

**Relationship Skills Education and
Child Support: Evidence from a
Program Partnership in Texas**

November 15, 2010

Robert Santillano
Robert G. Wood



MATHEMATICA
Policy Research, Inc.

**Relationship Skills Education and
Child Support: Evidence from a
Program Partnership in Texas**

November 15, 2010

Robert Santillano
Robert G. Wood

MATHEMATICA
Policy Research, Inc.

RELATIONSHIP SKILLS EDUCATION AND CHILD SUPPORT: EVIDENCE FROM A PROGRAM PARTNERSHIP IN TEXAS

Robert Santillano and Robert G. Wood

November 2010

Promoting responsible fatherhood as a means of improving child well-being is a growing policy priority. This strong interest suggests a need for additional research on the effectiveness of potential approaches to promoting this policy goal. The first and best source of support for a child is a nurturing two-parent family. However, when couples split up, child support can be a vital source of income for low-income, single-mother families. Therefore, a combined strategy of promoting stronger parental relationships and involving couples with the child support system when appropriate may be a promising approach for ensuring that children have continuous financial support from both parents.

The Building Strong Families (BSF) evaluation provides a unique opportunity to examine this policy approach. BSF is a multisite, random-assignment evaluation of a relationship skills education program for unmarried parents (Wood et al. 2010). The program aims to improve the stability and quality of unmarried parents' relationships with the ultimate aim of improving child well-being. Two of the BSF evaluation sites were in Texas. These sites augmented their BSF programs through collaboration with the Child Support Division (CSD) of the Texas Office of the Attorney General (OAG). This partnership aimed to promote paternity establishment and improve other child support outcomes by educating BSF parents about the child support enforcement process.

In this paper, we present estimates of the impact of this partnership between BSF and the CSD in Texas on child support outcomes, including paternity establishment, child support orders, and child support payments. In addition, we examine the BSF program's effects on other measures of paternal involvement, such as whether fathers live with their children or provide substantial financial support to them. The study relies on the rigorous random assignment research design used in the full BSF evaluation. The analyses rely on surveys of couples collected after 15 months of study participation and administrative child support records supplied by the OAG that provide two to three years of follow-up.

Overall, we find few impacts of the BSF-CSD partnership on child support outcomes for our full research sample. However, for the subgroup of BSF couples for whom we have longer histories of administrative outcomes (three years), we find the program led to significantly lower rates of involvement with the child support enforcement system. This result may indicate that the program increased the likelihood that BSF couples remained intact three years after program entry, thus reducing their need for child support involvement. However, we cannot confirm this possibility until data from 36-month BSF follow-up surveys—which are currently being conducted and which include questions on family structure—are available for analysis.

BSF and the Child Support Augmentation in Texas

The Office of Planning, Research & Evaluation in the Administration for Children and Families (ACF), part of the U.S. Department of Health and Human Services, launched BSF in 2002. ACF contracted with Mathematica Policy Research to conduct the evaluation. The program was designed

to help unmarried new parents strengthen their relationships with each other, with the ultimate goal of creating a stable and healthy home environment for their children. BSF's core service is relationships skills education sessions run by trained facilitators. These sessions follow a standard curriculum that covers a variety of topics, including improving communication skills, avoiding harmful fights, building intimacy and trust, and adjusting to life with a new baby.¹

The CSD of the Texas OAG partnered with the BSF project to investigate the effects of combining relationship skills education with early introductions to the child support enforcement system. With active support from the Texas OAG, Mathematica recruited two local organizations in Texas as BSF evaluation sites: Healthy Family Initiatives in Houston and Healthy Families San Angelo.

The CSD collaborated with the BSF program staff in Houston and San Angelo in several ways. The CSD provided BSF staff general training on the child support process and instruction on the process of legal paternity establishment, which is required for child support orders when a father denies paternity. The CSD also designated a liaison knowledgeable about both programs to promote child support orders for BSF participants. The nature of the collaboration at each site varied, however, according to important contextual factors.

In San Angelo, CSD and BSF staff maintained a close working relationship. CSD staff visited couples at the BSF location, and BSF staff were able to take some parents directly to the CSD's San Angelo office. All San Angelo BSF staff received training in child support procedures and in some cases served as advocates for BSF couples on child support issues.

Houston staff faced different practical challenges that made it difficult to maintain a strong partnership with CSD. The Houston BSF program covered a large metropolitan area served by eight geographically dispersed CSD offices. Further, CSD workers moved frequently across offices, making it more difficult for BSF staff to maintain stable and productive communication with each specific CSD location. In addition, the Houston BSF office mainly served Spanish-speaking immigrants, many of whom were undocumented. Undocumented immigrants might fear engagement with any government system due to their legal status. In contrast, the population served by the San Angelo BSF program was mostly English-speaking U.S.-born Latinos.

The OAG entered into a memorandum of understanding with Mathematica to evaluate the impacts of the augmented BSF program on child support outcomes. Mathematica conducted the analysis within the framework of the experimental research design used in its larger evaluation of BSF (Wood et al. 2010). In the two Texas sites, couples eligible for BSF were randomly assigned to a program group that could receive the BSF and CSD intervention, or a control group that could not. This design enabled researchers to examine effects of the combined program on a range of outcomes, including rates of paternity establishment and the amount of child support provided by fathers.

¹ For more information on the BSF program model and how it was implemented, see Dion et al. 2010. For more information on the BSF evaluation and the initial impact results, see Wood et al. 2010.

Hypotheses and Key Research Questions

The BSF intervention and its child support enhancements could influence child support-related outcomes in several ways. If relationship skills education leads more parents to stay together as couples, fathers may have greater access to and provide more direct financial support for their children. Therefore, BSF fathers may be more likely to provide financial support to their children but be less likely to have a child support obligation or to pay formal child support. In other words, BSF may reduce couples' need to be involved with the child support enforcement system and thus reduce the likelihood that they have child support orders and obligations in place.

Relationship skills education could also improve nonromantic relationships for parents who separate. If BSF succeeds in promoting greater cooperation between parents and improves their ability to manage their conflicts, these effects could in turn increase fathers' commitment and access to their children after a separation, along with their willingness to provide support informally or to comply with child support orders. This potential effect of BSF could increase payment of child support.

The child support enhancements to BSF provided in the Texas sites could also have a mix of effects on child support-related outcomes and couple relationships. First, the enhancements aimed to promote paternity establishment among BSF couples. Higher rates of paternity establishment could in turn increase the likelihood that child support orders are established and child support is paid if the couple later separates. In addition, the emphasis on supporting the child financially regardless of what happens to the couple's relationship could increase child support payments and compliance in the event that the couple breaks up. However, if BSF's relationship skills services make couples more likely to stay together, these latter effects may not be observed.

Therefore, interpreting impacts on child support outcomes is complicated, because a negative effect on child support involvement could indicate the success of the BSF-CSD partnership if this effect is driven by an increased likelihood that couples remain together. To address this complexity in interpreting possible impacts on child support outcomes, we examine a mix of other outcomes available through survey data, although at an early time point (15 months after program entry rather than two to three years, as with administrative child support data). Specifically, we use survey data to examine whether the father currently lives with the child or provides substantial financial support for the child.²

Based on these considerations, we have used survey and administrative data to address eight questions about the effects of the augmented BSF intervention on child support outcomes:

1. Are BSF mothers more likely to report an establishment of paternity at the 15-month follow-up? (survey data)³

² A father is classified as providing "substantial financial support" if the mother indicates that the father covers at least half of the expenses of raising the child.

³ The Acknowledgement of Paternity form is the legal document signed by a father that establishes paternity. Although the Texas OAG maintains these records, they were not provided for this analysis. For this reason we rely on survey reports of paternity establishment.

2. Are BSF fathers more likely to be living with their children at the 15-month follow-up? (survey data)
3. Are BSF fathers more likely to be living with their children or to have paid formal child support in the past month at the 15-month follow-up? (survey data)
4. Are BSF mothers more likely to report that fathers provide substantial financial support for their children? (survey data)
5. Are BSF mothers more likely to have submitted a child support application two years after random assignment? (administrative data)
6. Are BSF mothers more likely to have a child support order established two years after random assignment? (administrative data)
7. Are positive financial obligations more likely to have been established in child support cases for BSF couples two years after random assignment? (administrative data)
8. Are BSF fathers more likely to pay any child support two years after random assignment? (administrative data)

In addition, for the outcomes described in questions five through eight, we use an early cohort of enrollees to examine whether BSF and the CSD enhancements had effects on the outcomes described in those questions three years after random assignment.

Research Design and Study Sample

Mathematica conducted an experimental evaluation of the augmented BSF program in Houston and San Angelo. Approximately half of the applicants were randomly assigned to the BSF program and the other half to a control group that was not eligible for the program. Across the two programs, the research sample included 747 couples: 405 couples in Houston and 342 couples in San Angelo. Mathematica collected baseline information for all couples at the time of application. The first participants in both Houston and San Angelo were randomly assigned in July 2005. Participants continued to apply and random assignment to the program or control groups continued through November 2007 in San Angelo and February 2008 in Houston.

Mathematica administered a follow-up survey 15 months after the date of each couple's randomization to capture relationship and family structure outcomes. The survey also gathered information from couples on paternity establishment and the financial support fathers provided for their children. The response rate for the survey was high for both program and control groups.⁴ In Houston, 89 percent of program couples and 86 percent of control couples responded to the survey. In San Angelo, 85 percent of the couples in both program and control groups responded to the survey. A three-year follow-up survey is currently being conducted. However, these data are not yet available.

⁴ In some of these cases only one member of the couple responded. Across both sites, 518 couples (69 percent of the full research sample) had both members respond to the survey.

For this analysis, Mathematica also examined administrative data on child support outcomes provided by the Texas OAG. Mathematica provided the OAG with identifying information for study participants and the child whose birth gave rise to the couple's participation in the study (the focal child). The agency then used this information to match study participants to their child support case files.⁵ We use these data to examine program impacts on legally determined child support outcomes.

We estimated all impacts using multiple regression analysis that controls for baseline characteristics of the couple.^{6,7} We estimated impacts for the two Texas programs combined, as well as for each of the two programs separately. Because some effects on child support outcomes can take time to develop, we also estimated impacts for the subset of the study sample that has three full years of observable administrative data.

Impact Results

When we combine data from Houston and San Angelo, there are no statistically significant effects on paternity establishment or on the likelihood that fathers live with their children or provide substantial support to them (Table 1). In both research groups, we find high rates of paternity establishment. Approximately 93 percent of couples in both groups indicate that paternity was established for the focal child. We also find that most fathers live with the focal child. At the 15-month follow-up survey, 78 percent of program group fathers live with their children, compared with 73 percent of control group fathers, a difference that is not statistically significant (p -value = 0.128). Paternal financial support is also high for both groups. In 84 percent of both groups, mothers report that the fathers provide substantial financial support, defined as covering at least half of the cost of raising the child.

A somewhat different pattern of results emerges when we examine these effects separately for Houston and San Angelo (Table 2). In particular, the San Angelo BSF program had a significant effect (p -value = 0.095) on the likelihood that fathers were living with the focal child 15 months after program entry.⁸ At follow-up, 71 percent of BSF fathers in San Angelo were living with their children, compared with 63 percent of control group fathers (Table 2). In addition, BSF fathers in San Angelo were more likely than control group fathers to be either living with their children or providing them child support, 79 percent versus 71 percent. There are no other statistically

⁵ The appendix to this paper describes the variables obtained by the OAG and our process for accepting CSD and BSF matches.

⁶ The model controlled for the following participant characteristics: time since random assignment, whether the child was born at time of random assignment, age, race/ethnicity, education, employment, earnings, attendance of religious services, language, cohabitation, marital status, distress measures, relationship expectations, parental values, preference for timing of child, having multiple children with the BSF partner, having children with other partners, time known partner, and access to social support. All individual characteristics were measured at baseline.

⁷ Estimated effect sizes for binary variables are calculated as Cox-Log Odds ratios deflated by 1.65.

⁸ The site-specific estimated impacts reported here are identical to those presented in the main BSF analysis report (Wood et al. 2010). However, the p -values differ somewhat. These differences are due to the fact that the statistical model for the main analysis included all eight BSF program sites, whereas the estimates for this analysis included only the two sites in Texas. This differing estimation technique yields slightly different estimates of the standard errors and therefore somewhat different t -statistics and p -values. For example, the "father lives with child" impact in San Angelo has a p -value of 0.140 in the main analysis and therefore was statistically insignificant.

significant differences in either site for established paternity or general paternal provision of financial support.

Table 1. Impacts of BSF on Father Residence and Paternity Establishment at 15-Month Follow-Up

	Program Group (%)	Control Group (%)	Estimated Impact	p-Value	Effect Size
Father's paternity has been established	92.8	93.3	-0.5	0.804	-0.050
Father lives with child	77.8	72.9	5.0	0.128	0.163
Father lives with child or pays child support	84.3	79.3	5.0	0.108	0.204
Father provides substantial financial support	83.7	83.8	-0.2	0.958	-0.007
Sample Size	330	316			

Source: BSF 15-month follow-up survey, conducted by Mathematica Policy Research.

**/* Statistically significant at the .05/.10 level.

Table 2. Impacts of BSF on Father Residence and Paternity Establishment at 15-Month Follow-Up, by Site

	Program Group (%)	Control Group (%)	Estimated Impact	p-Value	Effect Size
Houston					
Father's paternity has been established	92.2	95.9	-3.8	0.201	-0.420
Father lives with child	84.6	82.7	1.9	0.663	0.086
Father lives with child or pays child support	89.5	87.3	2.2	0.606	0.130
Father provides substantial financial support	89.6	89.5	0.1	0.983	0.006
San Angelo					
Father's paternity has been established	93.5	90.8	2.7	0.404	0.227
Father lives with child	71.0	63.0	8.0*	0.095	0.220
Father lives with child or pays child support	79.0	71.2	7.8*	0.092	0.254
Father provides substantial financial support	77.8	78.2	-0.4	0.928	-0.014
Sample Size					
Houston	181	174			
San Angelo	149	142			

Source: BSF 15-month follow-up survey, conducted by Mathematica Policy Research.

**/* Statistically significant at the .05/.10 level.

We also conducted analysis with administrative data to examine BSF's impacts on formal child support outcomes. Administrative outcomes are not directly comparable to the survey responses on child support because they were measured at different points after random assignment. The administrative data available for analysis allow examination of child support outcomes for the full sample for two years after random assignment. In addition, approximately half of the sample had enrolled early enough for us to examine three-year outcomes using administrative data.⁹ In contrast, survey data available for this analysis were collected 15 months after random assignment. We present impacts results using administrative data for all couples in Table 3 and for early enrollees in Table 4.

Table 3. Impacts of BSF on Child Support Outcomes Two Years after Random Assignment (Houston and San Angelo Combined)

	Program Group (%)	Control Group (%)	Estimated Impact	p-Value	Effect Size
Child support application filed	23.1	22.7	0.4	0.889	0.014
Child support order established	9.1	8.9	0.2	0.933	0.013
Financial obligation existed	8.5	8.9	-0.4	0.845	-0.031
Father paid any child support	6.5	7.7	-1.2	0.527	-0.111
Sample Size	378	369			

Source: Administrative records data provided by the Texas Office of the Attorney General.

Note: All outcomes refer to the two-year period after random assignment.

**/* Statistically significant at the .05/.10 level.

Two years after random assignment, there are no statistically significant differences in administrative child support outcomes for program and control couples (Table 3). Both research groups are equally likely to have filed a child support application (23 percent for both groups) and are equally likely to have an order established or a financial obligation due (9 percent for both groups). In addition, similar percentages of BSF and control group fathers had paid child support two years after random assignment.

When we examine three-year outcomes for the early enrollees in the sample—166 program and 159 control couples—some statistically significant impacts emerge (Table 4). Specifically, there are statistically significant negative effects on the likelihood that orders were established, financial obligations were set, and fathers made formal child support payments. Among early enrollees, BSF couples are 7.9 percentage points less likely than control couples to have a child support order established, 7.4 percentage points less likely to have a positive child support financial obligation, and 6.5 percentage points less likely to pay any child support. Differences in compliance did not drive these differences in payments; the same proportion of BSF and control group fathers (88 percent)

⁹ Specifically, three-year impacts can be estimated for those randomly assigned before December 1, 2006. Administrative data were collected through December 31, 2009.

made payments when they had a financial obligation (not shown).¹⁰ Rather, among early enrollees, BSF fathers were less likely than control fathers to have child support obligations in the first place.

Table 4. Impacts of BSF on Child Support Outcomes Three Years after Random Assignment for Those Randomized Before December 1, 2006 (Houston and San Angelo Combined)

	Program Group (%)	Control Group (%)	Estimated Impact	p-Value	Effect Size
Child support application filed	26.4	31.6	-5.2	0.254	-0.154
Child support order established	12.1	20.0	-7.9**	0.047	-0.361
Financial obligation existed	11.2	18.6	-7.4**	0.049	-0.361
Father paid any child support	9.8	16.3	-6.5*	0.072	-0.355
Sample Size	166	159			

Source: Administrative records data provided by the Texas Office of the Attorney General.

Note: All outcomes refer to the three-year period after random assignment.

**/* Statistically significant at the .05/.10 level.

This finding raises obvious questions about why there should be a difference between two- and three-year impacts. Do program–control differences emerge later because of the time required for impacts on certain child support-related outcomes to emerge? Or, alternatively, did the program affect early and later enrollees differently? We investigated this possibility by testing for the statistical equivalence of program impacts estimated for early enrollees and later enrollees for the two-year child support outcomes in Table 3. The negative impacts on these outcomes were larger among early enrollees than they were among later enrollees (not shown). However, these differences in impacts for early and later enrollees were not statistically significant. We further investigated the possibility of differences by estimating impacts for the outcomes constructed from the 15-month follow-up survey for the early enrollees, but found no statistically significant impacts. Therefore, based on the administrative data there is no clear evidence that the difference in two- and three-year impacts reflects larger effects of BSF on early enrollees.

We also estimated these impacts separately for Houston and San Angelo. However, unlike the survey impacts discussed earlier, the pattern of impacts on these administrative records outcomes is very similar in the two sites. The appendix of this paper includes site-specific impacts on administrative outcomes.

One notable difference across the two sites, however, is the level of involvement with the child support enforcement system among the population served by BSF. For example, in San Angelo, 14 percent of couples in both research groups had a child support order established after two years (Table A.1). In contrast, only 4 percent of Houston couples had a child support order in place at this

¹⁰ Compliance is calculated by dividing the share of individuals who have paid any of the obligations by the share of those with a positive financial obligation. This represents a nonexperimental comparison, because these percentages are conditional on a post-random assignment outcome (having a positive child support obligation) that the intervention could have influenced.

point. This difference may reflect in part differences in the populations served by the two programs. Houston served primarily a population of new Spanish-speaking immigrants, many of whom may have been undocumented and thus reluctant to become involved with any government agency or program. In contrast, San Angelo served primarily a native-born English-speaking Latino population.

Conclusions and the Need for Future Analysis

Overall, the BSF programs in Texas and their child support enhancements had few statistically significant impacts on couples' family circumstances, couples' relationships, or their participation in the child support system. Two years after random assignment, there were no statistically significant impacts on any of the administrative child support outcomes we examined. Similarly, we found no effect on the likelihood that paternity was established as measured by survey data at 15 months. However, the rates of paternity establishment were quite high among the couples in our study sample—93 percent in both research groups—suggesting that there may have been little room for improvement on this measure.

Our analysis also suggests that BSF in Texas reduced couples' involvement with the child support enforcement system among early enrollees, for whom we had a full three years of follow-up administrative data. Among this group, BSF reduced the likelihood that couples had a child support order established after three years; it also reduced the likelihood that fathers were subject to a child support obligation or had paid child support at this point. Our results suggest that lower rates of compliance did not drive these impacts. Among fathers with child support orders in place, rates of compliance were identical across the two research groups.

Instead, these results may indicate that BSF couples were more likely to remain intact three years after program entry, thus reducing their need for involvement with the child support system. Unfortunately, the currently available data do not provide long-term follow-up on living arrangements or relationship status. The available data on these outcomes come from the 15-month follow-up survey. At 15 months, we find positive effects on the likelihood of fathers living with their children in San Angelo but not in Houston. Mathematica is currently conducting a second BSF follow-up survey, which will provide information on relationship status and living arrangements at 36 months. Data collection is scheduled to be completed in late 2011. When these 36-month data are available, we can examine whether effects on child support outcomes that we have observed among early BSF enrollees in Texas are related to a program effect of increasing the likelihood that fathers lived with their children.

REFERENCES

- Dion, M. Robin, Sarah A. Avellar, and Elizabeth Clary. “Implementation of Eight Programs to Strengthen Unmarried Parent Families.” Washington, DC: Mathematica Policy Research, May 2010.
- Wood, Robert G., Sheena McConnell, Quinn Moore, Andrew Clarkwest, and JoAnn Hsueh. “Strengthening Unmarried Parents’ Relationships: The Early Impacts of Building Strong Families.” Princeton, NJ: Mathematica Policy Research, May 2010.

TECHNICAL APPENDIX

Definition of Child Support Terms

Child support application: An application is recorded as the opening of a case file by the Child Support Division (CSD) at the Office of the Attorney General (OAG). This could have been by request of a custodial parent, noncustodial parent, or an agency in charge of administering certain public benefits.

Child support order: An order is established when an application has been processed and a judge or case workers has determined terms of an obligation for the noncustodial parent. Cooperation from the custodial parent is required to establish an order. Once established, it is in place until (1) the child reaches legal age and the noncustodial parent owes no arrears or 2) a custodial parent requests the case to be closed. A benefit of having a child support order is that it is easier for the court to adjust the terms at low administrative costs when family circumstances change.

Child support obligation: An obligation is determined at the time an order is established and is the monthly amount of money owed by the noncustodial parent for the support of the child. It can be set at 0 dollars and is divided into two categories: financial and medical obligations. The noncustodial parent pays positive financial obligations to the CSD, which then remits funds to the custodial parent. Unpaid obligations accrue as arrears.

Financial obligation: An obligation is the monthly amount of money owed by the noncustodial parent to the custodial parent for general child support.

Father's payment of child support: We recorded whether the father made a payment of any child support obligation over the follow-up period.

Matching BSF Participants to CSD Cases

Fathers, mothers, and children were individually matched to CSD data files by recorded name and date of birth or by Social Security number. After performing these individual matches, we accepted a match if two of the three individuals had matches. We also excluded cases in which the mother was the noncustodial parent. A single BSF case linked to two CSD cases with a father–mother match and a mother–child match. We accepted the case with the mother–child match because the application for the case was filed after the start of the BSF program.

Table A.1. Impacts of BSF on Child Support Outcomes Two Years after Random Assignment, by Site

	Program Group (%)	Control Group (%)	Estimated Impact	p-Value	Effect Size
Houston					
Child support application filed	11.6	9.2	2.4	0.381	0.155
Child support order established	3.8	4.1	-0.4	0.846	-0.058
Financial obligation existed	3.8	4.1	-0.4	0.846	-0.058
Father paid any child support	3.8	4.1	-0.4	0.846	-0.058
San Angelo					
Child support application filed	34.6	36.2	-1.6	0.753	-0.042
Child support order established	14.4	13.7	0.7	0.850	0.036
Financial obligation existed	13.2	13.7	-0.5	0.904	-0.023
Father paid any child support	9.2	11.3	-2.1	0.538	-0.135
Sample Size					
Houston	203	202			
San Angelo	175	167			

Source: Administrative records data provided by the Texas Office of the Attorney General.

Note: All outcomes refer to the two-year period after random assignment.

**/* Statistically significant at the .05/.10 level.

Table A.2. Impacts of BSF on Child Support Outcomes Three Years after Random Assignment for Those Randomized Before December 1, 2006, by Site

	Program Group (%)	Control Group (%)	Estimated Impact	p-Value	Effect Size
Houston					
Child support application filed	8.9	12.8	-3.8	0.382	-0.243
Child support order established	2.4	9.1	-6.7**	0.025	-0.857
Financial obligation existed	2.4	9.1	-6.7**	0.025	-0.857
Father paid any child support	2.4	9.1	-6.7**	0.025	-0.857
San Angelo					
Child support application filed	43.8	50.5	-6.6	0.412	-0.161
Child support order established	21.8	30.9	-9.1	0.220	-0.285
Financial obligation existed	19.9	28.0	-8.1	0.242	-0.271
Father paid any child support	17.2	23.5	-6.3	0.340	-0.238
Sample Size					
Houston	79	78			
San Angelo	87	81			

Source: Administrative records data provided by the Texas Office of the Attorney General.

Note: All outcomes refer to the three-year period after random assignment.

**/* Statistically significant at the .05/.10 level.

MATHEMATICA
Policy Research, Inc.

www.mathematica-mpr.com

Improving public well-being by conducting high-quality, objective research and surveys

Princeton, NJ ■ Ann Arbor, MI ■ Cambridge, MA ■ Chicago, IL ■ Oakland, CA ■ Washington, DC

Mathematica® is a registered trademark of Mathematica Policy Research