800 increase in annual earnings. However, this finding was only for students who did not continue on to college. Based on these two studies, we assume a one point increase in GPA is associated with an additional $800 per year in earnings. We follow Rouse (2005) by assuming that every individual works for 50 years and that the discount rate for future earnings is 3.5 percent. From this information we can calculate the benefits per student for a one point increase in GPA. We estimate the lifetime earnings to increase by $19,421 for a one point increase in GPA per student, in 2005 dollars. This benefit would be $23,541 in 2014 dollars.

How does family involvement in schooling affect GPA? Newman (1995) analyzed the impact of the California's Healthy Start initiative on school performance across 40 different sites. The Healthy Start initiative included four types of programs: school-site family resource centers, satellite family service centers, family service coordination teams, and youth service programs. All of these programs varied slightly in how they provided their services, but they are all focused on the idea that a community must design a program that best matches the needs of its citizens. These programs were designed to help families obtain the resources they need to meet their family specific goals. School-site family resource centers provide services through designated space on school grounds. Satellite family service centers were located off of school groups. Family service coordination teams typically did not provided services from a specific location; instead, they provided referrals to other service professionals. Families worked with service professionals to create specific goals and develop strategies to achieve them. Finally, youth service programs helped address students' and teenage mothers' health, education, and social needs. Healthy Start schools were typically located in urban areas, had students of diverse ethnic backgrounds, had high student mobility, and had large percentage of students enrolled in Chapter 1.

By comparing pre and post intervention GPAs, Newman found an overall increase of .07 in GPA for all students across all age groups. This effect was substantially larger for students with the lowest GPAs at the start of the intervention. Newman found the impact of Healthy Start on GPA to vary by grade level and gender. There was no significant impact on GPA for high school students or for female students. The effect was slightly larger for younger students.

Based on Newman's (1995) findings, we assume PFS could provide a 0.07 increase in GPA for its participating students. Using the 0.07 impact of family involvement programming on student GPA, we calculate the benefit to students in PFS from increased lifetime earnings and the benefit to tax payers from higher taxes. This is done by multiplying the 0.07 impact on GPA by the monetary value discussed previously for a full one point increase in GPA of $23,541 in 2014 dollars. Hence we estimate the effect of increased parent involvement on student GPA to yield $1,648 in the present value of higher lifetime earnings per student.

Increased Graduation Rates. It is not surprising given the previous discussion of the importance of attendance and academic achievement that graduating from high school provides substantial benefits to society. Students who graduate high school have higher lifetime earnings (Carnevale, Rose, and Cheah, 2014), have fewer health problems (Lantz et al., 1998), and commit fewer crimes (Lochner and Moretti, 2004) than those who do not finish high school. All of these effects lead to benefits that can be monetized for both the individual and society. Levin, Belfield,

Muennig, and Rouse (2007) go beyond estimating lifetime earnings gains from graduation by calculating the social benefits in terms of higher earnings, higher tax revenues, and lower public health and criminal justice costs. They rely on existing estimates of programs targeting African-American male students to estimate the benefits of an additional black male high school graduate. They then compare these benefits with the costs of five different interventions that have been shown to improve high school graduations rates. These five interventions are the Perry Pre-school Program, class size reduction, First Things First, the Chicago Child-Parent Center program, and teacher salary increase. The benefit-cost ratios of these interventions per additional black male high school graduate range from 2.13 to 4.35. In present value terms, the benefits range from $136,427 to $197,599 in 2004 dollars.

Because we do not have data on the graduation rates of students participating in PFS, we rely on the impact of the interventions mentioned above on high school graduation. Levin et al. (2007) report on how many additional high school graduates per one hundred (100) participants are led to graduate because of the intervention. The Perry Pre-school program resulted in nineteen (19) additional graduates per one hundred students served. Class size reduction caused eighteen (18) more graduates, First Things First impact was an additional sixteen (16) graduates, the Chicago Child-Parent Center program found an effect of eleven (11) graduates, and the teacher salary increase intervention provided five (5) additional graduates per one hundred students. Based on these ranges of estimates, we choose a conservative impact of three (3) additional graduates per one hundred students that participate in the PFS program. We can then use this assumed impact along with the benefit discussed above to estimate the social benefit PFS generates by increasing graduation rates for students. Because the intervention listed above primarily impacted students from Pre-K through elementary school, we chose to limit the effected population to students younger than thirteen years old. This population included 863 children or 33% of the 2,615 total individuals served by PFS during 2013-2014. Using the previous estimate of three (3) additional graduates per one hundred (100) students, we calculate PFS to have an approximate effect of producing 26 additional high school graduates. Applying the estimate of higher earnings resulting from high school graduation from Rouse (2005) using the benefit of $318,800 per additional graduate, we approximate the social benefit to be $8,288,800 in 2014 dollars. This is a conservative estimate of the benefit of high school graduation because it does not take into account related cost savings in terms of public health or crime or higher tax revenues. However, even though we do not include these cost savings, it may be useful for other researchers to be aware of these values. Levin et al. (2007) find the present value at age 20 of public health savings to be $33,500 for each additional graduate, reduced criminal justice costs to be $55,500, and extra tax revenue to be $167,600.

Benefits of Food Security

Some families face challenges affording a sufficient amount of food. PFS offers food pantry services to families in need. During the 2013-2014 focus year, the organization recorded 1,595 uses of pantry services across its three food shelf locations. PFS encourages participants to use the food pantries once per month, but allows them to visit more frequently if they have large unexpected bills in a specific month. This is done to help families free up additional money to

help pay for those bills. In this report, the annual cost savings of reducing food insecurity is estimated.

The U.S. Department of Agriculture regularly surveys U.S. households to determine the extent of food insecurity. Food insecurity describes individuals or families who experience worries about obtaining food or are actually unable to afford enough nutritious food to eat. According to the most recent national statistics, 19% of households with children in the U.S. experienced food insecurity at some time during the year 2014 (Coleman-Jensen, et al. 2015). Many of these households participate in publicly-funded food programs such as food stamps or WIC, but even with this public assistance the amount of food they are able to afford is insufficient. The consequences of food insecurity or hunger have been analyzed in several studies including Mykerezi, Mills, and Melo (2013) and Brown et al. (2004). Brown et al.'s study separates out the consequences of food insecurity or hunger on health care expenses and school success. They report an estimate of $66.8 billion for the annual costs of hunger-related illness for the entire U.S in 2005. The consequence of food insecurity for student achievement was estimated to be $9.2 billion annually for the nation as a whole. The implication is that completely eliminating food insecurity in the U.S. could generate benefits of $76.0 billion annually in terms of education and health benefits. This national cost of food insecurity due to higher health care costs and reductions in school performance can be estimated as an annual cost of $6,350 per food insecure household.

Can food pantry participation reduce food insecurity? Researchers do not seem to have estimated the causal effect of food pantry visits on the probability that a food insecure household may become food secure. Some suggestive evidence on whether different types of food pantry models may have an effect on food insecurity is provided by a study conducted by Martin, Wu, Wolff, Colantoni, & Grady (2013) who estimate whether a Freshplace food pantry collaborative can improve food security relative to traditional food pantries. The Freshplace food pantry model allows participants to select their own food and can go to the pantry twice a month. Participants also meet with a project manager once a month to monitor a Freshstart Plan, which is designed to help then with becoming more food secure and self-sufficient. They also provide cooking and food education classes. Using the USDA Food Security Module which asks about a household's food security issues over a 12 month period, the authors find that Freshplace participation is associated with a 42% lower probability of participants being described as very low food insecurity compared to participants who attend a traditional pantry.

Recognizing that pantry visits can have an effect on food insecurity, the estimation of the effect of the 1,595 PFS pantry visits requires several assumptions. Because of the lack of specific information on how many visits each family makes per year, we estimate visits based on a study from Feeding America (2011). The study surveyed food pantry visitors and reported that 36% went at least once a month in the previous year, 18% went between 6 to 11 times per year, 27% went 2 to 5 times and 19% of their respondents reported visiting a food pantry once in the last year. Making an assumption that half of the “at least monthly” visitors visited twice a month, this information suggests that 46% of food pantry visits are made by households that go twice a month. Potentially, PFS could be offering frequent twice-a-month pantry visits to 30.6

households.[2] Finally, an estimate by Nord et al. (2007) indicates that 34% of households with incomes less than 185% of the poverty line are food insecure. Multiplying 30.6 households that potentially could have switched from food insecure to food secure as a result of twice-monthly pantry visits by 0.34, this suggests that 10.4 households could have changed their food insecure status as a result of the 1,595 pantry visits reported by PFS in 2014-2015. Hence the total savings in health and education costs arising from reducing food insecurity as a result of the PFS food pantry visits can be estimated as 10.4 food insecure households that become food secure times $6,350 savings per household or $66,040 in annual savings due to reducing food insecurity.[3]

Benefits of Reducing Housing Instability

In addition to having problems affording food, some families face difficulties finding or affording a stable housing situation. For many-low income families, the lack of affordable housing leads to frequent numbers of residential moves, often causing children to change schools. Frequent school mobility, especially among low-income families, has been identified by researchers as a significant contributor to schooling difficulties (Brennan, Reed, and Sturtevant, 2014). Children who come from homeless or highly mobile (H/HM) homes are at a much greater risk for negative academic outcomes. Studies have shown that they face many of the same risks as very low income children (Masten and Sesma, Jr., 1999). These risks include single parent households, parents with little education, parents with low employment, exposure to violence, exposure to illness or death, and high rates of behavior and emotional problems. However, H/HM children are still found to have worse outcomes than low-income children. Cutuli, et al. (2012) used data from the Minneapolis Public School district across five years to compare H/HM students to students in the general population, students on the free meal program, and students with reduced price meals. Academic achievement data was collected for students in third through eighth grade from the Computer Adaptive Levels Tests and the Measures of Academic Progress. Demographic characteristics of H/HM students showed lower attendance, higher rates of being in special education services, and lower math and reading achievement, even when compared with other at-risk children. Static-risk models run by the authors showed an academic gap for math and reading achievement between H/HM students and all other groups. The gap between H/HM students and other students remained stable or increased between third

[2] Assuming that 18% of clients visit the pantry twice a month or 24 times a year, 18% visit once per month, 27% visit 4 times a year, 18% visit 9 times, and 19% visit once in the recent year, the share of food pantry visits accounted for by the twice-a-month visitors is equal to [(0.18)24/{(0.18x24)+(0.18x12)+(0.18x9) + (0.27x4)+ (0.19x1)}] = 0.46. Forty-six percent of 1,595 pantry visits is 734 visits for those visiting 24 times a year. Taking the total number of pantry visits of 734 for the frequent visitors and dividing that by 24 visits per year yields an estimate of 30.6 households that are estimated to be served by the PFS food pantry 24 times a year.)

[3] In 2005, approximately 11% of U.S. households were classified as food insecure (Nord et al. 2006). Given 108.8 million households in the U.S., the percent of food insecure households can be estimated as 11.97 million food insecure households. Hence the food insecurity-related medical and education costs of $76.0 billion divided by 11.97 million people generates an estimate of the health and education-related costs of food insecurity per food insecure household as $6,350. Note that this estimate is conservative to the extent that the clients of the food pantry are more likely to contain more children than the U.S. population as a whole and hence the education benefits from reducing food insecurity may be larger for this group.

and eighth grade. These studies highlight the need to improve housing stability if we wish to improve at-risk children's achievement in school.

Another study by Heinlein and Shinn (2002) looked at 764 students in a very mobile New York City Community School District. They focused on students in sixth grade who were in the NYC school system in kindergarten and who had a test score in third or sixth grade. The test scores came from the California Achievement Tests, Fifth Edition. After running regressions of mobility on reading and math scores, the authors found students with two or more moves between kindergarten and third grade scored 6.24 percentile points lower in math and 3 percentile points lower in reading in third grade. Moving prior to fourth grade also had a negative impact on test scores in sixth grade. For every move that occurred prior to fourth grade, the result was a 1.39 percentage point decrease in math scores and a 2.43 percentage point reduction in reading scores. The authors also found moves prior to fourth grade to be associated with a 1.32 percentage point increase in the odds of being overage in sixth grade. Students were considered overage if there were older than twelve-and-a-half by the end of April of sixth grade. This implies that not only do children who experience housing instability have lower academic achievement; they also are more likely to have been held back at one point, or missed a year of school, making them overage for their grade.

PFS' efforts to provide stable housing assistance. Several PFS families experienced housing crises such as homelessness, living in a car or they are "doubled up" with other families. The program worked with Section 8 housing families who received vouchers from the federal government. If a family lost a voucher due to an event such as having the electricity turned off, PFS worked to help families keep their housing vouchers and connect them with shelters or emergency assistance when needed. If no assistance was available, PFS was able to grant a family financial assistance (in some cases) with money funneled through 360 Communities from the county or other agencies. PFS was also able to help package financial assistance. For example, if a family needed $800, but PFS only had $350 available, then the program collaborated with churches or St. Paul Foundation or others to put together a full package to cover their needs.

If families needed transportation, PFS collaborated with schools to set up transportation. With only one homeless shelter in Dakota County, PFS advocated for families on a regular basis to be placed on a priority waiting list. In addition, PFS worked with churches to help pay for hotel stays for families for one or two nights. PFS also helped families keep their own home by teaching families how to follow a budget.

To the extent that the services of PFS can reduce housing instability, one possible outcome is better academic performance of children. Is school mobility associated with lower test scores? Temple and Reynolds (1999) tried to answer this question using a sample of students from low-income neighborhoods in Chicago who mostly were enrolled in elementary schools containing kindergarten through eighth grade. Controlling for test scores in kindergarten, students who changed schools ended up with lower test scores in reading and mathematics by the end of 7th grade. The negative effect on test scores was larger for students who moved four or more times. If PFS were able to reduce school mobility for a highly-mobile group from four moves to zero

moves, then the estimated effect on test scores would be .32 standard deviations for reading achievement and .30 standard deviations in mathematics. A more conservative assumption is that PFS services lead to a reduction in school mobility by one move. According to Temple and Reynolds (1999), a reduction in school mobility by one move for students at risk of frequent mobility is associated with an improvement in test scores by approximately 0.065 standard deviations.

An estimate of the effect of a one standard deviation increase in test scores is provided by Krueger (2003) who reports that a one standard deviation in test scores is likely to increase the present value of lifetime earnings by $26,544 in 1998 dollars or $38,552 in 2014 dollars under the assumption of a 3.5% discount rate and an assumption of 2 % economic growth. Accordingly, it can be assumed that a 0.065 increase in test scores is associated with a $2,506 increase in the present value of lifetime earnings.

Measuring Costs

The measurement of costs for PFS is much more direct than measuring and valuing the outcomes of the program. However, care must be taken to ensure that all of the resource costs of the program are included. Because of this requirement, we included funding raised from external sources, an estimation of the value of donated items, and an estimate of the cost of volunteers' time. The reason for including items not directly incurred by PFS is because these items are being utilized by the program to deliver its services. Without these indirect costs and donated items, the services provided by the program would be less and we would expect lower impact on the outcomes. Therefore, to ensure that we capture the true total cost of running the program as it relates to the benefits provided, we included these other costs.

We used cost data for PFS from July 1, 2013 through June, 30 2014. Table 5 shows the dollar value associated with each expense category. A brief description of each category is as follows: The costs for salary and benefits are for all staff working in the PFS program, which includes family support workers and administration. Supplies included standard office supply costs, such as binders and ink for printers. External funding sources included churches and other agencies PFS works with to provide financial assistance packages for families. Internal funding sources included local and federal agencies and are combined with external funding sources assist families with financial needs greater than $250-$350. Administration costs are the PFS share of management and general costs incurred by 360 Communities to run the program. The costs of materials used included everyday office expenses; for example, consulting, telephone charges, printing costs, postage, utilities, office space rent, maintenance, etc. Donated items were conservatively estimated based on the description of the items. The majority of items donated were bags of various clothing items and school supplies. Other items donated included, mattresses, Target gift cards, books, board games, food, and amusement park passes. Volunteers' time was estimated using the minimum wage in Minnesota during this time, $8 an hour, for the 123.5 volunteer hours that were recorded.

Table 5. *Partners for Success Program Costs*

Services	**Dollar Amount**	**Dollar Amount Per Individual***	**Percentage**
Salary and Benefits	$746,414.96	$285.44	77.10%
Supplies	$265.87	$.10	.03%
External Funding Sources	$3,286.82	$1.26	.34%
Internal Funding Sources	$15,204.83	$5.81	1.57%
Administration Costs	$131,957.22	$50.46	13.63%
Materials Used	$49,079.45	$18.77	5.07%
Donations	$20,953	$8.01	2.16%
Volunteers	$988	$.38	.10%
Total Cost	**$968,150.15**	**$370.23**	**100%**

* Per individual served is based on the 2,615 unique individuals served in the focus year.

As shown above, the largest cost for the PFS program is for salary and benefits for employees, which accounts for 77% of total expenses. This expense along with administration costs total to over 90% of the total costs for PFS. The total cost of services provided is equal to $968,150. On a per person served basis, we calculated the dollar costs per individual in the program by taking overall costs for each category and dividing that amount by the 2,615 unique individuals served during the 2013-2014 focus year. Based on these cost data provided by PFS, we find the program to cost $370.23 per individual served.

SROI Analysis

Given the total resource cost of $968,150 for services provided during the 2013-2014 year, we can compare this total cost to our estimate of possible benefits. Based on the estimation of PFS benefits inferred from previous literature and the cost data, we can estimate an approximation of the social return on investment for PFS assuming similar impacts to those discussed in the relevant studies described in previous sections of this report.

Table 6 describes the framework for estimating the benefits of the intervention services in terms of reductions in truancy, improvements in GPA, greater numbers of high school graduates, reduced food insecurity, and reductions in school mobility due to improvements in residential stability. For all categories other than food security, we assume that the students most affected by the intervention will be those under the age of 13 (n=873). Moreover, for all outcomes other than high school graduation, we assume that half of these students (n=436) students, will actually experience a positive change in the various outcomes as a result of program participation. All dollar estimates represent the value of a dollar in 2014.

For the benefit of reducing school absences by day per year, our estimate is that lifetime earnings would increase by $5,738 for each student affected by the program. Because the estimated effect is a reduction in days absent by 0.55 days instead, the possible benefit is then $3,156 per student

Table 6. *Present Value Benefit Estimation by Category for PFS (Stated in 2014$)*

	Reduced Truancy*	**Higher GPA***	**Increased High School Graduates**	**Reduction in Food Insecurity**	**Reduction in School Mobility***
a. Number affected	436 children	436 children	See row d.	See row d.	436 children
b. Unit of outcome change	One day per year	One point	One additional high school graduate	One additional household	One standard deviation in test scores
c. Value of one unit change in $2014	$5,738	$23,541	$318,800	$6,350	$38,552
d. Possible magnitude of effect	0.55 reduction in days missed	0.07 higher GPA	25, 12, or 3 additional graduates	10.4 households	0.065 standard deviation increase in test scores
e. Estimate benefit from PFS program (c x d) in $2014	$3,156 per student $1,376,016 in total in present value terms	$1,648 per student $718,528 in total in present value terms	$7,970,000; $3,825,600 or $956,400 higher lifetime earnings#	$66,040 annual lower health care and education costs	$2,505 per student $1,092,180 in total in lifetime earnings

*For the categories of truancy, GPA, and school mobility, the assumption is that the intervention potentially has an impact for students less than 13 years of age (n=873 students) and only one-half of the total number of these students (436) actually are impacted by the intervention. # Additional benefits of high school graduation are discussed and reported in Table 7.

and we estimate that 436 students are affected, the total benefit of reducing school absences is $1,376,016 in additional lifetime earnings. In terms of the program's effect on a student's grade point average, we rely on the assumption that a one-unit increase in GPA is associated with an increase in lifetime earnings of $23,541. Assuming that the intervention leads to an improvement in GPA by 0.07 points, the total benefit to all students assumed to be affected is $718,528 in lifetime earnings.

Improvements in high school graduation rates comprise the largest category of the benefits by far. For each student who is prevented from dropping out of high school by participation in the PFS program, the estimates in Rouse (20050 and Levin et al. (2007) suggest that present value of the lifetime earnings benefit is $318,800 in 2014 dollars. How many students are affected by this program? Assuming three students out of each 100 students (or 25 in total) are induced to graduate instead of dropping out, this would generate a total benefit of $7,970,000 in increased life time earnings. Assuming that only 12 rather than 25 students are induced to stay in school, the earnings benefits are $3,825,600. Taking a much more conservative approach and assuming that only 3 students in total are induced by the program to stay in school, this leads to a benefit estimate of $956,400.

The estimate of the benefit of reducing food insecurity depended critically on assumptions about how many households were using the food pantry services enough times to actually change the household's status from food insecure to food secure. Assuming that 10.4 households were getting very frequent assistance at the rate of twice a month every month for a year, the estimated benefit of reducing food insecurity is $66,040. This estimate relied on an existing study by Brown et al. (2005) that estimated the costs of food insecurity in the U.S. in terms of additional health care costs and reductions in school achievement.

Finally, the benefits of reducing frequent school mobility of homeless or highly mobile students was estimated by assuming that the program services lead to a reduction in school mobility by one school move. For example, we assume that the PFS program leads to a reduction in school mobility from 4 to 3 moves during elementary school. For each student who moves one fewer time due to the intervention, the estimated effect is $2,505. The assumption is that a reduction in school mobility by one move is associated with a 0.065 standard deviation increase in elementary school, and each standard deviation increase in test scores is associated with an increase in lifetime income of $38,552. Assuming that 436 students are positively impacted, the total benefit from providing housing assistance is equal to $1,092,180.

Because high school graduation is considered a basic indicator of school success and the estimated monetary benefits of graduation are sizeable by themselves, Table 7 focuses entirely on reporting the benefit of increasing the number of high school graduates due to PFS efforts by either 25, 12, or 3 graduates a year. These monetary estimates come from Levin et al. (2007) and are adjusted to 2014 dollars. For each projection of the intervention's effect on graduation, the monetary benefits are reported three different ways. First, the estimates of high school graduation are reported in terms of higher personal earnings accruing to the program participant. Second, the earnings estimated are augmented by estimates of the reductions in criminal justice costs associated with lower rates of high school dropout. Finally, the reported estimates include

public health benefits, benefits of higher tax revenues, and benefits resulting from lower criminal justice system costs in addition to projections of higher private earnings. Because the crime savings estimates of Levin et al. 2007 are specifically for African-American males, we only include half of the estimated crime benefits to reflect the fact that interventions' effects on female crime are generally lower or not statistically significant (e.g. Reynolds et al., 2011).

In Table 7, all estimates (except one) of the benefits associated with the PFS intervention's effect on high school graduation exceed the costs by a sizeable amount. The effects of inducing even three high school students to graduate rather than drop out are greater than program costs when the additional benefits of reducing crime costs are included. The benefit-cost ratio for PFS due to the effect on reducing high school dropout alone ranges from a low of approximately $0.99 to a high of $14.29. Clearly, even modest efforts to reduce the number of high school dropouts may yield social benefits that exceed program costs.

All of the benefit categories discussed in this report are included in Table 8. Making reasonable assumptions about program effectiveness that are consistent with results found in various research studies, Partners for Success may generate significant benefits to society by promoting parental involvement, working directly with students and reducing residential instability and food insecurity. To increase confidence in this study's findings, we report the most conservative estimates of the effect of the PFS program on high school graduation rates.

Considerations for computing the impacts of high school graduation and calculating benefits that overlap. Before comparing the total benefits to the total costs, it is important to re-consider and re-examine how the estimates on the benefit side were computed. As reported in Table 7, the benefits associated with high school graduation are sizeable. While the results suggest that the benefits of a small increase of high school graduates by 3 per year in total are almost enough to offset the entire costs of the PFS program, more information about the effect of PFS on high school graduation is crucial. As we currently have little indication of what the effect of program participation is on high school graduation, Tables 6, 7 and 8 contain several alternative estimates.

A second consideration is that some of the education benefits are double counted. For example, an improvement in school attendance is assumed to lead to an increase in student graduation rates. At the same time, an increase in GPA is assumed to be associated with higher earnings in adulthood, but attendance also can improve GPA and students with higher GPAs may be more likely to graduate. All of the benefit categories either were entirely based on assumptions that the PFS program would lead to improvements in the children's school performance or included some benefits from improvements in school performance. While the estimated benefits of reducing food insecurity were based mainly on the assumption that food insecurity affects the health of all household members, this category also included some benefits of improved test scores and a reduction in need for school remediation services. Table 8 includes the entire set of program benefits while including only the most conservative estimates of the effects on high school graduates in recognition of the double counting issue.

Total costs of the PFS services in the year 2013-2014 were almost a million dollars, or $968,150. The largest reported total benefit estimate in Table 8 is $4,913,195, suggesting a benefit-cost ratio of $5.07. This takes into account the possible benefits to society in terms of higher lifetime participant earnings, higher tax revenues, and lower public health and criminal justice system costs. Assuming that the PFS program is able to induce 25 high school students on their way to dropping out to become high school graduates instead, the total benefits including the other benefit categories in Table 8 might be $17,089,689 instead, reflecting a benefit-cost ratio of $17.65. We view this as an upper bound estimate as it assumes that the same benefits are not counted more than once or that all of the education impacts are independent of each other. The estimated benefit-cost ratios in Table 8 range from $4.35 to $5.07 and may represent an under-estimate of benefits to the extent that PFS may induce more than 3 students a year to stay in school and graduate rather than drop out. Even these conservative estimates compare favorably to existing estimates of the alternative intervention programs such as small class sizes ($2.83 to $1; Krueger, 2003) and many of the estimates of social programs reported in Aos et al. (2004).

Table 7. *Benefits Associated with Increasing the Number of High School Graduates: An Approximation for PFS (Stated in 2014$)*

Number of high school students induced to graduate as a result of the PFS intervention.	**Total Dollar Amount**
Including personal earnings gains only	
Assuming 25 new graduates	$7,970,000
Assuming 12 new graduates	$3,825,600
Assuming 3 new graduates	$956,400
Including personal earnings gains and crime savings	
Assuming 25 new graduates	$8,809,425
Assuming 12 new graduates	$4,228,524
Assuming 3 new graduates	$1,057,131
Including personal earnings gains, higher tax revenues, public health and crime savings	
Assuming 25 new graduates	$13,836,925
Assuming 12 new graduates	$6,641,724
Assuming 3 new graduates	$1,660,431
Total Costs	**$968,150**
Plausible range of benefit-cost ratios	**$0.99 to $14.29**

Table 8. Benefit categories and comparison of total benefits to total costs: An Approximation for PFS (Stated in 2014$).

Components of Benefits	Total Dollar Amount
Reduced School Absences	$1,376,016
Increased GPA	$ 718,528
Increased high school graduation – *3 additional graduates (earnings only)or* *3 additional graduates (earnings and societal crime savings only) or* *3 additional graduates (earnings, higher tax revenues, societal public health and crime savings)*	$ 956,400 $1,057,131 $1,660,431
Reduced Housing Instability	$1,092,180
Reduced Food Insecurity	$ 66,040
Total Benefit 1	**$4,209,164**
Total Benefit 2	$4,309,895
Total Benefit 3	$4,913,195
Components of Costs	
Administrative and Operating Costs	$ 946,209
Donations and Volunteer Time	$ 21,941
Total Costs	**$ 968,150**
Benefit-Cost Ratio[1]	**$4.35**
Benefit-Cost Ratio[2]	**$4.45**
Benefit-Cost Ratio[3]	**$5.07**

[1]Assuming 3 new graduates and counting their personal earnings gains only. [2] Assuming 3 new graduates and counting their personal earnings gains and societal crime savings only [3]Assuming 3 new graduates and counting their personal earnings gains, higher tax revenues, societal public health and crime savings.

SROI Implications

This report has identified five potential outcome areas that are expected to be impacted by a program like PFS that provides a range of family support services to parents and their children with the goals of improving school success, reducing food insecurity, and intervening to reduce homelessness and frequent residential mobility. For all of these outcome areas, existing research provides some estimates of how a well-implemented program can generate positive impacts for families and youth. Moreover, improvements in all of these outcomes can be valued in dollar terms.

The biggest benefit category is high school graduation. To the extent that the PFS services can have an impact on graduation, a conservative estimate of the benefit of one additional student graduating is $318,800 in the present value of higher earnings throughout adulthood. Even if no other benefits existed, the program would have to induce only 4 additional students to graduate

in order for the PFS program benefits to exceed the costs. Adding to personal earnings the social benefits associated with high school graduation such as crime cost savings, higher tax revenues, and lower public health costs generates even higher estimates of the benefits of inducing high school dropouts to stay in school instead. The next two largest categories of benefits are associated with the PFS's assumed effects on improving student attendance at school and the program's estimated effect of promoting residential stability. Well-implemented programs that focus on improving student attendance and reducing frequent school mobility are likely to generate significant benefits.

This report has utilized different ways of conceptualizing the economic benefits of the Partners for Success program. Assuming that the only benefits are in terms of increasing high school graduation rates, using reasonable assumptions about program effectiveness generates benefit-cost ratios ranging from approximately $1 in benefits for an additional dollar in costs to a high of $14.29 in benefits for one dollar spent. This latter estimate assumes that 25 students are prevented from dropping out per year. The second more comprehensive approach to estimating program benefits involves making separate benefit calculations for five important outcomes that potentially be affected by the PFS program. Concern that some of those benefits may not be completely independent of each other and double counting may exist led us to use the most conservative estimates for preventing high school dropout. Using this conservative approach, the benefit-cost ratio is estimated to range from $4.35 to $5.07.

In the next section, we discuss what types of additional data the PFS program could collect to improve the accuracy of future SROI and other impact evaluations.

Recommendations for Additional Data Collection

The results of this study provide a reasonable estimate of the return for the PFS program. Any assessment of the SROI of a particular program must rely on accurate and complete data regarding a program's outcomes. In this section, we make recommendations on the types of data that would facilitate a more detailed and accurate SROI calculation in the future. Some of these data are already being collected by PFS but several additional indicators are suggested that would be useful in calculating an SROI in future studies.

Program evaluation data collection

- ✓ **Continue to collect data from parents regarding their involvement in school-related activities.** A review of the research and previous evaluation results support the notion that working with FSWs does have an effect on parents with regard to increased engagement in their child's educational progress. The systematic collection of data on parents' involvement is a key component of reporting PFS' overall effectiveness.

- ✓ **Continue to develop systematic reporting of activities related to family learning plans.** The systematic collection of measurable outcomes relating to FSWs' work with families provide valuable information that can show some of the benefits of participation in the program. Further development of these processes will help PFS exemplify program benefits.

- ✓ **Continue to collect data from multiple sources to isolate program effectiveness.** Showing how PFS impacts its participants is complicated by students and families receiving extra supports through other school resources and programs. Thus, clearly defined outcomes for PFS' unique benefits to students and families will help differentiate program effectiveness from other services.

- ✓ **Record individuals' level of participation in the program.** Tracking the dates when participants enter and leave the program, and same household/family indicators for participants will help to determine duration and dosage of services.

Benefits and costs data collection

- ✓ **Collect data on academic outcomes.** Tracking students' attendance, graduation progress, test scores, and grades before and after participation in the program will help PFS to accurately assess program benefits to students.

- ✓ **Collect benefits and cost data for donations.** Tracking types and quantities of donated items to and from the program will allow for more precise SROI analyses in the future. For example, details about the quantity of food shelf donations to individuals per year, and types and quantities of clothing items helps to determine the benefits of the program.

- ✓ **Follow-up on referrals for stable housing.** Following up on activities that PFS engages in to connect families to resources will help to show benefits of the program. For example, information on whether a parent was able to retain housing due to PFS involvement can help determine how the program contributes to stable housing for students and families.

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