REMINDERS TO PAY

Using Behavioral Economics to Increase Child Support Payments

OPRE Report 2015 20

July 2015

BIAS BEHAVIORAL INTERVENTIONS TO ADVANCE SELF SUFFICIENCY

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OPRE Report 2015-20
July 2015

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OVERVIEW

The Behavioral Interventions to Advance Self-Sufficiency (BIAS) project is the first major opportunity to use a behavioral economics lens to examine programs that serve poor and vulnerable families in the United States. Sponsored by the Office of Planning, Research and Evaluation of the Administration for Children and Families in the U.S. Department of Health and Human Services and led by MDRC, the project applies behavioral insights to issues related to the operations, implementation, and efficacy of social service programs and policies. The goal is to learn how tools from behavioral science can be used to deliver programs more effectively and, ultimately, improve the well-being of low-income children, adults, and families.

This report presents findings from two behavioral interventions designed to increase the collection of child support payments in Franklin County, Ohio. The interventions were intended to increase the number of parents who made a child support payment, as well as increase the dollar amount of total collections per parent. In particular, the Franklin County Child Support Enforcement Agency (FCCSEA) was focused on noncustodial parents who do not have their child support payments automatically deducted from their paychecks, as these parents need to take action each month to make a payment. Using a process of behavioral diagnosis and design, the BIAS team found that over half of the parents who owed child support did not have a recent history of making payments via income withholding, and moreover, that many of these parents were not being sent regular payment reminders. The BIAS team hypothesized that reminding these parents to pay their child support could increase the occurrence and amount of their payments.

The BIAS team, in collaboration with FCCSEA, tested two low-cost payment reminder interventions for parents who did not have income withholding, using random assignment experiments over four months. The first test targeted parents to whom payment reminder notices were not being sent. The second test targeted parents who were already being mailed monthly payment reminder notices. This second test compared the effectiveness of a new payment reminder notice that incorporated behavioral principles with the current payment reminder notice being sent by Ohio's Child Support Payment Central (CSPC) — the state's payment processing center.

The first test found that reminders produced a modest but statistically significant increase of 2.9 percentage points in the number of parents who made at least one child support payment over four months. Compared with the control group payment rate of 48.5 percent, 51.5 percent of noncustodial parents who were sent a payment reminder made a payment. However, there was no statistically significant increase in total collections per person, suggesting that these additional payments were small. In the second test, the redesigned payment reminder notice and current CSPC payment reminder performed comparably, and no statistically significant differences in the number of parents paying or the dollar amount of payments were found. The findings reviewed in this report are consistent with the existing behavioral science literature, which demonstrates that reminders can influence people's actions. However, the modest findings suggest that the targeted noncustodial parents may have a limited ability to pay, or that the behavioral bottlenecks they face were not adequately addressed by the interventions.

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The Authors

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EXECUTIVE SUMMARY

The Behavioral Interventions to Advance Self-Sufficiency (BIAS) project is the first major opportunity to use a behavioral economics lens to examine programs that serve poor and vulnerable families in the United States. Sponsored by the Office of Planning, Research and Evaluation (OPRE) of the Administration for Children and Families (ACF) in the U.S. Department of Health and Human Services and led by MDRC, the project applies behavioral insights to issues related to the operations, implementation, and efficacy of social service programs and policies. The goal is to learn how tools from behavioral science can be used to deliver programs more effectively and, ultimately, improve the well-being of low-income children, adults, and families.

The Franklin County Child Support Enforcement Agency (FCCSEA) collects approximately $180 million in child support each year.[1] However, approximately one-third of the current support that is owed to custodial parents and the state is not collected.[2] While not every noncustodial parent has the ability to pay the full amount of support ordered, the agency's goal is to narrow the gap between the amount owed and the amount paid in order to increase the economic well-being of the custodial families it serves.[3]

This report presents findings from two low-cost behavioral interventions designed to increase the collection of child support payments in Franklin County, Ohio, which is home to the state's capital city of Columbus. The interventions were conducted over four months and used a random assignment design in which a sample of noncustodial parents without income withholding were divided between a control group that was sent no outreach other than the status quo, and program groups that were sent various intervention materials.[4]

BIAS Diagnosis and Design Process

The BIAS team used a method called "behavioral diagnosis and design" to identify potential behavioral bottlenecks related to making a child support payment and develop low-cost, behaviorally informed changes intended to improve the payment process.[5] The behavioral diagnosis and design process is composed of four phases.

1. **Define:** The BIAS team defines the problem in a way that is precise enough to be testable.
2. **Diagnose:** The team collects both qualitative and quantitative data to identify factors that may be causing the problem, and uses the data to develop theories based on behavioral research about why bottlenecks are occurring.

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1 Franklin County Board of Commissioners, "Franklin County Celebrates Child Support Awareness Month," Press Release (Columbus, OH: Office of Public Affairs, Franklin County Board of Commissioners, 2013).

2 Franklin County Child Support Enforcement Agency, "Franklin Incentive Percentage Tracking Chart: FFY 2013" (Columbus, OH: Franklin County Child Support Enforcement Agency, 2013).

3 This report employs the term "noncustodial parent" because it is widely used by child support policymakers and researchers. However, not all parents without custody owe child support and those parents who do owe child support may have joint or sole custody of their child.

4 Noncustodial parents whose income is withheld have their child support payments automatically deducted from their paycheck and sent directly to Child Support Payment Central (the state's payment processing center) on their behalf. Noncustodial parents without income withholding must actively plan to make a payment and follow through each month.

5 ideas42, an early partner in the BIAS project, developed a methodology called "behavioral diagnosis and design" for applying insights from behavioral economics to improve program outcomes. The process presented in this document, also called behavioral diagnosis and design, is a version that has been refined for the BIAS project.

3. **Design:** The team uses theories about why bottlenecks are occurring and other behavioral insights to develop an intervention.
4. **Test:** The team evaluates the behavioral intervention using rigorous scientific methods.[6]

The process is ideally iterative, allowing for multiple rounds of hypothesis development and testing, and aims to connect the problem, behavioral bottleneck, and design solution together in a coherent way.[7] The rest of this section describes how the BIAS team applied this process to the child support system in Franklin County.

Define

FCCSEA was interested in increasing both the number of noncustodial parents making child support payments and the total dollar amount of those payments. In particular, FCCSEA was focused on improving the payment behavior of noncustodial parents who do not have income withholding, as these parents need to take action each month to make a payment. FCCSEA collects approximately two-thirds of current child support payments that are due, which is above the national average but short of the county's goals.[8]

Diagnose

To address these issues, the BIAS team analyzed data on noncustodial parents' current monthly child support obligations, collection amounts, arrears, order modifications, and enforcement actions spanning three years, from March 2010 to February 2013; conducted focus groups and interviews with child support agency staff and clients to better understand their experiences with the child support system; and reviewed a variety of forms, letters, and flow charts relevant to the payment process, paying close attention to the clarity and tone of communications with clients.

Through this process, the BIAS team found that a significant number of parents — slightly over half of all noncustodial parents in Franklin County — were not making payments through income withholding, even though approximately 70 percent of all collections were the result of payments via this method. A noncustodial parent who does not have income withholding generally does not have any "attachable wages," which means that the parent's wages are not paid through a typical payroll system, the parent has no job or income, or the child support agency does not know about the parent's employment. These noncustodial parents are responsible for manually making a child support payment each month, remitting payment by mail, online, or in person at the FCCSEA office. While Ohio's Child Support Payment Central (CSPC) — the state's payment processing center — was mailing a monthly payment reminder notice to some noncustodial parents who did not have income withholding, over 15,000 parents in Franklin County were not being sent any such notice. Based on interviews with parents and staff, the BIAS team hypothesized that the lack of reminder notices might result in fewer payments being made than would otherwise be the case. The team also hypothesized that the wording of the existing CSPC payment reminder notice could be confusing or discouraging to those who receive it.

The team identified six potential bottlenecks related to the child support payment process for noncustodial parents who do not have income withholding, and theorized behavioral reasons for the bottlenecks, as shown in Table ES.1. The behavioral terms that are used in the table appear in boldface and are defined in Appendix Table 1.

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6 The BIAS team tests behavioral interventions using a random assignment design, where some portion of a given sample is provided the intervention and the rest continues with business as usual. Randomized controlled trials are considered the most rigorous and accurate way to detect and evaluate the impact of an intervention.

7 For a more detailed description of behavioral diagnosis and design, see Lashawn Richburg-Hayes, Caitlin Anzelone, Nadine Dechausay, Saugato Datta, Alexandra Fiorillo, Louis Potok, Matthew Darling, and John Balz, *Behavioral Economics and Social Policy: Designing Innovative Solutions for Programs Supported by the Administration for Children and Families,* OPRE Report 2014-16a (Washington, DC: Office of Planning, Research and Evaluation, Administration for Children and Families, U.S. Department of Health and Human Services, 2014).

8 Office of Child Support Enforcement, *FY2012 Preliminary Report* (Washington, DC: Office of Child Support Enforcement, Administration for Children and Families, U.S. Department of Health and Human Services, 2013).

TABLE ES.1
HYPOTHESIZED BOTTLENECKS AND BEHAVIORAL CONCEPTS

FRANKLIN COUNTY CHILD SUPPORT ENFORCEMENT AGENCY

BOTTLENECK	BEHAVIORAL REASONS FOR BOTTLENECK
• Many noncustodial parents are not sent any reminder to pay.	• Lacking a reminder, forgets to pay in a given month due to **prospective memory** failure
• Noncustodial parents may receive a reminder but not open it, understand it, or find it helpful.	• Does not open mail due to **inattention** • Disregards reminder as not **salient** • Avoids reminder due to the **ostrich effect** for child support matters • Faces increased **cognitive load** as a result of confusing reminder • Views potentially large arrearages total, which generates an **affective response** • Suffers from **planning fallacy** because there is no explicit due date
• Noncustodial parents may decide not to pay their child support.	• Avoids information about child support obligation due to the **ostrich effect** • Experiences **affective response** due to feelings toward the other parent • Views child support system through a negative **frame** • Believes noncustodial parents are not supportive parents due to **social influence**
• Noncustodial parents intend to pay, but may not effectively budget for their child support payments.	• Exhibits **present bias**, weighing present concerns over future concerns • Plans to pay but runs out of money due to **planning fallacy** • Has a high **cognitive load** as a result of stress, financial or otherwise
• Noncustodial parents intend to pay, but may not remember to pay their child support.	• Exhibits **inattention** and **prospective memory** failure related to when a payment is due • **Procrastinates** until deadline is missed
• Noncustodial parents intend to pay but may encounter obstacles in making payments.	• Encounters **hassle factors** associated with paying at the office, online, or through the mail via check or money order

Design

Based on the findings from the behavioral diagnosis and design process, the BIAS team and FCCSEA created two interventions to address the hypothesized behavioral bottlenecks. The interventions were designed to operate within the existing child support payment system, rather than create new processes. Each intervention focused on a different group of parents — the first targeted those without income withholding who *were not* being sent a payment reminder notice; and the second targeted those without income withholding who *were* being sent a payment reminder notice. The intervention materials included a number of behavioral techniques that were designed to address the identified bottlenecks in an effort to increase both the number of parents making payments and the total dollar amount of those payments.

Test

The two tests ran concurrently from January 2014 through April 2014. Outcomes were measured for the months the tests ran, with no follow-up period. Both tests used random assignment to compare a program group or groups sent intervention materials with a control group sent no new materials.

Test 1

A monthly reminder to pay was sent to noncustodial parents who did not have income withholding and were not already being sent any reminder to pay from CSPC. Both a written payment reminder notice and an automated phone call reminder, or robocall, were tested. Otherwise identical versions of a payment reminder notice created by the BIAS team with differing due dates were also tested to see if the time frame of the reminder had any impact on payment behavior. The robocall was tested both alone and in conjunction with each of the payment reminder notices. The test included five program groups and a control group, to which qualifying noncustodial parents were randomly assigned:

- a payment reminder notice and a robocall with a mid-month due date
- a payment reminder notice with a mid-month due date
- a payment reminder notice and a robocall with a late-month due date
- a payment reminder notice with a late-month due date
- a robocall only
- a control group (status quo — no payment reminder notice or robocall)

The impact of the various reminders on the number of noncustodial parents making payments, as well as the dollar amount of those payments, was evaluated using a fractional factorial design.[9]

Test 2

Using the same payment reminder notice that was created for Test 1, Test 2 explored whether the redesigned payment reminder notice produced more payments than the current CSPC notice. The redesigned notice included simplified language, easy-to-follow instructions, and positive reinforcement. A sample of noncustodial parents who did not have income withholding, but who were already being sent a monthly reminder notice from CSPC, were randomly assigned to have their current CSPC notice suppressed for the intervention period and replaced with the redesigned notice from FCCSEA (program group). The number of noncustodial parents making payments in the program group and the dollar amount of those payments were compared with those of the control group, which continued to be sent the CSPC payment reminder notice.

Study Findings

The findings from both tests are summarized in Figure ES.1.

Test 1

Sending a reminder to pay produced a positive impact on one of the two key outcomes of interest: The number of noncustodial parents who made a payment increased by a statistically significant 2.9 percentage points.[10] However, the additional payments made were likely small, as the increase in total dollar amount of collections per person ($27) was not statistically significant. Any form of reminder (mid-month or late-month payment reminder notice, robocall, or the combinations of the two) had a positive effect compared with no reminder at all. However, no one form of reminder was more successful in increasing payments compared with the others.

---

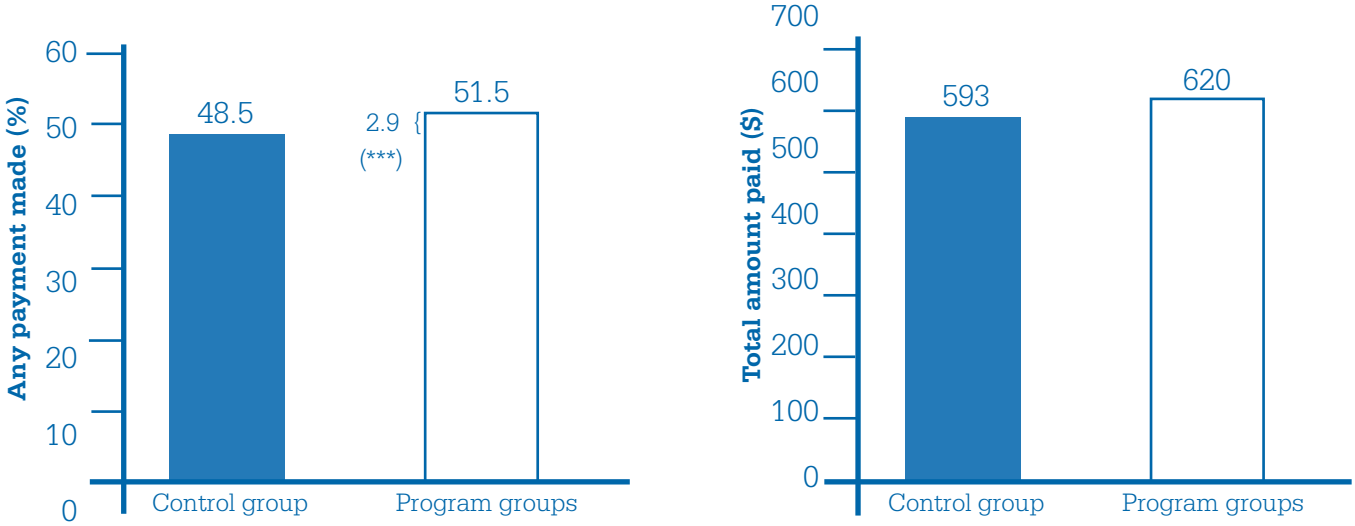
9 In a fractional factorial design, only select combinations of research groups are included in the design, instead of all possible combinations. Variation in time frame of the robocall was tied to the time frame of the notice in this study. For the group without a notice, only the later robocall was tested.

10 Statistically significant impacts are effects that can be attributed with a high degree of confidence to the program rather than to chance alone.

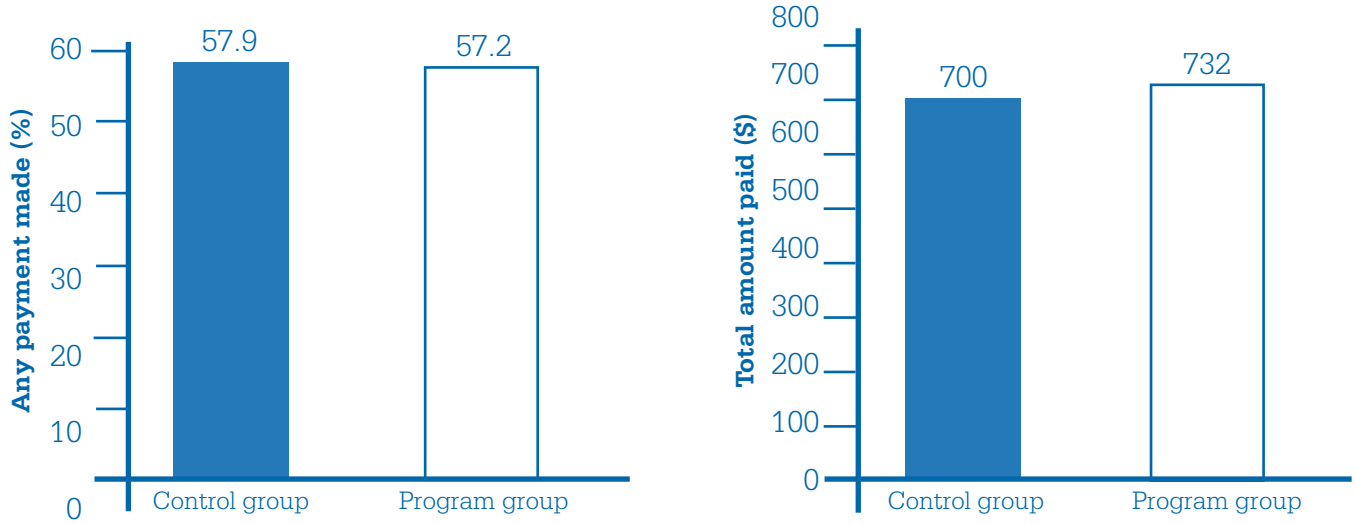
FIGURE ES.1
CHILD SUPPORT PAYMENT OUTCOMES: JANUARY–APRIL 2014

FRANKLIN COUNTY CHILD SUPPORT ENFORCEMENT AGENCY

Test 1: Noncustodial parents not currently being sent a notice



Test 2: Noncustodial parents currently being sent a notice



SOURCE: MDRC calculations using Franklin County Child Support Enforcement Agency data.

NOTES: A two-tailed t-test was applied to differences between research groups. Statistical significance levels are indicated as: *** = 1 percent; ** = 5 percent; * = 10 percent.
Estimates are adjusted for noncustodial parent baseline characteristics.

Test 2

Findings from Test 2 show that the behavioral components included in the redesigned payment reminder notice did not lead to a statistically significant increase in the number of noncustodial parents making payments, or the dollar amount of those payments. These findings suggest that there is no advantage to using the redesigned payment reminder notice over the current CSPC payment reminder notice, despite the use of behavioral language and postage-paid return envelopes that were included with the program group notices.

Conclusion

The BIAS team and FCCSEA implemented two behaviorally informed interventions to address potential bottlenecks related to making a child support payment, with the goals of increasing both the number of parents without income withholding who make payments and the total dollar amount of their payments. These interventions, which were low cost (approximately $2.50 per person) and easy to administer, had mixed results: The first intervention, sending a reminder to pay to those who were not previously being sent one, increased the number of parents making payments, which is notable given the targeted population's often sporadic payment history. The resulting payments translated into money that custodial families and the state may not have otherwise received. However, the additional payments were likely small and did not increase total collections by a statistically significant amount. The second intervention, a redesigned, behaviorally informed payment reminder notice, was no more effective than the existing CSPC payment reminder notice at increasing the number of parents making payments or the dollar amount of those payments.

Noncustodial parents without income withholding present a unique challenge to child support agencies because their employers generally pay them outside of a typical payroll system, they have sporadic employment, or they are unemployed. It may be difficult and cumbersome for these parents to plan to make a child support payment and follow through each month. It is possible that the redesigned payment reminder notice created by the BIAS team did not fully address the relevant behavioral bottlenecks and was therefore not as successful as another intervention may have been. Future studies in this area using different messages or interventions to address bottlenecks, and with longer follow-up periods to examine the potential for longer-term behavioral change, might yield more information on ways to encourage noncustodial parents to make child support payments.

However, many of these noncustodial parents may simply be financially unable to make a payment, potentially due to wrongly sized orders that do not match their current financial situations. Some child support orders are based on imputed income, or estimates as to what the child support agency or court thinks the noncustodial parent could earn in the job market. Individuals may also experience a change of job or job loss that creates difficulties in making child support payments. In order to maximize the effectiveness of behavioral interventions, child support agencies may want to consider ways to improve processes and policies related to aligning orders to noncustodial parents' current financial circumstances.[11]

Looking Forward

Behavioral economics provides a new way of thinking about the design of human services programs and a potentially powerful set of tools to improve program outcomes. In addition to the work in Franklin County, the BIAS project has completed evaluations with other partners, including the New York City Center for Economic Opportunity, the Oklahoma Department of Human Services, the Los Angeles County (California) Department of Public Social Services, the Indiana Office of Early Childhood and Out of School Learning, Cuyahoga County (Ohio) Job and Family Services' Office of Child Support Services, and Washington State Division of Child Support. Results from these evaluations will be published as they become available to further inform this rapidly developing field.

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11 Yoonsook Ha, Maria Cancian, and Daniel R. Meyer, "Unchanging Child Support Orders in the Face of Unstable Earnings," *Journal of Policy Analysis and Management* 29, 4 (2010): 799-820.

REMINDERS TO PAY

Using Behavioral Economics to Increase Child Support Payments

The Behavioral Interventions to Advance Self-Sufficiency (BIAS) project is the first major opportunity to use a behavioral economics lens to examine programs that serve poor and vulnerable families in the United States. Sponsored by the Office of Planning, Research and Evaluation (OPRE) of the Administration for Children and Families (ACF) in the U.S. Department of Health and Human Services and led by MDRC, the project applies behavioral insights to issues related to the operations, implementation, and efficacy of social service programs and policies. The goal is to learn how tools from behavioral science can be used to deliver programs more effectively and, ultimately, improve the well-being of low-income children, adults, and families. For more information about behavioral economics, see Box 1.

This report presents findings from two behavioral interventions designed to increase the collection of child support payments in Franklin County, Ohio — by increasing both the number of noncustodial parents who make child support payments and the dollar amount of those payments. This report uses the term "noncustodial parents" to refer to parents who owe child support payments.[1]

The Child Support Context

State and tribal child support enforcement agencies served nearly 17 million children and collected $32 billion in total child support obligations in fiscal year (FY) 2013.[2] This sum attests to continued gains in recent years by child support agencies in collecting current support owed, even during difficult economic times.[3] Child support agencies have also made strides in modernizing the child support system, including establishing a new online income withholding system for employers and exploring debt forgiveness, work-oriented programs, and review and adjustment procedures to help ensure that noncustodial parents' orders better match their current earnings.[4]

Despite these efforts, billions of dollars of child support go unpaid each year.[5] Unpaid support makes it difficult for agencies to fulfill their mission of increasing the economic well-being of the custodial families they serve. This difficulty is particularly true for the 29 percent of custodial families eligible for child support who have incomes below the federal poverty level. For custodial families with incomes below the federal poverty level who receive child support, the payments on average account for 45 percent of their income, making regular child support payments critical for these families.[6] Additionally, unpaid support can result in lower federal incentive payments for state child support agencies.[7]

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1 The term "noncustodial parent" is widely used by child support policymakers and researchers. However, not all parents without custody owe child support and those parents that do owe child support may have joint or sole custody of their child.

2 Office of Child Support Enforcement (2014a, 2014c).

3 Office of Child Support Enforcement (2014c).

4 Office of Child Support Enforcement (2014b).

5 Office of Child Support Enforcement (2013a, 2014c).

6 Office of Child Support Enforcement (2014a).

7 Federal performance measures for state and tribal child support agencies are based on five metrics: paternity establishment, support orders established, current support collected, cases paying toward arrears, and cost-effectiveness. Agencies are either rewarded for good or improved performance with additional federal funding, or penalized for poor performance or a failure to improve.

BOX 1
BEHAVIORAL ECONOMICS

Behavioral economics, part of the broader field of behavioral science, is the application of psychological insights to economic models of decision making.[*] Innovative research in this area has shown that human decision making is often imperfect and imprecise. People — clients and program administrators alike — procrastinate, get overwhelmed by choices, and miss important details. As a result, they may not always achieve the goals they set for themselves. Principles from behavioral economics can both shed light on decision making and offer new tools to improve outcomes for program participants.

Research has shown that small changes in the environment can facilitate desired behaviors; planning and commitment devices can be used to improve self-control; and default rules can produce positive outcomes even for people who fail to act. Over the past decade, behavioral economics has gained popularity in the private and public sectors. For example, credit card machine vendors for New York City taxi cabs leverage the use of defaults to influence customer choice. Passengers paying for their ride with a credit card are prompted by a screen to enter a tip amount, and have the option to either choose one of three default amounts or to enter an amount of their own. When the default amounts were increased — for example, by changing the options from 15, 20, and 25 percent to 20, 25, and 30 percent — the average tip amount increased.[†] In the public sector, California introduced a Fast Track system to streamline the Medicaid enrollment process. Fast Track in California successfully connected eligible families to vital services by employing common behavioral economics strategies, making the process easier and reducing the hassle associated with enrollment.[‡] The BIAS team has previously partnered with the Texas Office of the Attorney General's Child Support Division to encourage incarcerated noncustodial parents, who often have no income with which to make payments, to apply to have their orders reduced. The BIAS team designed and evaluated a behaviorally informed, low-cost outreach effort and found that it increased the application rate by 11 percentage points, compared with the control group's rate of 28 percent.[§]

These examples are some of the recent applications of behavioral economics to human behavior. Behavioral tweaks — or "nudges," as they are frequently called — are often meant to be limited in scope. As the prominent psychologist Daniel Kahneman states, behavioral economics is "characterized by achieving medium-sized gains by nano-sized investments."[‖] These types of interventions are not always expected, or intended, to achieve enormous impacts or attain a system overhaul. Instead, they are meant to be responsive to behavioral tendencies and to foster change at relatively low cost and effort. For a more detailed overview of behavioral economics, see *Behavioral Economics and Social Policy: Designing Innovative Solutions for Programs Supported by the Administration for Children and Families*.[#]

[*]For an overview of behavioral science, see Kahneman (2011).

[†]Haggag and Paci (2014).

[‡]Lord (2014).

[§]Farrell, Anzelone, Cullinan, and Wille (2014).

[‖]Singal (2013).

[#]Richburg-Hayes et al. (2014).

In an effort to narrow the gap between the amount owed and amount paid, child support agencies have increased their efforts to establish automatic income withholding orders. Income withholding refers to an order that requires an employer to retain a portion of a noncustodial parent's wages and forward the withholding to the appropriate agency for the payment of child support.[8] Consistent with the behavioral economics literature on the power of defaults, income withholding has proven to be a very successful and efficient tool for child support agencies by changing the default from having to take action (making a payment each month) to inaction (having payments deducted automatically each month).[9] Child support agencies use income withholding whenever possible, and it was the source of 74 percent of all collections nationwide in FY 2013.[10] However, not all noncustodial parents qualify for income withholding, typically because they earn wages outside of a payroll system or are unemployed.

8 Office of Child Support Enforcement (2013b).

9 Benartzi and Thaler (2004); Kamenica (2012); Case, Lin, and McLanahan (2003).

10 Office of Child Support Enforcement (2014a).

There are many reasons why noncustodial parents might not pay their child support, including several hypothesized behavioral barriers that this study attempts to address. However, financial challenges in making a payment are likely a significant factor for many noncustodial parents, as not every parent has the ability to pay the full amount of support ordered. Past research suggests that noncustodial parents have elevated poverty rates in excess of 20 percent, and many of these noncustodial parents face employment barriers.[11] An estimated 42 percent of poor, nonpaying noncustodial parents did not complete high school.[12] A lack of recent work experience, disability, and past incarceration can also hinder a noncustodial parent's ability to pay an established order amount. In addition, orders are frequently based on imputed income, rather than actual income, particularly among low-income noncustodial parents.[13] These barriers could pose a challenge to the success of behavioral interventions focused on small changes to existing processes and communications.

Understanding the Process: Behavioral Diagnosis and Design

The BIAS project uses a specific method called "behavioral diagnosis and design" to try to improve program outcomes through the application of behavioral principles.[14] To complement ongoing efforts to improve child support collections, the Franklin County Child Support Enforcement Agency (FCCSEA) was interested in trying innovative methods to encourage payments among noncustodial parents. Adopting the perspective of the program's clients (in this case both noncustodial and custodial parents), the BIAS team, in conjunction with Franklin County, searched for barriers related to the child support payment decision-making process, and launched two behavioral interventions to address them.

As depicted in Figure 1, the behavioral diagnosis and design process comprises four phases. Rather than being linear, as the figure suggests, the ideal process is iterative, allowing for multiple rounds of hypothesis testing and refinement.

The first phase in the process is to define the problem in terms of the desired outcome, without presuming particular reasons for the cause. The BIAS team relies on a variety of data when defining the problem to mitigate *a priori* assumptions about how systems work or how the people within them function. Next, in the diagnosis phase, the BIAS team collects both qualitative and quantitative data to identify what is causing the problem. The team uses the data to guide hypotheses about the behavioral reasons for participant outcomes.

During the third phase, or design phase, the BIAS team uses theories about why "bottlenecks," or barriers to program success, are occurring, to help develop proposals for interventions based on behavioral research. It is important to have a clear theory of change because an intervention may be effective at addressing one behavioral issue but have no effect on another. For example, if the BIAS team hypothesized that most noncustodial parents were not making payments because they were forgetting to send in the money, then the team would develop an intervention that specifically addresses this bottleneck. The BIAS team would not necessarily develop this same intervention if it hypothesized that most noncustodial parents were not submitting payments because they did not understand how to do so. The two hypotheses are based on different theories of change that lead to different interventions. During the next phase, or test phase, behavioral interventions are evaluated using rigorous scientific methods.[15] The behavioral diagnosis and design processes aim to connect the problem, the behavioral bottleneck, and the design solution together in a coherent way.[16]

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11 Sorensen and Zibman (2000).

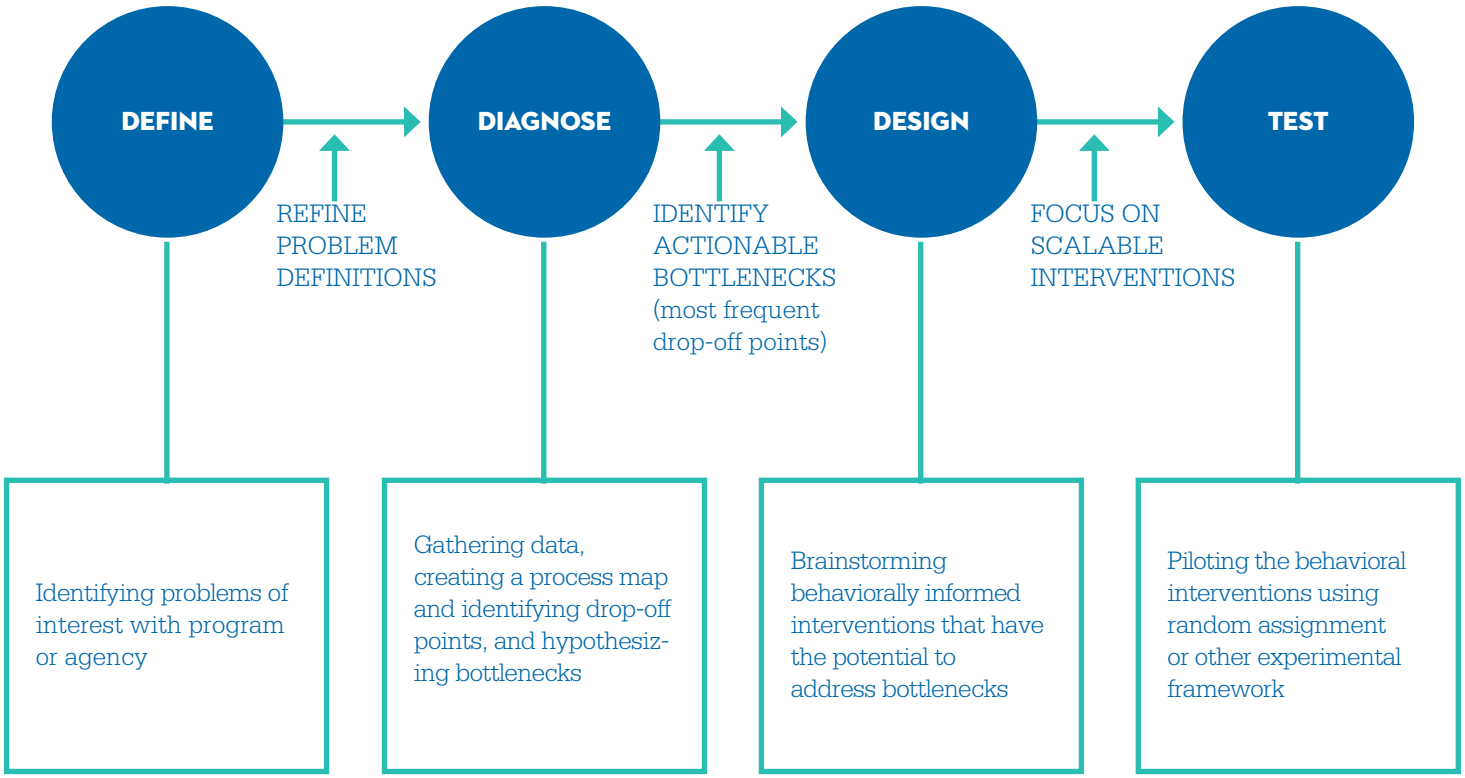
12 Sorensen and Zibman (2000).

13 Income is imputed to calculate the amount of a child support order when no income information for the noncustodial parent is available, or if the court or child support agency determines that the noncustodial parent is voluntarily unemployed or underemployed.

14 ideas42, an early partner in the BIAS project, developed a methodology called "behavioral diagnosis and design" for applying insights from behavioral economics to improve program outcomes. The process presented in this document, also called behavioral diagnosis and design, is a version that has been refined for the BIAS project.

15 The BIAS team tests behavioral interventions using a random assignment design, whereby some portion of a given sample receives the intervention and the rest continues with business as usual. Randomized controlled trials are considered the most rigorous form of evaluation and the most accurate way to detect the impact of an intervention.

16 For a more detailed description of behavioral diagnosis and design, see Richburg-Hayes et al. (2014).



SOURCE: This figure was adapted from a figure created by ideas42.

NOTE: Behavioral diagnosis and design is ideally an iterative process. For a more detailed description of behavioral diagnosis and design, see Richburg-Hayes et al. (2014).

Define: Increasing Child Support Payments

Franklin County is home to Ohio's capital city Columbus and a population of approximately 1.2 million people. The median household income is around $50,000, similar to Ohio and national averages.[17] FCCSEA's total caseload includes more than 50,000 active cases with support orders, representing one in four children in the county.[18] In FY 2012, FCCSEA was able to collect 65 percent of current obligations, and its annual total collections are worth approximately $180 million.[19] Many of the families that FCCSEA serves are low income: In 2009, 44 percent of orders were based on an actual or imputed income of $18,310 for a family of three.[20]

FCCSEA was interested in increasing both the number of parents required to pay child support who actually make payments and the total dollar amount of those collections, not only in an effort to gather more money for families but also to achieve a 70 percent collections target set by the state.

Diagnose: Why Some Noncustodial Parents Don't Pay

To address these goals, the BIAS team reviewed data from March 2010 to February 2013 on noncustodial parents' monthly current child support obligations, collection amounts, arrears, order modifications, and enforcement actions; conducted focus groups and interviews with child support agency staff and clients to better understand their experiences with the child support system; and reviewed a variety of forms, letters,

17 U.S. Census Bureau (2014).

18 Correspondence with site (November 13, 2014); Franklin County Board of Commissioners (2013).

19 Franklin County Child Support Enforcement Agency (2013); Franklin County Board of Commissioners (2013).

20 Franklin County Child Support Enforcement Agency (2011).

and flow charts relevant to the payment process, focusing on the clarity and tone used in communications with clients. Through the diagnosis process, the research team learned that many noncustodial parents make their child support payments through income withholding. During each of the intervention months, over 40 percent of noncustodial parents in Franklin County made child support payments through withholding, resulting in nearly $42 million and approximately 70 percent of all collections. Parents with income withholding have their child support payments automatically deducted from their paycheck and sent directly to Ohio's Child Support Payment Central (CSPC) — the state's payment processing center — on their behalf, and are not sent a reminder notice from CSPC. As payments via this method do not require any active decision making by the noncustodial parent, the BIAS team and FCCSEA agreed there was no clear behavioral issue to address for those with income withholding.

However, a significant number of noncustodial parents in Franklin County (almost 60 percent) do not make payments using income withholding. A noncustodial parent who does not have income withholding generally does not have any "attachable wages," which means that the parent's wages are not paid through a typical payroll system, the parent has no job or income, or the child support agency does not know about the parent's employment. While CSPC sends a monthly payment reminder notice to many noncustodial parents who are not on income withholding, about 15,000 parents without income withholding are not sent any such reminder notice.[21] Typically, no reminder is sent because CSPC has some record of an open income withholding order for a parent even though no money is being collected. In such cases, CSPC assumes that the noncustodial parent has income withholding, which would make that parent ineligible to be sent a notice. For example, last year a parent may have worked at a large company and had his child support payments automatically deducted from each paycheck and sent to CSPC by his employer. This year, however, that parent started his own business and left his job at the large firm. Neither he nor his former employer informed FCCSEA of this change. In such a case, FCCSEA's tracking system would not be updated and would continue to flag the parent as someone who makes his support payments through automatic income withholding. Therefore, no reminder to pay would be sent despite the fact that no money has been deducted from his paycheck.

At first glance, it might seem as though noncustodial parents who are not sent a reminder notice from CSPC would have a greater ability to pay than parents who are sent a reminder notice, since at some point they were flagged as having employment that qualifies them for income withholding. Accordingly, it could be inferred that these noncustodial parents have a more established work history than those who have never had an income withholding order. However, FCCSEA staff noted that their current policy is to follow any lead, from any source, that could produce an income withholding order. For example, a custodial parent might tell FCCSEA that she heard her child's father now works at a utility company. Based on this information, which FCCSEA does not verify, FCCSEA staff would open an income withholding order for the father at the utility company. In the absence of other information about employment, that income withholding order would remain open and on his file in the FCCSEA tracking system, even if no child support payments are being made by the utility company because the parent does not actually work there. That parent would not be sent a reminder notice since the system has flagged the individual as having income withholding. As a result of this policy, FCCSEA reported that many noncustodial parents have numerous open income withholding orders, none of which results in any collections.

Through interviews with parents and staff, the BIAS team hypothesized that the lack of reminder notices might have a negative impact on payment activity. Literature from the behavioral science field has found that reminders can be successful tools for spurring action in the fields of health, voting, and personal

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21 The following are the specific criteria for being sent a notice from CSPC: (1) The noncustodial parent's case must be open and active; (2) The case/order must be complete and have an active financial obligation with current orders or arrears due that are greater than zero; (3) The billing for the case/order must not be suppressed. Cases can be suppressed by supervisors for the following reasons: invalid address, case closure pending, ordered charging suspended, death, emancipation, and other; (4) The income withholding has been end-dated or there is no income withholding; (5) The third party numbers (Ohio database unique identifier) do not match on the income withholding and child support individual employer information; (6) The case/order must not be interstate initiating and Franklin County cannot be requesting assistance from another state in enforcing the order; and (7) The parent must have a valid address.

finance.[22] The team also hypothesized that the CSPC notice could be confusing or discouraging for those who do receive it. The behavioral map in Figure 2 summarizes the behavioral diagnosis work done by the BIAS team, and lays out the bottlenecks and hypothesized behavioral concepts that may explain unpaid child support payments for noncustodial parents who do not have income withholding. Though the map includes a variety of barriers, the evaluations conducted under the BIAS project largely focus on behavioral barriers that are better suited for low-cost, "light-touch" behavioral "nudges." For example, a more structural barrier, such as a noncustodial parent's inability to pay due to low income, is not easily addressed through behavioral intervention and therefore falls outside the scope of the project's work. In addition, interventions tested under the BIAS project require evaluations that have short-term outcomes and ideally fit within existing programs without significant additional resources. In addition to reminders to pay, FCCSEA was interested in applying behavioral principles to the administrative adjustment and review process (also known as order modifications), but tracking the outcome of a modification request and subsequent payment behavior would have required a longer time frame than available to the project team. The administrative tasks associated with such an intervention might have also overwhelmed FCCSEA staff.

The BIAS team and FCCSEA identified six primary bottlenecks associated with the child support payment process that were amenable to behavioral intervention; that is, they were related to potential behavioral reasons for why noncustodial parents who have the ability to pay at least some portion of their order may not be doing so. Table 1 provides a matrix that connects the hypothesized relationships between the proposed bottlenecks, behavioral concepts, and specific components of the interventions tested by the BIAS team. Behavioral terms used throughout this report are in bold type the first time they appear and are defined in Appendix Table 1.

Bottleneck 1: Many noncustodial parents are not sent any reminder to pay.

As previously noted, around 15,000 noncustodial parents in Franklin County do not have income withholding and are not sent any reminder to pay, typically because CSPC has an open income withholding order, even though no money is being collected from those orders. This lack of reminder may make it more likely that parents will forget to make their child support payment. Forgetting to perform an intended action at the right time, such as paying child support every month, is known as **prospective memory** failure.

Bottleneck 2: If a noncustodial parent receives a reminder, he or she may not open it, understand it, or find it helpful.

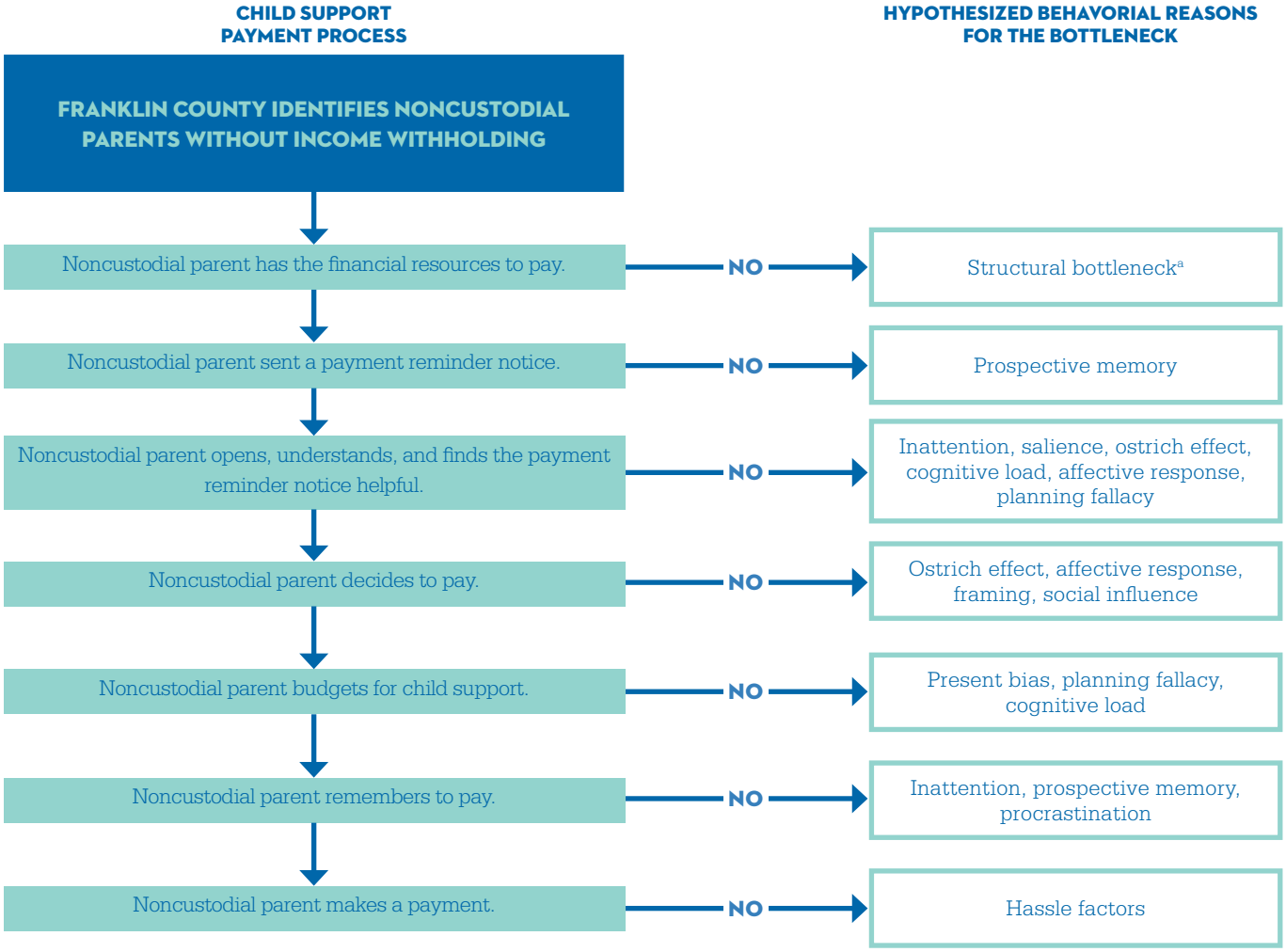
Noncustodial parents have many interests competing for their time and attention, and may not be focused on carefully reviewing all of the mail they receive. This **inattention** may lead parents to not open all of their mail regularly. The current payment notice comes from CSPC, an entity that may be largely unknown to parents, which can create confusion and reduce the **salience** of the notice, as it is not directly from the enforcement agency. Even if parents realize the notice relates to their child support obligations, they may not pay attention to it, an example of the **ostrich effect** (an individual chooses to avoid potentially upsetting information altogether).

If mail is opened, confusing language, child support jargon, and difficult-to-find instructions on the current reminder notice may create a high **cognitive load**, or demands on parents' mental resources, for those who do not understand what the listed payments refer to or who may need additional guidance on how to make a payment. The current notice also lists the total arrearage due, which may trigger frustration or hopelessness for parents with large arrears, possibly generating an **affective response** (an individual reacts based on emotions). The lack of a specific due date on the notice may lead to a **planning fallacy** (an individual struggles to make and follow through on a payment plan).

22 Cadena and Schoar (2011); Green (2004); Karlan, McConnell, Mullainathan, and Zinman (Forthcoming); Lantz et al. (1995); Rodgers et al. (2005).

FIGURE 2
BEHAVIORAL MAP FOR MAKING A CHILD SUPPORT PAYMENT

FRANKLIN COUNTY CHILD SUPPORT ENFORCEMENT AGENCY



SOURCE: Figure based on BIAS behavioral diagnosis research with Franklin County Child Support Enforcement Agency staff.

NOTES: This map is a stylized representation of the child support payment process for some noncustodial parents. A noncustodial parent does not necessarily go through all these steps in the displayed order.

[a]Structural bottlenecks are not associated with any behavioral concept and lie outside the scope of the BIAS project, but are included in this behavioral map for illustrative purposes.

Bottleneck 3: A noncustodial parent may decide not to pay his or her child support.

Noncustodial parents may have diverse reasons for choosing not to make a child support payment. For example, some parents may be so far behind on current support that they seek to avoid any information about their child support obligation, an example of the ostrich effect. Noncustodial parents may have an affective response, if, for example, they have conflicts with the custodial parent of their children, they feel they lack control over how the custodial parent spends child support payments, or they may not be committed to the welfare of their nonresident children.

In addition, a lack of positive feedback from custodial parents or the child support agency when a past payment was made may influence noncustodial parents' future payment decisions. While some FCCSEA staff make efforts to more proactively and positively engage with noncustodial parents, these practices do

not appear to be common. Both by law and historical practice, FCCSEA's focus has been on penalties and enforcement actions for noncustodial parents in default (meaning they are past due on one month's worth of support or more). Agency staff expressed the belief that making regular child support payments was a basic responsibility of a noncustodial parent, not a behavior meriting special recognition. **Framing** and **social influence** could be important factors at play in this bottleneck. Framing relates to how information is presented to noncustodial parents; social influence involves how noncustodial parents are viewed by others and how they view themselves in light of others' perceptions. During field research, several noncustodial parents shared concerns that they were being stereotyped as "deadbeat dads" by FCCSEA and the custodial parents, and that their interactions with FCCSEA were more punitive and legal in nature than would be expected of a case manager and client relationship.

Bottleneck 4: A noncustodial parent intends to pay, but may not effectively budget for his or her child support payment.

FCCSEA staff reported, and field work done by the research team suggests, that noncustodial parents without income withholding tend to pay near the end of the month. Making a payment at the end of the month may require careful financial planning, especially for those with limited incomes. Psychological and cognitive factors consistent with the inability to fully plan expenditures when between paychecks include **present-biased** time preferences, in which a noncustodial parent may give more weight to present concerns than future ones (for example, paying a cell phone bill today or paying child support at the end of the month); planning fallacy, in which noncustodial parents assume they will be able to send in a payment at some point, but realize at the end of the month that they do not have the money with which to pay their order; and high cognitive load deriving from stress — financial or otherwise.

Bottleneck 5: A noncustodial parent intends to pay, but may not remember to pay his or her child support.

Noncustodial parents without income withholding may face difficulties remembering to make a child support payment each month. They may put off making a decision early in the month, and continue to delay or forget to take action until they have missed the deadline. This bottleneck may be due to inattention, prospective memory failure, or **procrastination.**

Bottleneck 6: A noncustodial parent intends to pay, but may encounter obstacles in making a payment.

There are significant **hassle factors** associated with making payments. For example, FCCSEA payment windows are only open during normal business hours, making it difficult for a noncustodial parent with a day job to come to the office to make a payment. FCCSEA staff noted that parking outside of their office is often not readily available and public transportation is scarce. Walking into the FCCSEA office itself presents a number of hassles, as parents are required to remove belongings from their pockets and go through a metal detector monitored by a uniformed guard. Payment options that do not require visiting the FCCSEA office may have additional fees (online credit card payments carry an $11 fee), or may create additional steps, such as getting a check or money order, that require considerable time and effort from the noncustodial parent. In addition, the current notice does not include a postage-paid return envelope, which creates hassles for noncustodial parents who wish to mail in their payment.

Design and Test the Interventions

Crafting a behavioral map led the BIAS team to hypothesize that sending a reminder notice to noncustodial parents who were not currently being sent one could address or alleviate some of the bottlenecks they may face. The team also hypothesized that the existing reminder notice could be redesigned using insights from behavioral economics to address some of the shortcomings and related bottlenecks that the team identified.

TABLE 1
HYPOTHESIZED RELATIONSHIPS OF BOTTLENECKS, BEHAVIORAL CONCEPTS, AND COMPONENTS OF THE INTERVENTIONS

FRANKLIN COUNTY CHILD SUPPORT ENFORCEMENT AGENCY

	INTERVENTION COMPONENT[a]				
HYPOTHESIZED BOTTLENECKS AND BEHAVIORAL CONCEPTS	Use Reminders	Set Deadlines	Reduce Cognitive Load	Remove Hassle Factors	Reframe Messaging
MANY NONCUSTODIAL PARENTS ARE NOT SENT ANY REMINDER TO PAY.					
Prospective memory	✔				
NONCUSTODIAL PARENTS MAY RECEIVE A REMINDER BUT NOT OPEN IT, UNDERSTAND IT, OR FIND IT HELPFUL.					
Inattention	✔				
Salience			✔		
Ostrich effect					✔
Cognitive load			✔	✔	
Affective response					✔
Planning fallacy		✔			
NONCUSTODIAL PARENTS MAY DECIDE NOT TO PAY THEIR CHILD SUPPORT.					
Ostrich effect					✔
Affective response					✔
Framing					✔
Social influence					✔
NONCUSTODIAL PARENTS INTEND TO PAY, BUT MAY NOT EFFECTIVELY BUDGET FOR THEIR CHILD SUPPORT PAYMENTS.					
Present bias					✔
Planning fallacy		✔			
Cognitive load			✔		
NONCUSTODIAL PARENTS INTEND TO PAY, BUT MAY NOT REMEMBER TO PAY THEIR CHILD SUPPORT.					
Inattention	✔				
Prospective memory	✔				
Procrastination		✔			
NONCUSTODIAL PARENTS INTEND TO PAY, BUT MAY ENCOUNTER OBSTACLES IN MAKING PAYMENTS.					
Hassle factors				✔	

NOTES: Behavioral concepts cannot be definitively identified but rather are hypotheses derived from the behavioral diagnosis and design process that may explain behavioral bottlenecks.

[a]The following are examples of intervention components in Franklin County:

Use reminders: Send robocall reminder to noncustodial parents approximately five days before their payments are due.

Set deadlines: Set specific deadlines for payment, such as January 15.

Reduce cognitive load: Simplify information presented on the notice sent to noncustodial parents; include steps on how to make a payment.

Reduce hassle factors: Include postage-paid return envelope.

Reframe messaging: Include note that thanks parents for making a payment; encourage noncustodial parents to contact FCCSEA regarding any payment difficulties.

The BIAS team worked in conjunction with FCCSEA to develop two behaviorally informed interventions, aimed at increasing both the number of noncustodial parents who make a child support payment and the dollar amount of those payments. The first intervention tested was a reminder that functioned like a credit card bill or doctor's appointment reminder for noncustodial parents without income withholding who were not already being sent a notice. The second intervention tested was a redesigned version of the notice for those without income withholding who were already being sent a CSPC notice. Figure 3 provides an overview of the research design and test samples.

The first test, or Test 1, involved giving a monthly payment reminder to noncustodial parents who had not been sent a CSPC notice and who had not made a payment through income withholding in the three months prior to random assignment. Using a fractional factorial design, the intervention tested the impact of various factors on payments: the use of a mailed, behaviorally informed payment reminder notice, the use of an automated phone call reminder, or robocall, and the use of different time frames for the payment reminder notices. The factorial design divided the research sample into six groups, five of which were given different combinations of these factors, with a control group that was not given any of these factors. This design allowed the factors to be tested individually as well as bundled together. Box 2 provides more information about the factorial design and what types of impacts can be tested using it.

To test whether the redesigned payment reminder notice created by the BIAS team was more effective in eliciting payments compared with the existing reminder notice sent to some noncustodial parents by CSPC, a second test, or Test 2, replaced the CSPC notice for a sample of noncustodial parents with the redesigned notice created by the BIAS team. The redesigned notice used in Test 2 was the same payment reminder notice that was used for the mid-month payment reminder notice in Test 1. The redesigned notice and CSPC notice were tested against each other to see if either was more effective at generating payments.

Test 1: Do Reminders Lead to More Payments?

This test featured three types of reminders. Otherwise identical versions of a payment reminder notice with differing due dates were tested to see if the time frame of the reminder and payment deadline had any impact on payment behavior. The test also included a robocall for a sample of noncustodial parents.

Reminder notice with a mid-month due date. Sending a reminder early in a month with a due date in the middle of a month may help noncustodial parents who have trouble planning their finances through the end of the month, or who tend to procrastinate, by prompting them to pay early when funds are more likely to be available.

Reminder notice with an end-of-the-month due date. Sending a reminder later in the month with a due date on the last day of the month may make the need for payment seem more urgent, as the reminder is sent closer to the date (the last day of the month) after which a payment is considered past due by Franklin County. Noncustodial parents may be more likely to make a payment since the action required (making a payment) is in the nearer term.

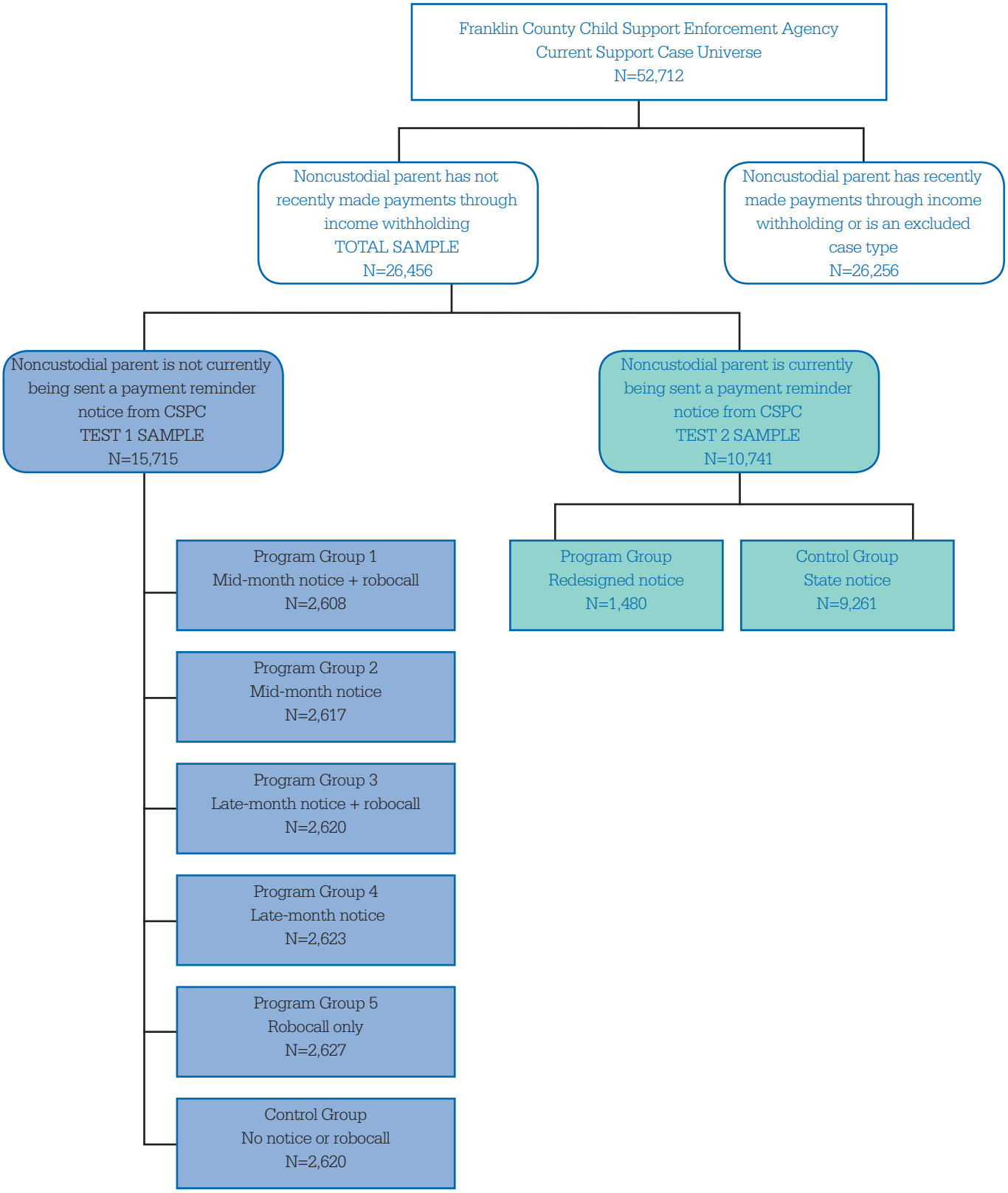
Robocalls. Robocalls serve as another mode of notification to noncustodial parents that their payment is due, similar to how many doctors' offices remind patients of upcoming appointments. These robocalls occurred approximately five days before the relevant due date in order to leave noncustodial parents with enough time to prepare and mail or deliver in person a payment, yet close enough to the due date to reduce the likelihood of procrastination, forgetting, or inattention to the issue.

These three types of reminders were all tested individually against a control group that was not sent any reminders. Furthermore, a robocall was tested in combination with each of the written payment reminder notices. This component resulted in five program groups that were sent one of the following treatments, as well as a sixth group that served as a control:

- a payment reminder notice and a robocall with a mid-month due date
- a payment reminder notice with a mid-month due date

FIGURE 3
RESEARCH DESIGN AND SAMPLES

FRANKLIN COUNTY CHILD SUPPORT ENFORCEMENT AGENCY



SOURCE: MDRC calculations using Franklin County Child Support Enforcement Agency data.

BOX 2
WHAT IS A FACTORIAL DESIGN?

A factorial design is an experimental design in which research groups are defined by all possible combinations of two or more factors at two or more levels. Factors are independent variables, such as the reminder notice, robocall, or other components of a bundled intervention. Levels can be designated simply as the inclusion and exclusion of the factor (which would be two levels), or as several dosages or timings of the factor (for multiple levels). The number of levels of each factor is multiplied by the others to determine the number of research groups. In a fractional factorial design, only select combinations of the research groups are included in the design, instead of all possible combinations. Factorial designs allow the impacts of each factor to be tested with a smaller sample size than would be required to test the same number of factors with the same power in a traditional experiment. Interactions of the factors with each other can also be tested in this design.

TABLE 2
RESEARCH GROUPS
TEST 1: NONCUSTODIAL PARENTS NOT CURRENTLY BEING SENT A NOTICE

FRANKLIN COUNTY CHILD SUPPORT ENFORCEMENT AGENCY

Research Group	FACTOR		
	Notice Reminder	Notice Time Frame	Robocall
1	Y	Mid-month	Y
2	Y	Mid-month	N
3	Y	Late-month	Y
4	Y	Late-month	N
5	N	NA	Y
6 (Control)	N	NA	N

NOTE: Robocall time frame corresponds to notice time frame for Groups 1 and 3. Group 1 (mid-month) calls occurred on or around the 10th of the month. Group 3 (late-month) calls occurred on or around the 25th. For Group 5, without a notice, the robocall had the late-month time frame.

- a payment reminder notice and a robocall with a late-month due date
- a payment reminder notice with a late-month due date
- a robocall only[23]
- a control group (status quo — no payment reminder notice or robocall)

Table 2 shows the Test 1 research groups, which are described more fully below. Table 2 also displays the components of the factorial design. The shaded cells represent the program groups that were assigned a given column's factor (for example, the mid-month versus late-month reminder date).[24]

Intervention Materials

The BIAS team sought to develop a payment reminder notice that was easy to read, provided clear instructions for payment options, and included elements intended to address some of the identified behavioral bottlenecks. The team redesigned the current CSPC payment reminder notice to achieve this goal. The CSPC notice can be found in Figure 4 with annotations highlighting components that the BIAS team

23 The robocall-only program group used a late-month due date.

24 Variation in time frame of the robocall could not be included as a factor level since it was tied to the time frame of the notice.

FIGURE 4
EXISTING CSPC PAYMENT REMINDER NOTICE

FRANKLIN COUNTY CHILD SUPPORT ENFORCEMENT AGENCY

6148462042

CSPC

Less well-known entity

05:56:00 p.m. 11-14-2013 1/1

1. Mail Payment to:
   Ohio CSPC, PO Box 182372, Columbus, OH 43218-2372
2. Please write the Case Number and Order Number on your check or money order.
3. Send all correspondence to your CSEA:
   13183 STATE ROUTE 13
   MILLFIELD, OH 45761-9901
4. If you have any questions about your case please contact your local CSEA at 1-740-593-5046

Payment instructions are hard to find

44 - 2 OHICoup_102113 1 - 12167

[redacted]

Child Support Summary For: [redacted]
County Name: **ATHENS**

Case Number: [redacted]

Order Number: [redacted]

Payment Breakdown

ADMINISTRATIVE FEES (POUNDAGE)	MONTHLY	X	$5.22	=	$5.22
ORDERED PMT CHD SUPP ARRS	MONTHLY	X	$43.51	=	$43.51
CURRENT ONGOING MEDICAL COSTS	MONTHLY	X	$0.00	=	$0.00
CURRENT CHILD SUPPORT	MONTHLY	X	$217.56	=	$217.56

Confusing Language

Total Monthly Obligation	**$266.29**
Outstanding Obligation status as of 09/30/2013:	***$3,966.09***

Instructions for coupon use: Please remit one coupon per payment to:
Ohio CSPC, PO Box 182372, Columbus, OH 43218-2372

Total, potentially intimidating arrears amount

OHCP 1b

Detach at perforation

PAYMENT COUPON
Ohio Child Support Payment Central (CSPC)

Use this coupon only for the case number and order number below:

Name: [redacted]

Case Number: [redacted]

OrderNumber: [redacted]

Include this coupon with your payment. DO NOT fold, staple, or mutilate. Please record your Case and Order Number on the check.

Check this box if your address has changed and write new address on back of coupon.

Child Support Payment For:

November, 2013

No specific due date

AMOUNT ENCLOSED:

Mail payments to:

OHIO CHILD SUPPORT PAYMENT CENTRAL
PO BOX 182372
COLUMBUS OH 43218-2372

No postage-paid return envelope

[redacted]

identified as possible areas for improvement.[25] The redesigned payment reminder notice created by the BIAS team can be found in Figure 5. The figure emphasizes portions of the notice that were informed by behavioral concepts. The changes made to the notice include simplifying language to reduce cognitive load; reframing the message to address social influence and negative feelings toward child support; setting clear deadlines to address prospective memory failure, procrastination, and inattention; and including a postage-paid return envelope to address hassle factors. Only the redesigned notice was used for Test 1.

The team also developed language for the robocall. The message was designed to address inattention, procrastination, and framing:

> Hello, this is a reminder from the Franklin County Child Support Enforcement Agency with information about your case. Your support payment of [amount] is due by [date].
>
> If you have questions about how to make this payment, or are having trouble making your payment, please contact us at (614) 525-3275. We will be happy to discuss your options. Thank you for supporting your child.

Methodology

Test 1 examined whether the treatments designed by the BIAS team increased the number of noncustodial parents making payments and the dollar amount of those payments. Qualifying noncustodial parents for Test 1 had an active child support order, were not currently paying through income withholding, and were not being sent any payment reminder notice from CSPC. The treatments consisted of multiple study arms that tested the type of reminder (payment reminder notice, robocall, or both) and the time frame of the reminder against a control that was sent no payment reminder notice or robocall.

Random assignment was completed in December 2013. Baseline characteristics of noncustodial parents in Test 1 (and in Test 2) can be found in Appendix Table 2. Observable baseline characteristics were similar across research groups, as is expected from random assignment.[26] Across all groups in both tests, those in the study were over 90 percent male, and ethnicity was roughly split between African-American and Caucasian, with small percentages of Hispanic and other minorities. Baseline support order amounts were also similar across all groups, just over $270, as was the percentage of orders set judicially versus administratively, with about three-fourths judicial. Arrears averaged about $15,000 for the Test 1 sample (compared with about $11,600 for the Test 2 sample). There are 15,715 noncustodial parents in the Test 1 analysis sample.[27]

Test 1 ran for four months. Payment reminder notices were mailed and robocalls were made from January to April 2014. There was no follow-up research period, as outcomes were measured only for each month the intervention occurred. The first set of payment reminder notices (mid-month due date) were mailed to assigned noncustodial parents on the 1st of each month and had a due date of the 15th of the month (research groups 1 and 2 from Table 2). The second set of payment reminder notices (late-month due date) were mailed to assigned noncustodial parents on the 15th of each month and had a due date of the last day of the month (research groups 3 and 4 from Table 2).[28] All notices included a postage-paid return envelope that noncustodial parents could use to mail in a payment. Robocalls for noncustodial parents with a mid-month due date payment reminder notice occurred on the 10th of each month (research group 1 from Table 2), while calls for parents with a late-month due date payment reminder notice occurred on the 25th (research group 3 from Table 2). Robocalls occurred on the 25th for noncustodial parents in the robocall-only group (research group 5

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25 The existing CSPC payment reminder notice was not used in Test 1 but is presented here as it provided the basis for the redesigned payment reminder notice that was tested.

26 An omnibus F-test was conducted to test for systematic differences in baseline characteristics between program and control groups for Test 1 and Test 2 (but not comparing the groups across Tests 1 and 2, since these were intentionally different populations).

27 A total of 973 noncustodial parents who were initially randomized for Test 1 were dropped because they were incarcerated, homeless, or living in a foreign country, or their cases lacked a social security number or were closed before January. No reminders or robocalls were sent to these parents, and no outcome data were collected on them.

28 If the 1st or 15th of the month fell on a weekend, notices were mailed either on the Friday before or Monday after.

FIGURE 5
REDESIGNED PAYMENT REMINDER NOTICE

FRANKLIN COUNTY CHILD SUPPORT ENFORCEMENT AGENCY

Add recognizable name and logo

Franklin County
Child Support Enforcement Agency

80 East Fulton Street, Columbus, Ohio 43215 ▪ Tel: 614-525-3275

John Sample
Address
Address
City, State, Zip

Reduce cognitive load

OBLIGATION INFORMATION

Current Child Support	$ 220.23
Monthly Back Support Payment	$ 22.00
Administrative Fees	$ 7.52
Total Monthly Obligation	**$ 249.75**

SETS Case Number:	7011111111
Order Number:	AO701111111
Obligee:	Jane Sample

Set deadline

Payment due by August 31, 2013

Remove total arrears due

HOW TO MAKE A PAYMENT

Mail a check or money order payable to Ohio Child Support Payment Central with the form below.

To view other methods for making your payment, please visit our website:
http://support.franklincountyohio.gov/about/making-support-payments.cfm

Reframe messaging

If you are having difficulty making payments or want to discuss other payment options, please call our office at 614-525-3275.

THANK YOU FOR SUPPORTING YOUR CHILD!

IMPORTANT MESSAGE

Did you know Child Support obligations never automatically change even if your income or job changes? If your order is three years old or you have had a change in circumstances, you may be eligible for an adjustment to your Child Support obligations. Please contact us at (614) 525-3275 to learn more about the Administrative Adjustment & Review process.

Please return this portion with payment

Obligor Name: John Sample
Case Number: 7011111111
Order Number: AO701111111

Amount Due **$249.75**

Amount Enclosed $_____

MAKE CHECKS PAYABLE TO:

Ohio Child Support Payment Central
P.O. Box 182372
Columbus, OH 43218-2372

Include postage-paid return envelope

from Table 2).[29] No payment reminder notice or robocall was sent to the control group, which was the status quo for those in Test 1.

Findings

Sending a reminder to pay produced a small positive impact, or statistically significant difference of means, between program and control groups, on one of the two key outcomes of interest: the number of noncustodial parents who made a payment. However, the additional payments were likely small and did not create a statistically significant increase in total collections per person.

As shown in Table 3, 51.5 percent of noncustodial parents who were sent a payment reminder made a payment, a statistically significant increase of 2.9 percentage points over the control group, which was sent no reminder to pay. The total amount paid was an additional $27 per person for the program groups (over the course of the four months), but this difference was not statistically significant.[30] The proportion of an order that was paid was also analyzed, and about one-third of what was owed was paid by both the program and control groups.

Table 4 examines the different reminder methods used in Test 1. Each treatment approach yielded a statistically significant impact on the number of noncustodial parents making a payment, compared with the control group, which suggests that being sent a reminder notice to pay was important regardless of the mode (notice or call) or time frame of the reminder. The impacts on the number of payments made ranged from 2.4 to 3.6 percentage points. While the program group averages have slightly different magnitudes, the differences between the various program groups fall within what would be expected from random sampling error and do not provide rigorous evidence that any of the tested treatments or combination of treatments is more effective than another. However, all program groups are different from the control group by an amount that is unlikely to be due to sampling error. The number of payers during the follow-up period in each of the five program groups was an average of 72 people greater than the control group, resulting in an estimated total of 380 more payers than there would likely have been without the intervention (results not shown).

The impact of each individual factor of the bundled treatments was also tested, as shown in Table 5. The analyses done in Table 5 allowed the research team to better understand the potential effect of each factor tested in the intervention. For example, the analyses estimate the effect of a single factor, such as robocalls (whether provided by itself or in combination with other factors), against any other group that was not sent a robocall (whether or not that group was sent a written reminder notice).

The factors tested were the mailing of a payment reminder notice, the use of two different time frames for a payment reminder notice, and the sending of a robocall reminder to pay. The comparisons made in this test can be visualized by comparing shaded with unshaded research groups in each column of Table 2, and yield each factor's main effect. For example, to estimate the effect of the robocall, the outcomes of the research groups with shaded boxes under the robocall column are compared with the outcomes of the research groups with unshaded boxes in that same column.

Table 5 summarizes the main effects of each factor of the intervention. The main effect of being sent a payment reminder notice on making a payment was statistically significant (a magnitude of 1.5 percentage points), indicating that the notice was consistently effective, despite variations in other factors. This effect can be seen by looking at the row labeled "Reminder notice" and comparing the mean for the groups that were sent a reminder notice (51.5 percent) against the mean for the groups that were not (49.9 percent). Neither robocall reminders nor the time frame of the payment reminder notice had a significant main effect on

29 Due to limitations of the robocall system, calls were completed over a two- to three-day period around the 10th and 25th of each month for noncustodial parents assigned to call conditions.

30 It is useful to consider the 90 percent confidence interval for this estimate. The true impact falls within a range of 1.65 standard errors above and below the estimate 90 percent of the time (or in 90 out of 100 replications of a randomized controlled trial). For this impact estimate of $27 on the amount paid, the range is from $6 to $60. The hypothesis that the true impact is zero cannot be confidently rejected based on this estimate.

TABLE 3
CHILD SUPPORT PAYMENT OUTCOMES, JANUARY–APRIL 2014
TEST 1: NONCUSTODIAL PARENTS NOT CURRENTLY BEING SENT A NOTICE

FRANKLIN COUNTY CHILD SUPPORT ENFORCEMENT AGENCY

Outcome	Program Groups	Control Group	Difference	Standard Error
Any payment made[a] (%)	51.5	48.5	2.9***	1.0
Total amount paid ($)	620	593	27	20
Ratio of payment to amount owed in first month	0.33	0.33	0.01	0.02
Sample size	13,095	2,620		

SOURCE: MDRC calculations using Franklin County Child Support Enforcement Agency data.

NOTES: A two-tailed t-test was applied to differences between research groups. Statistical significance levels are indicated as: *** = 1 percent; ** = 5 percent; * = 10 percent.

Estimates are adjusted for noncustodial parent baseline characteristics.

[a] A joint F-test for significance of any BIAS intervention was significant only for this outcome.

TABLE 4
ANY PAYMENT MADE, BY INTERVENTION ARM, JANUARY–APRIL 2014
TEST 1: NONCUSTODIAL PARENTS NOT CURRENTLY BEING SENT A NOTICE

FRANKLIN COUNTY CHILD SUPPORT ENFORCEMENT AGENCY

Outcome	Program Group	Control Group	Difference	Standard Error
Any payment made (%)				
Mid-month notice + robocall	50.9	48.5	2.4*	1.3
Mid-month notice, no robocall	52.1	48.5	3.6***	1.3
Late-month notice + robocall	51.2	48.5	2.7**	1.2
Late-month notice, no robocall	51.7	48.5	3.2**	1.2
Robocall only, no notice	51.4	48.5	2.9**	1.2
Sample size	approx. 2,600 each	2,620		

SOURCE: MDRC calculations using Franklin County Child Support Enforcement Agency data.

NOTES: A two-tailed t-test was applied to differences between research groups. Statistical significance levels are indicated as: *** = 1 percent; ** = 5 percent; * = 10 percent.

Estimates are adjusted for noncustodial parent baseline characteristics.

TABLE 5
ANY PAYMENT MADE, BY INTERVENTION FACTOR, JANUARY—APRIL 2014
TEST 1: NONCUSTODIAL PARENTS NOT CURRENTLY BEING SENT A NOTICE

FRANKLIN COUNTY CHILD SUPPORT ENFORCEMENT AGENCY

Outcome by Factor	Groups With Factor	Groups Without Factor	Main Effect	Standard Error
Any payment made (%)				
Reminder notice	51.5	49.9	1.5**	0.8
Sample size	10,468	5,247		
Robocall	51.2	50.8	0.4	0.7
Sample size	7,855	7,860		
Mid-month notice[a]	51.3	51.3	0.0	0.9
Sample size	5,225	5,243		

SOURCE: MDRC calculations using Franklin County Child Support Enforcement Agency data.

NOTES: A two-tailed t-test was applied to differences between research groups. Statistical significance levels are indicated as: *** = 1 percent; ** = 5 percent; * = 10 percent.
Estimates are adjusted for noncustodial parent baseline characteristics.
[a]Mid-month notice comparisons are to late-month notice groups only, excluding groups not sent a notice.

making a payment, compared with the other groups in the table. None of the factors had a significant main effect on the total amount paid or proportion of first-month obligation paid.

The results in Table 5 differ from those in Table 4 for several reasons. First, the sample members being compared are different in the two tables. Table 4 compares each of the five individual research groups, which are each only about one-sixth of the sample. (The control group is the other one-sixth of the sample.) Table 5, on the other hand, uses the entire sample for each comparison.[31] The sample members in Table 4 are receiving either the specified intervention (for each program group) or no intervention at all (for the control group). In contrast, most of the sample members on both sides of the comparisons in Table 5 are receiving some form of intervention. For example, most of those with the shaded or unshaded robocall boxes in Table 2 also have shaded notice boxes. The robocall's main effect is thus being measured in a sample that is for the most part already receiving the reminder notice, and it suggests that while the robocall is effective when no other reminder is present (as shown in Table 4), it does not appear to be effective in a sample that is already receiving reminder notices.

Overall, the findings from Test 1 confirm other research, suggesting that reminders can be a useful tool for engaging people.[32] However, Test 1 did not address whether the redesigned payment reminder notice was more effective than the current CSPC payment reminder notice that some noncustodial parents were already being sent. Test 2 explored this question by comparing the redesigned payment reminder notice with the current payment reminder notice.

Test 2: Do Behaviorally Redesigned Notices Lead to More Payments?

The purpose of this test was to understand whether redesigning the current CSPC payment reminder notice using insights from behavioral economics and including a postage-paid return envelope would increase payments. This test focused on noncustodial parents who were already being sent a monthly payment reminder notice from CSPC, and had a current order that they were not paying through income

31 The only exception is the mid-month notice to late-month notice comparison, which excludes those who did not receive a notice.

32 Cadena and Schoar (2011); Green (2004); Karlan, McConnell, Mullainathan, and Zinman (Forthcoming); Lantz et al. (1995); Rodgers et al. (2005).

withholding.[33] During the test, these parents were either sent the current notice or the behaviorally informed, redesigned notice.

Intervention Materials

Key components of the redesigned notice are described below. Figure 5 presents a visual representation of all the behavioral elements incorporated in the redesigned payment reminder notice.

Easy-to-understand information. The text included in the notice was intended to be simple for parents to understand. Potentially confusing child support jargon was removed and replaced with more familiar terminology, and the due date for the payment was clearly noted. The notice's logo was also changed to that of a more familiar agency. These changes were intended to increase the salience of the notice, reduce the cognitive load of reading it, and reduce planning fallacy and procrastination.

Clear instructions. The instructions on how to make a payment were prominently labeled and succinct, and directed parents to make a payment through the most commonly used option for parents without income withholding, a mailed check or money order. A postage-paid return envelope was also included. These changes were largely made to address hassle factors and cognitive load.

Positive framing. The notice thanked parents for making a payment and emphasized that FCC-SEA was available to help if they were having trouble making payments. This change was made to address framing and social influence issues.

Methodology

Noncustodial parents were randomly assigned to either the control group, which continued to be sent the current CSPC payment reminder notice, or the program group, which was sent the redesigned payment reminder notice. There are 1,480 program group and 9,261 control group sample members in Test 2.[34] The test ran for four months, from January to April 2014, and outcomes were measured for each month, with no follow-up period.

Program group notices were mailed on the 1st of each month, had a due date of the 15th, and included a postage-paid return envelope.[35] For noncustodial parents in this group, Franklin County staff suppressed the current payment reminder notice from CSPC for the duration of the study. Control group notices were mailed on the last business day of the month preceding the one for which the payment is due, the state's standard procedure. For example, the payment reminder notice for February 2014 was sent on or just before January 31. Robocalls were not sent to either research group.

Findings

Findings from this test show that the new components included in the redesigned payment reminder notice did not lead to an increase in the number of noncustodial parents making payments or the dollar amount of those payments. This finding, presented in Table 6, suggests that there is no advantage to the redesigned notice over the current CSPC notice, despite the use of behaviorally informed language and the postage-paid return envelopes that were included with program group notices. The amount paid by noncustodial parents in Test 2 was approximately $700 for both research groups, which was about 40 percent of the total payments that were owed.

Baseline characteristics shown in Appendix Table 2 indicate a key difference between the Test 1 and Test 2 samples. The average arrears were lower for those in Test 2 than for those in Test 1, approximately $11,600 compared with approximately $14,900, respectively. However, both groups have similar

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33 Criteria for being sent a notice from CSPC are outlined in footnote 21.

34 A total of 169 noncustodial parents who were initially randomized for Test 2 were dropped because they were incarcerated, homeless, or living in a foreign country, or their cases were closed before January. No reminders or robocalls were sent to these parents, and no outcome data on them were collected.

35 Similar to the case in Test 1, if the 1st of the month fell on a weekend, notices were mailed either on the Friday before or Monday after.

TABLE 6
CHILD SUPPORT PAYMENT OUTCOMES, JANUARY—APRIL 2014
TEST 2: NONCUSTODIAL PARENTS CURRENTLY BEING SENT A NOTICE

FRANKLIN COUNTY CHILD SUPPORT ENFORCEMENT AGENCY

Outcome	Program Group	Control Group	Difference	Standard Error
Any payment made (%)	57.2	57.9	-0.8	1.3
Total amount paid ($)	732	700	32	25
Ratio of payment to amount owed in first month	0.40	0.39	0.00	0.02
Sample size	1,480	9,261		

SOURCE: MDRC calculations using Franklin County Child Support Enforcement Agency data.

NOTES: A two-tailed t-test was applied to differences between research groups. Statistical significance levels are indicated as: *** = 1 percent; ** = 5 percent; * = 10 percent.

Estimates are adjusted for noncustodial parent baseline characteristics.

baseline child support orders. The difference in arrears may suggest that parents who were already being sent reminders to pay were more likely to make payments, since they had accrued fewer arrears despite similar child support orders. While several factors may contribute to these lower arrears, this observation does lend anecdotal support to the idea that reminders matter. The high levels of arrears also suggest that both groups include parents who struggle to make payments overall.

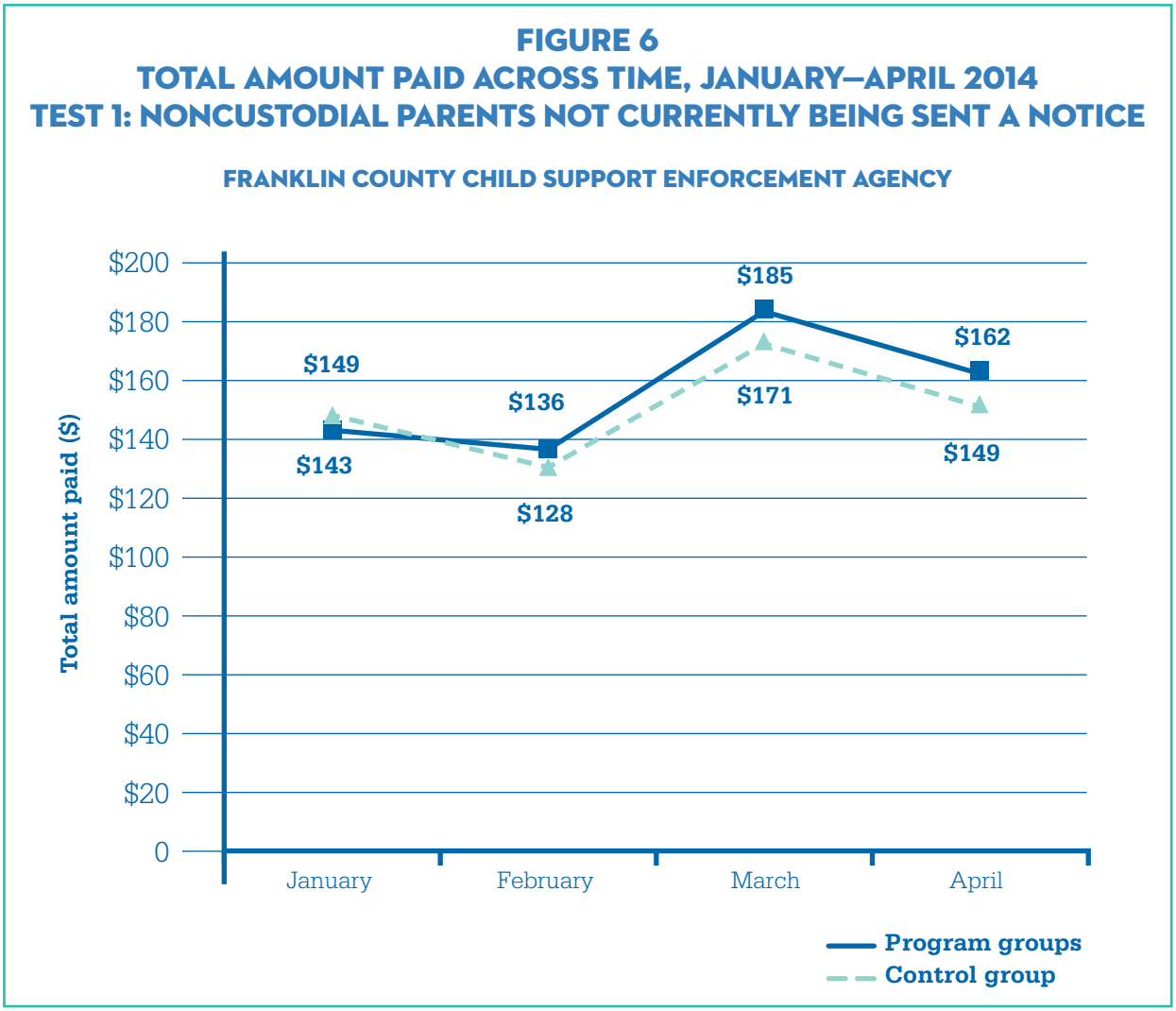
Other Factors Potentially at Play

Exploratory analysis can help further explain both interventions' main results. The BIAS team examined month-by-month payments, as well as several noncustodial parent subgroups.

Trends Over Time

The site was interested in whether sending recurring notices had an impact on payment behavior. By examining monthly payments in an exploratory analysis, the team identified a trend in which the difference between the program and control group payments grew over time. Figure 6 shows the amount that members in the Test 1 program and control groups paid on average during the four-month intervention. During the first month of the intervention, there was a very small decrease in total, per-person payments in the program groups compared with the control group. During the second, third, and fourth months of the study, there was a small and growing increase in total, per-person payments in the program groups compared with the control group.[36] These findings could suggest that behavioral change may not happen immediately, and leave open the question of whether recurring reminder notices to pay have a cumulative effect. However, other factors may have influenced this observation, including the proportion of undelivered mail, which decreased over the course of the intervention. Over 500 Test 1 sample members had their reminder notice returned to FCCSEA by the postal service in January (approximately 5.5 percent of the research sample that was mailed a notice). This number was cut in half by April. An additional 10 percent of all noncustodial parents in Test 1 did not have a valid address despite efforts by Franklin County to improve address information for the January mailing. These sample members were never sent any reminder notices in any month, but they remain in the analysis sample. Had their mailing addresses been available, it might have changed the size of the impacts slightly if reaching those sample members

36 The differences were not statistically significant until the final month, at the 10 percent level. This effect does not give conclusive evidence of a program effect on payments since there is no evidence that this difference would have persisted had the program continued. This analysis is exploratory and was pursued to investigate payment patterns over time as observed by the site.



SOURCE: MDRC calculations using Franklin County Child Support Enforcement Agency data.

would have influenced their payment behavior over time. A longer-term study might help determine whether sending recurring reminders to pay influences longer-term payment behaviors.

Subgroups

Subgroup analyses are performed to see if the intervention is more effective for some types of sample members than others, as defined by their baseline characteristics. Unlike comparing means of research groups, subgroup comparisons seek to detect differences in impacts (or differential impacts). The same subgroup analyses were performed for Test 1 and Test 2 to explore whether the interventions affected some groups of noncustodial parents more than others. Based on the work in the diagnosis phase and conversations with FCCSEA, the BIAS team identified four subgroups of interest. The full statistics for the subgroup analyses for Test 1 can be found in Appendix Table 3. The table for subgroup analyses for Test 2 is not presented, given the lack of statistically significant main effects.

Income Withholding History

This subgroup analysis compared impacts for noncustodial parents who had ever completed a payment using income withholding with those who had not. Noncustodial parents who had never completed a payment using income withholding may be less likely to have a substantial work history than those who had made a payment using income withholding. Having more work history could suggest larger financial resources and a greater ability to pay. However, there was no evidence of a differential impact in this subgroup analysis for Test 1.

A differential impact was detected in Test 2 when comparing noncustodial parents who had never completed a payment using income withholding with those who had (results not shown). The redesigned payment reminder notice had a significantly higher impact on the total amount paid for noncustodial parents who had previously completed a payment using income withholding than for those who had never used income withholding ($96 higher on average). This finding supports the idea that the ability to pay is an important factor in determining the influence of a behavioral intervention. However, in the absence of any other significant effect of the redesigned payment reminder notice on total payments per person, it is difficult to interpret this finding. The lack of a general impact on increasing the dollar amount of payments may be a result of low-income and unstable work situations that limit some noncustodial parents' ability to pay.

Order Type

Staff in Franklin County suggested that noncustodial parents with administratively set orders may have fewer financial resources than those who go through the judicial process and have their orders set in court.[37] Nearly half of judicially set orders are the result of a divorce proceeding. Franklin County has anecdotally found that those who were once married and had children together have higher incomes than those who were never married. Compared with those with administrative orders, noncustodial parents with judicial orders in Test 1 had a larger improvement (by 3.6 percentage points) in the likelihood of making payments as a result of being sent the program notice during the intervention period, and this differential impact was statistically significant. However, the test did not detect statistically significant differences in impacts on total payments made per person. This finding suggests that those who have had judicial orders may have greater ability to pay, consistent with Franklin County's hypothesis.

Number of Child Support Cases

Noncustodial parents with multiple cases may have larger financial burdens than those with one case, potentially limiting the effect of payment reminders. The subgroup analysis gave evidence to support this hypothesis. In Test 1, those with one child support case experienced larger impacts on the likelihood of making a payment as a result of being sent the redesigned notice than those with multiple orders.

Public Assistance Receipt

Some noncustodial parents may have an ability to pay, but choose not to. One proxy for making the choice not to pay may be whether or not the custodial parent on a case receives public assistance. In such cases, a portion of the payment, or even all the payment, typically goes to repaying the state rather than to the custodial parent and child. Noncustodial parents may be deterred from making a payment if they feel that it is not going directly to the custodial parent and child. Past research on pass-through and disregard policies for noncustodial parents with children receiving Temporary Assistance for Needy Families (TANF) has shown that parents pay more child support when more of the support goes directly to the custodial family, compared with when the payments are retained by the government as reimbursement for the family's TANF benefits and accounted for when determining the family's benefits.[38] In addition, receipt of public assistance by the custodial parent may increase the likelihood that the noncustodial parent is low income, and would therefore have less of an ability to make a payment. However, no evidence of a differential impact was found in the Test 1 subgroup analysis by public assistance involvement as of random assignment.

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37 FCCSEA establishes an administrative child support order when it has issued an administrative paternity establishment order; an "Acknowledgment of Paternity Affidavit" is final and one of the parents has asked FCCSEA to establish an administrative child support order; or there is a presumption of paternity and FCCSEA receives a request to establish an administrative child support order. FCCSEA files with the court for a judicially established child support order when the court is already involved (that is, there is a pending custody hearing or the child is adopted); FCCSEA has issued an administrative paternity establishment order; an "Acknowledgment of Paternity Affidavit" is final but neither of the parents has asked FCCSEA to establish an administrative child support order; the noncustodial parent is the mother; or the child was conceived by artificial insemination.

38 Lippold, Nichols, and Sorensen (2010); Cancian and Meyer (2007).

Implementation and Costs

The program was generally well implemented and payment reminder notices and robocalls were sent out as intended with one exception. During the first month of Test 1, noncustodial parents in the program group that was sent a mid-month payment reminder notice plus robocall (who were supposed to be sent a payment reminder notice on the 15th of the month and robocall on the 10th of the month) were not sent the first robocall as intended. The robocall was instead sent in error to the program group for Test 2, which was not supposed to be sent any calls. In other words, the mid-month payment reminder notice plus robocall group in Test 1 was sent three reminder calls instead of four throughout the course of the intervention, making the treatment as implemented largely consistent with the intended treatment. The program group in Test 2 was sent only one unintended phone call, resulting in a departure from the intended intervention of sending only one payment reminder notice, but the BIAS team believes that it is unlikely that this additional call significantly altered the findings since noncustodial parents in this group were sent only one robocall over four months.

FCCSEA staff kept track of mail returned as undeliverable and nonworking or incorrect phone numbers, and updated parent information each month. During the first month of the intervention, some mail was returned (approximately 5.5 percent of those to whom a notice was sent), but this percentage declined over time as incorrect addresses were updated.

Franklin County estimated the total combined cost of producing the program group notices for both tests to be $30,218 for 44,000 notices, or approximately $2.53 for each noncustodial parent in the research groups assigned to be sent notices.[39] Costs to implement this project include staff time, printing costs, mailing costs, and business return service charges (to track when the postage-paid return envelopes were used). Nearly 60 percent of all costs went to postage on the letters, followed by just under 20 percent of the total each for return postage charges and staff time. Franklin County stuffed the envelopes by hand, which contributed to the majority of the staff costs. The use of robocalls was a negligible cost for Franklin County since the agency was already using an automated call system, and staff time to set up the calls was minimal.

Based on these numbers, it appears it would be relatively inexpensive for FCCSEA to increase the number of noncustodial parents who are sent a reminder to pay.

What the Findings Mean for Child Support and Next Steps

This study highlights several important lessons for state policymakers and researchers. Noncustodial parents without income withholding present a unique challenge to child support agencies given that they are generally paid outside of a typical payroll system, irregularly employed, or unemployed. It may be difficult for these parents to plan to make a child support payment and follow through each month. Test 1 findings suggest that reminders were successful in increasing the number of noncustodial parents making payments, which is notable given the targeted population's often sporadic payment history. The resulting payments translated into money custodial families and the state may not have otherwise received. Interviews conducted during site visits revealed that custodial parents find any payment helpful, especially a regular monthly one.

While many noncustodial parents may face significant obstacles to financially supporting their children due to limited income and other barriers, the fact that a low-cost, "light-touch" intervention led to a significant increase in the number of parents who made a payment is promising for child support agencies. Box 3 provides additional insights from FCCSEA on their perspective on the study findings and some corollary benefits they encountered implementing the interventions.

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39 These figures are estimates provided by Franklin County. Costs included here are those that go above and beyond Franklin County's current processes.

BOX 3
FRANKLIN COUNTY'S PERSPECTIVE

FCCSEA was pleased with the increased number of payers and collections reported during the study period. Controlling for observable baseline differences, the 13,095 noncustodial parents in Test 1 from all program groups combined made $350,000 more in payments than what would have been expected in an equivalent sample without the intervention. While this increase in payments was not statistically significant, and therefore could not be attributed to the intervention with certainty, Franklin County was understandably satisfied with additional collections of this magnitude.

The FCCSEA management team reported that staff benefited from this project as well, since the behavioral mapping process and implementation of the study helped bring to light potential improvements in how the agency interacts with families and how its processes are understood from the customer's point of view. Franklin County also benefited from getting updated address information for many parents, and reported receiving increased calls from noncustodial parents who had long stopped communicating.

Franklin County examined the evaluation findings to better understand how to target future notifications to noncustodial parents, and plans to extend its work using behavioral science.

However, it is also important to note the limitations of these tests. While the findings from Test 1 generally support existing literature on the potential value of reminders, the tests do not provide any guidance on what type of reminder is most effective. Past research points to the idea that electronic communication tools, such as text messaging, may be important additions to future research, especially as younger and more technologically savvy customers enter the child support system.[40]

While the payment reminder notices provided in Test 1 did increase the number of noncustodial parents who made a payment, neither test was able to significantly increase the dollar amount of those payments, which may point to the larger issue of a parent's inability to pay. Future behavioral interventions that focus on noncustodial parents with an established ability to pay may be more successful in increasing payments. In order to maximize the effectiveness of behavioral interventions, child support agencies may want to target reminders to certain noncustodial parents. In order to better match orders to noncustodial parents' current financial circumstances, agencies may also want to consider ways to improve both the process of "right-sizing" orders and policies related to imputing wages when other information is not available.[41]

It is also possible that the reminder strategies tested by the BIAS team did not fully address the payment process's true bottlenecks and were therefore not as successful as another behavioral intervention might have been. Future studies in this area that employ different interventions or messages to address bottlenecks, as well as longer time frames for follow-up to examine the potential for longer-term behavioral change, might yield more information on ways to encourage noncustodial parents to make a child support payment. An intervention, possibly with behaviorally informed elements, that is focused on increasing the noncustodial parent's ability to make a payment or improving that person's relationship with the custodial parent or child might also produce different results.

40 Rodgers et al. (2005); Cadena and Schoar (2011); Haynes et al. (2013); Karlan, McConnell, Mullainathan, and Zinman (Forthcoming).

41 Ha, Cancian, and Meyer (2010).

Looking Forward

The BIAS project offers the opportunity for continued hypothesis testing that is grounded in behavioral economics and takes advantage of the low-cost, iterative nature of rapid cycle experimentation. Building on the interventions tested in Franklin County, the BIAS team has conducted similar tests in nearby Cuyahoga County, Ohio. The tested interventions include another iteration of the mailed payment reminder notice incorporating additional insights from behavioral science, as well as text message reminders.

Behavioral economics provides a new way of thinking about the design of human services programs and a potentially powerful set of tools for improving program outcomes. In addition to the work in Ohio, the BIAS project has completed evaluations with other partners, including the New York City Center for Economic Opportunity, the Oklahoma Department of Human Services, the Los Angeles County (California) Department of Public Social Services, the Indiana Office of Early Childhood and Out of School Learning, and Washington State Division of Child Support. Results from these evaluations will be published as they become available to further inform this rapidly developing field.

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APPENDIX

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APPENDIX TABLE 1
BEHAVIORAL TERMS

TERM	DEFINITION	EXAMPLE TEXT
Affective response	Decision making that is driven by a feeling or an emotion. Emotions can drive our choices much more than we expect, and "gut" decisions have far-reaching consequences. For example, "crimes of passion" may reflect a momentary affective response.	Slovic, Finucane, Peters, and MacGregor (2002)
Cognitive load	Overburdened mental resources that impair individual decision making. People typically think that they will be able to pay attention to information and then understand and remember it as long as it is important. However, an individual's mental resources — which are often taken for granted — are not unlimited and are more fallible than people often recognize. Challenges and emotional stress can drain these mental resources and actually make it difficult to make good decisions.	Paas and van Merriënboer (1994)
Frame	The way in which information is presented. Every piece of information can be presented in different ways, and small changes in the wording of a message or a choice can drastically change the way it is perceived and the choices that people make with regard to it. Information is never evaluated in a neutral or impartial way, because every way of presenting information is a frame that leads people in one direction or another.	Kahneman (2011)
Hassle factor	A feature or situational detail that makes a behavior harder to accomplish. This could be, for example, a small barrier to completing a task, such as filling out a form or waiting in line. While these factors may seem trivial and are often neglected in program design, reducing or eliminating them can have an outsized impact on outcomes.	Bertrand, Mullainathan, and Shafir (2004)
Inattention	Since people have a limited rate of information processing, they can pay attention to only a restricted amount at any given time.	DellaVigna (2009)
Ostrich effect	The tendency to avoid undesirable information, even when that information might have significant negative implications, including matters of life and death. For example, people have been known to avoid checking on their investments during periods of economic downturns.	Karlsson, Loewenstein, and Seppi (2009)
Planning fallacy	People often underestimate the length of time or amount of effort it will take for them to complete a task, frequently ignoring past experiences.	Brunnermeier, Papakonstantinou, and Parker (2008)
Present bias	Giving more weight to present concerns than to future ones. People tend to make plans to do unpleasant tasks "tomorrow," and they make the same choice when "tomorrow" becomes "today."	Laibson (1997)
Procrastination	When people voluntarily and irrationally delay intended actions, despite the expectation of potentially negative consequences.	Sirois and Pychyl (2013)
Prospective memory	Remembering to perform a planned action or intention at the appropriate time.	Brandimonte, Einstein, and McDaniel (1996)
Salience	The degree to which a stimulus attracts and retains a person's attention.	Kahneman (2003)
Social influence	Directly or indirectly fostering a behavior through direct or indirect persuasion. For example, an influential peer or authority figure can often establish the guidelines for socially appropriate and inappropriate behavior.	Service et al. (2014)

APPENDIX TABLE 2
SELECTED CHARACTERISTICS OF SAMPLE MEMBERS AT BASELINE

FRANKLIN COUNTY CHILD SUPPORT ENFORCEMENT AGENCY

	TEST 1 NOT CURRENTLY BEING SENT A NOTICE		TEST 2 CURRENTLY BEING SENT A NOTICE	
CHARACTERISTIC	**PROGRAM GROUPS**	**CONTROL GROUP**	**PROGRAM GROUP**	**CONTROL GROUP**
Gender				
Male (%)	93.1	92.7	91.5	92.5
Average age	42.1	42.0	40.9	40.7
Race/ethnicity (%)				
African-American	54.2	56.7	57.1	53.7
Caucasian	42.0	39.6	40.1	43.4
Hispanic	2.4	2.7	1.2	1.7
Other	1.5	1.0	1.5	1.2
Average number of child support cases	1.1	1.2	1.2	1.2
Noncustodial parents with more than one case (%)	11.5	12.3	12.3	12.5
Baseline child support order ($)	269	275	284	273
Baseline arrears order ($)	132	126	107	108
Baseline arrears ($)	14,811	15,085	11,641	11,628
Baseline (December 2013) payment amount ($)	143	153	171	185
Order type (%)				
Administrative	19.3	18.7	22.3	23.1
Judicial	76.3	76.8	72.4	71.8
Multiple order types	4.4	4.5	5.3	5.1
Sample size	13,095	2,620	1,480	9,261

SOURCE: MDRC calculations using Franklin County Child Support Enforcement Agency data.

NOTE: An omnibus F-test was conducted to test for systematic differences in baseline characteristics between program and control groups. No statistically significant differences were found.

APPENDIX TABLE 3
CHILD SUPPORT PAYMENT OUTCOMES FOR SUBGROUPS, BY INTERVENTION FACTOR, JANUARY–APRIL 2014
TEST 1: NONCUSTODIAL PARENTS NOT CURRENTLY BEING SENT A NOTICE

FRANKLIN COUNTY CHILD SUPPORT ENFORCEMENT AGENCY

	ADMINISTRATIVE ORDERS			JUDICIAL ORDERS			SUBGROUP DIFFERENCE
OUTCOME BY FACTOR	GROUPS WITH FACTOR	GROUPS WITHOUT FACTOR	MAIN EFFECT	GROUPS WITH FACTOR	GROUPS WITHOUT FACTOR	MAIN EFFECT	
Any payment made (%)							
Reminder notice	44.8	46.0	-1.2	53.7	51.3	2.4***	†
Sample size	2,030	987		7,972	4,034		
Robocall	45.6	44.8	0.8	53.0	52.8	0.3	
Sample size	1,497	1,520		6,014	5,992		
Mid-month notice[a]	43.7	46.7	-3.0	54.0	53.0	1.0	†
Sample size	1,044	986		3,940	4,032		
Total amount paid ($)							
Reminder notice	347.4	328.1	19.3	701.8	690.5	11.3	
Sample size	2,011	979		7,936	4,015		
Robocall	355.6	326.9	28.7	706.7	689.3	17.4	
Sample size	1,478	1,512		5,990	5,961		
Mid-month notice[a]	335.6	369.2	-33.6	693.8	693.8	0.0	
Sample size	1,034	977		3,922	4,014		
Ratio of payment to amount owed in first month							
Reminder notice	0.22	0.22	-0.01	0.37	0.38	0.00	
Sample size	1,990	973		7,867	3,990		
Robocall	0.22	0.22	0.01	0.37	0.37	0.00	
Sample size	1,466	1,497		5,947	5,910		
Mid-month notice[a]	0.22	0.23	-0.01	0.39	0.35	0.04	
Sample size	1,022	968		3,879	3,988		

(continued)

APPENDIX TABLE 3 (CONTINUED)
CHILD SUPPORT PAYMENT OUTCOMES FOR SUBGROUPS, BY INTERVENTION FACTOR, JANUARY–APRIL 2014
TEST 1: NONCUSTODIAL PARENTS NOT CURRENTLY BEING SENT A NOTICE

FRANKLIN COUNTY CHILD SUPPORT ENFORCEMENT AGENCY

	ONE CHILD SUPPORT CASE			MULTIPLE CHILD SUPPORT CASES			SUBGROUP DIFFERENCE
OUTCOME BY FACTOR	GROUPS WITH FACTOR	GROUPS WITHOUT FACTOR	MAIN EFFECT	GROUPS WITH FACTOR	GROUPS WITHOUT FACTOR	MAIN EFFECT	
Any payment made (%)							
Reminder notice	52.4	50.4	2.0**	44.2	46.3	-2.1	†
Sample size	9,257	4,626		1,211	621		
Robocall	51.9	51.6	0.3	45.9	44.0	1.8	
Sample size	6,952	6,931		903	929		
Mid-month notice[a]	52.4	52.1	0.4	42.7	45.8	-3.1	
Sample size	4,637	4,620		588	623		
Total amount paid ($)							
Reminder notice	646.6	639.2	7.4	401.7	395.2	6.5	
Sample size	9,202	4,599		1,211	621		
Robocall	657.0	631.2	25.8*	412.8	386.5	26.3	
Sample size	6,909	6,892		903	929		
Mid-month notice[a]	634.5	643.2	-8.7	393.4	413.6	-20.1	
Sample size	4,609	4,593		588	623		
Ratio of payment to amount owed in first month							
Reminder notice	0.36	0.36	0.00	0.15	0.19	-0.05**	
Sample size	9,112	4,569		1,211	620		
Robocall	0.36	0.35	0.00	0.17	0.15	0.02	
Sample size	6,854	6,827		903	928		
Mid-month notice[a]	0.37	0.34	0.03	0.14	0.15	0.00	
Sample size	4,554	4,558		588	623		

(continued)

APPENDIX TABLE 3 (CONTINUED)
CHILD SUPPORT PAYMENT OUTCOMES FOR SUBGROUPS, BY INTERVENTION FACTOR, JANUARY—APRIL 2014
TEST 1: NONCUSTODIAL PARENTS NOT CURRENTLY BEING SENT A NOTICE

FRANKLIN COUNTY CHILD SUPPORT ENFORCEMENT AGENCY

	PUBLIC ASSISTANCE INVOLVEMENT			NO PUBLIC ASSISTANCE INVOLVEMENT			SUBGROUP DIFFERENCE
OUTCOME BY FACTOR	GROUPS WITH FACTOR	GROUPS WITHOUT FACTOR	MAIN EFFECT	GROUPS WITH FACTOR	GROUPS WITHOUT FACTOR	MAIN EFFECT	
Any payment made (%)							
Reminder notice	53.5	52.4	1.1	49.4	47.5	1.9*	
Sample size	5,234	2,683		5,234	2,564		
Robocall	53.8	52.4	1.4	48.5	49.1	-0.6	
Sample size	3,942	3,975		3,913	3,885		
Mid-month notice[a]	52.7	54.1	-1.4	49.8	48.7	1.2	
Sample size	2,621	2,613		2,604	2,630		
Total amount paid ($)							
Reminder notice	503.1	482.1	21.0	734.0	744.0	-10.0	
Sample size	5,220	2,674		5,193	2,546		
Robocall	511.9	480.3	31.6*	741.8	732.8	9.0	
Sample size	3,930	3,964		3,882	3,857		
Mid-month notice[a]	495.4	509.5	-14.1	714.6	727.7	-13.1	
Sample size	2,614	2,606		2,583	2,610		
Ratio of payment to amount owed in first month							
Reminder notice	0.31	0.33	-0.02	0.36	0.35	0.01	
Sample size	5,182	2,655		5,141	2,534		
Robocall	0.32	0.31	0.02	0.35	0.36	-0.01	
Sample size	3,908	3,929		3,849	3,826		
Mid-month notice[a]	0.31	0.30	0.00	0.38	0.33	0.05	
Sample size	2,588	2,594		2,554	2,587		

(continued)

APPENDIX TABLE 3 (CONTINUED)
CHILD SUPPORT PAYMENT OUTCOMES FOR SUBGROUPS, BY INTERVENTION FACTOR, JANUARY–APRIL 2014
TEST 1: NONCUSTODIAL PARENTS NOT CURRENTLY BEING SENT A NOTICE

FRANKLIN COUNTY CHILD SUPPORT ENFORCEMENT AGENCY

	EVER HAD INCOME WITHHOLDING			NEVER HAD INCOME WITHHOLDING			SUBGROUP DIFFERENCE
OUTCOME BY FACTOR	GROUPS WITH FACTOR	GROUPS WITHOUT FACTOR	MAIN EFFECT	GROUPS WITH FACTOR	GROUPS WITHOUT FACTOR	MAIN EFFECT	
Any payment made (%)							
Reminder notice	55.3	53.2	2.1**	46.5	45.9	0.6	
Sample size	5,900	2,909		4,568	2,338		
Robocall	54.9	54.4	0.5	46.3	46.3	0.1	
Sample size	4,435	4,374		3,420	3,486		
Mid-month notice[a]	55.6	54.8	0.9	45.6	47.0	-1.4	
Sample size	2,962	2,938		2,263	2,305		
Total amount paid ($)							
Reminder notice	630.3	646.4	-16.1	596.8	576.2	20.6	
Sample size	5,864	2,894		4,549	2,326		
Robocall	649.8	621.2	28.6	597.0	582.8	14.2	
Sample size	4,408	4,350		3,404	3,471		
Mid-month notice[a]	623.3	618.8	4.4	583.7	614.4	-30.7	
Sample size	2,946	2,918		2,251	2,298		
Ratio of payment to amount owed in first month							
Reminder notice	0.34	0.35	-0.01	0.32	0.33	-0.01	
Sample size	5,807	2,880		4,516	2,309		
Robocall	0.34	0.34	0.00	0.33	0.32	0.01	
Sample size	4,376	4,311		3,381	3,444		
Mid-month notice[a]	0.35	0.32	0.03	0.33	0.31	0.02	
Sample size	2,915	2,892		2,227	2,289		

SOURCE: MDRC calculations using Franklin County Child Support Enforcement Agency data.

NOTES: A two-tailed t-test was applied to differences between research groups. Statistical significance levels are indicated as: *** = 1 percent; ** = 5 percent; * = 10 percent.

Tests of differences in impact estimates across subgroups were conducted. Statistical significance levels are indicated as follows: ††† = 1 percent; †† = 5 percent; † = 10 percent.

Estimates are adjusted for noncustodial parent baseline characteristics.

[a]Mid-month notice comparisons are to late-month notice groups only, excluding groups not sent a notice.

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EARLIER PUBLICATIONS

From the Behavioral Interventions to Advance Self-Sufficiency (BIAS) Project

Taking the First Step: Using Behavioral Economics to Help Incarcerated Parents Apply for Child Support Order Modifications
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Behavioral Economics and Social Policy: Designing Innovative Solutions for Programs Supported by the Administration for Children and Families
2014. Lashawn Richburg-Hayes, Caitlin Anzelone, Nadine Dechausay, Saugato Datta, Alexandra Fiorillo, Louis Potok, Matthew Darling, John Balz.

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